

Conventions

This document is divided into the sections listed below.

MedKnowledge Descriptive Information and Modules

The MedKnowledge Descriptive Information is presented first, followed by the MedKnowledge modules. The MedKnowledge Descriptive Information and modules include the following sections for each item:

- **Overviews**—provide descriptive information about each module or section.
- **Editorial Policies**—provide information about the policies that guide the development and maintenance of the data in each module or section.
- **Applications**—provide information about the practical application of data contained in each module or section.
- **Technical Specifications**—provide table/entity information and specifications for each module or section.

Data Dictionary

The Data Dictionary provides an alphabetical listing of the column names with a definition for each. These column names are not categorized by module; however, a link is provided in the Technical Specification Tables from the column name to the Data Dictionary.

Technical Specifications

The Technical Specifications provides an alphabetical listing of the tables in each module. Each specification includes the purpose of the table and a list of all the columns in the table, with links to the Data Dictionary.

 **P** indicates a Primary key; **F** indicates a Foreign key; **PF** indicates a Primary and Foreign key.

Entity Relationship Diagrams

The Entity Relationship Diagrams provide a graphical representation of table/entity relationships within each module.

ERD Line Symbol **Meaning** Exactly one (required) Zero or one (optional) One or multiple (required) Zero, one, or multiple (optional) More than one (required) Recursive loop

File Naming Conventions

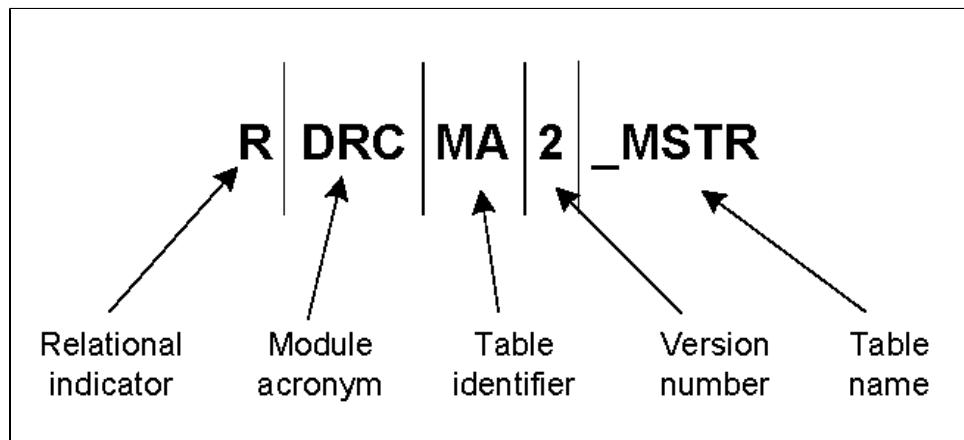
Names of the data files provided in both DB and UPD use the following convention:

R{mmmm}{tt}{v}_{nnn...nnn}

The file name format for all product deliveries is as follows:

Name Component	Definition
R	Indicates a relational data file
{mmmm}	Two to four character module acronym
{tt}	Two character table identifier
{v}	One digit version number
_nnn...nnn	Variable length intuitive table name

Dosage Range Check Master Table: RDRCMA2_MSTR



Data Definition Language Policy

This section provides information about the Data Definition Language (DDL) files.

DDL files are created to assist in establishing the fundamental database structures within a relational database management system. DDL files help reduce the time-consuming task of defining the tables needed to store FDB knowledge products in a relational database.

Supported DDL Platforms

FDB's objective is to support the most common database platforms. The following database platforms are supported with the DDL files:

- Oracle
- SQL Server
- Sybase
- RDB
- ANSI 92 SQL (for compliant databases that are not explicitly supported)

DDL Properties

Please refer to the following tables for a description of the DDL properties both supported and not supported by FDB.

Supported DDL Properties

Supported DDL Property	Description
Column Naming	The column name and its length adheres to standards that are mutually compatible with all supported database platforms. Column names are 30 characters or less.
Mandatory Fields	When indicated by the design and supported by the target database, constraints for mandatory columns (not null constraints) are supplied for the appropriate columns for the tables within a module. The constraint name, when needed, adheres to standards that are mutually compatible with all supported database platforms.
Primary Key Index Creation	When supported by the target database, primary key indexes are provided for primary key columns for the tables within a module. The index name adheres to standards that are mutually compatible with all supported database platforms.
Table Creation	The "Create Table" statement always appears for each table delivered in the module. The table name and its length adheres to standards that are mutually compatible with all supported database platforms. Table name lengths are 30 characters or less.

Unsupported DDL Properties

Unsupported DDL Property	Description
Data Loading	Coding and scripts to assist in loading the flat file databases into the structures established by the DDL are not supplied.
Foreign Key Creation	Creation of foreign keys is not supported. This allows you to load your tables in any order they choose.
Indexes	Indexes are not directly created. Primary keys may indirectly result in the creation of an index; however, this is database specific. Foreign key indexes are also not created.
Permission Information	Items such as users, grants, and privileges are not defined in the DDL.
Reserve	There is no reserved space.
Table Sizing	Information Items such as data volume, storage requirements, and number of records are not defined in the DDL.
Transaction Code	Transaction codes, delimiters, and the like are not supported within the DDL.

Numeric and Date Field Policies

This issue applies to all customers.

In 2010, FDB began to provide null values within new MedKnowledge date and numeric fields when there is no value. Date and numeric fields released prior to 2010 contain zeros when there is no value, for example, the IDDF Obsolete Date (IOBSDTE) column within the IDDF Canada Drug Product Table (RICAIDC1_DRUG_PRODUCT). For existing problems with zero padded date fields, include a NULLIF statement in your load routine to convert these values for all date fields.

Please note that nulls are represented as spaces/blanks in REL and RELD since they are fixed-width files.

Product and Physical File Organization

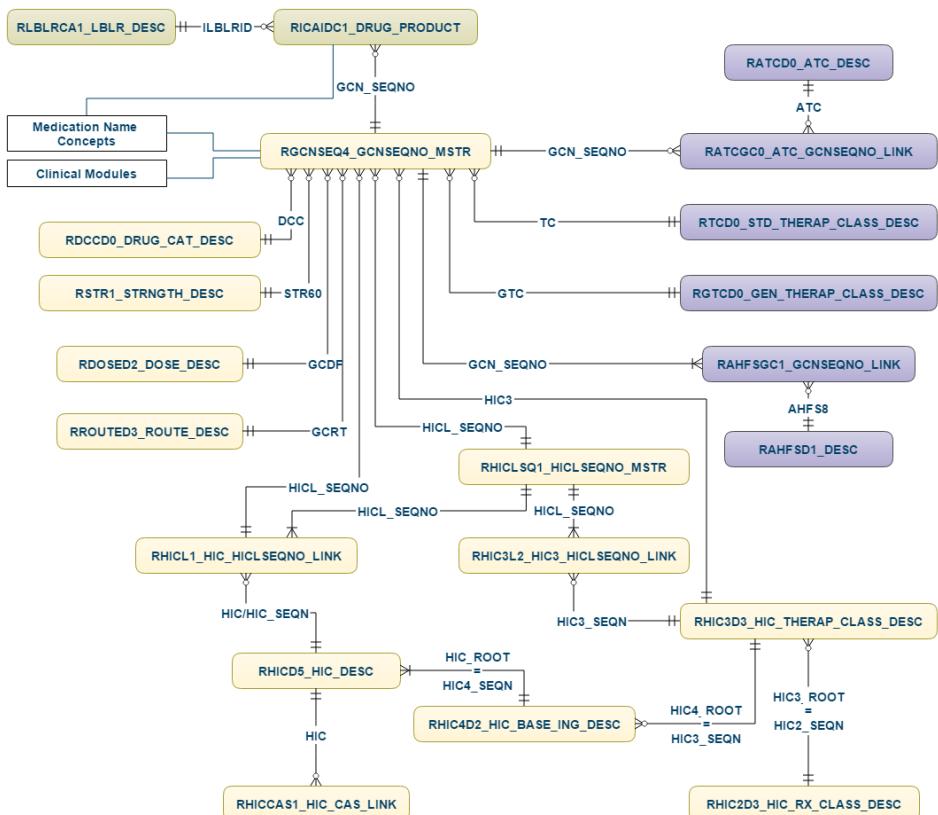
The following are brief explanations of the product organization and the physical file organization of the DDL:

- Organized and Delivered by Module—Each module supplies those table definitions that make up the module. The DDL name for each module reflects the module name and database type. For example, Drug_Drug_Interaction_SYBASE.sql.
- Organized by Target Database Supported—For a given target database and module, all DDL statements for tables, primary key indexes, and constraints appear in one file, with the exception of Oracle. In the case of Oracle, the DDL is provided in a control file (.sql), table file (.tab), a constraint file (.con) and an index file (.ind).

The following diagram displays a partial layout of the DDL directories.

Partial directory structure for DDL

Identifiers and Attributes Top-Level ERD



Legend

	Packaged Product Data
	Generic Formulation and Ingredient Data
	Miscellaneous Therapeutic Classification Data

Clinical Formulation and Ingredient Data

- General Information
- Clinical Formulation and Ingredient Data Editorial Policies
- Applications
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- Definitions
- Concepts

Overview

The Clinical Formulation and Ingredient section provides a detailed explanation of First Databank's (FDB's) clinical drug formulation identifier, the Clinical Formulation ID ([GCN_SEQNO](#)), along with the ingredient set, route of administration, dosage form, and drug strength data.

- (i) FDB is not a laboratory and is not equipped to do a laboratory analysis of pharmaceutical products. FDB depends on the pharmaceutical manufacturer to provide all relevant information accurately and completely in the package insert. FDB relies on the information in the package insert when determining how to enter a particular drug into the knowledge base.
- (i) Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)), Routed Medication ID ([ROUTED_MED_ID](#)), and the Routed Generic ID ([ROUTED_GEN_ID](#)) levels in the FDB knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also defined.

- Dosage Form
- Inactive Ingredient
- Ingredient Set
- Piggyback Solution Products
- Route of Administration
- Strength of Drug

Dosage Form

The physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug.

A Dosage Form Code (**GCDF**) is associated to each Clinical Formulation ID (**GCN_SEQNO**) to identify that component of the clinical formulation. For example, *Acetaminophen With Codeine Phosphate 300 mg-60 mg Tablet Oral* (**GCN_SEQNO** = 4169) has a GCDF value of **TA** with a description of **Tablet**.

Refer to **Dosage Form** in the [Concepts](#) section for more information.

Inactive Ingredient

An ingredient that does not serve a therapeutic function. The Clinical Formulation ID (**GCN_SEQNO**) aggregates drug products that share the same active ingredients in their formulation. Inactive ingredients are not taken into consideration when grouping drug products with like ingredient lists.

Ingredient Set

A set of active ingredients in a clinical formulation.

The set of active ingredients in a Clinical Formulation ID (**GCN_SEQNO**) is represented by the Ingredient List Identifier (**HICL_SEQNO**).

Refer to **Ingredient List Identifier (HICL_SEQNO)** in the [Concepts](#) section for more information.

Piggyback Solution Products

Products that contain the drug already in solution and are specifically intended for intravenous piggyback (IVPB) administration.

Refer to **Piggyback Solution Products** in the [Concepts](#) section for more information.

Route of Administration

Refers to the normal site or method by which a drug is administered in the body, such as oral, injection, or topical.

A Route of Administration Code (**GCRT**) is associated to each Clinical Formulation ID (**GCN_SEQNO**) to identify that component of the clinical formulation. For example, *Acetaminophen With Codeine Phosphate 300 mg-60 mg Tablet Oral* (**GCN_SEQNO** = 004169) has a GCRT value of **1** with a description of **Oral**.

Refer to **Route of Administration** in the [Concepts](#) section for more information.

Strength of Drug

The strength of a clinical formulation refers to the potency of the drug and is most commonly expressed in a metric quantity, such as 500 mg, however, other unit expressions are possible if consistent with product labeling and good clinical judgment.

A Drug Strength Description ([STR](#)) is associated to each Clinical Formulation ID ([GCN_SEQNO](#)) to identify that component of the clinical formulation. For example, the STR for *Acetaminophen With Codeine Phosphate 300 mg-60 mg Tablet Oral* (GCN_SEQNO = 004169) is **300 mg-60 mg**, meaning 300 mg of Acetaminophen and 60 mg of Codeine.

Refer to **Strength** in the [Concepts](#) section for more information.

Concepts

This section describes concepts and database elements that are important for understanding the module.

- Clinical Formulation Identifier (GCN_SEQNO)
 - Clinical Formulation ID and Packaged Drug Products
- Ingredient List Identifier (HICL_SEQNO)
 - Generic Names
 - Ingredient List (HICL_SEQNO)
 - Ingredient Identifier (HIC_SEQN)
 - Base Ingredient Identifier (HIC4_SEQN)
 - Specific Therapeutic Classification Identifier (HIC3_SEQN)
 - Pharmacological Classification Identifier (HIC2_SEQN)
 - Organ System Identifier (HIC1_SEQN)
 - Ingredient List Relationships
 - Ingredient to Ingredient Diagram
 - Ingredient Classification Diagram
- Route of Administration
 - Oral Routes
 - Injection Routes
 - Parenteral/Non-injection Routes
 - Further Information on Routes
- Dosage Form
- Strength
 - Conventions for Strength Units
 - Character and Special Symbol Conventions
 - Single Ingredient Products
 - Multi-Ingredient Products
 - Piggyback Solution Products
 - Apothecary to Metric Conversion
- Routed Generic
 - ROUTED_GEN_ID
 - ROUTED_GEN_STATUS_CD

Clinical Formulation Identifier (GCN_SEQNO)

FDB's primary clinical formulation identifier is the Clinical Formulation ID (GCN_SEQNO). It represents a pharmaceutical formulation that is based on a unique combination of active ingredients, route of administration,

dosage form, and strength. The Clinical Formulation ID (GCN_SEQNO) is used to group together drug products with like active ingredient sets, routes of administration, dosage forms, and strength and provides an excellent method for:

- navigating to clinical modules
- developing a list of candidates for substitution in the dispensing environment
- formulary building
- prescribing

The components for the drug formulation, identified by the Clinical Formulation ID (GCN_SEQNO), are stored in the following columns:

- Ingredient List Identifier (**HICL_SEQNO**)—The Ingredient List Identifier represents the list or set of active ingredients in a drug formulation. Inactive ingredients are generally not included in the ingredients list. Some exceptions exist to facilitate the application of clinical information. These exceptions are not common.
- Route of Administration (**GCRT**)—The Route of Administration Code provides the normal site or method by which the drug is administered, such as oral, injection, or topical. A text description of the GCRT is provided in the Route Description (**RT**) column.
- Dosage Form (**GCDF**)—The Dosage Form Code represents the dosage form of the clinical formulation, such as tablet or capsule. A text description of the GCDF column is provided in the Dosage Form Description (**GCDF_DESC**) column.
- Strength (**STR**)—The Drug Strength Description most commonly describes the drug potency in metric units. Other unit expressions are possible if consistent with product labeling and good clinical judgment.

The Clinical Formulation ID (**GCN_SEQNO**) aggregates drug products that share a like active ingredient set, route of administration, dosage form, and strength of drug but are marketed by multiple manufacturers, for example, the pharmaceutical formulation of *Acetaminophen With Codeine Phosphate 300 mg-60 mg Tablet Oral* has a Clinical Formulation ID (**GCN_SEQNO**) value of **004169**. This formulation may be manufactured, packaged, and sold in hundreds of variations ranging from bottles of 500 to blister packs. The information found in FDB's clinical modules (such as drug-drug interactions, duplicate therapy occurrences, drug allergy checking, side effects, etc.) is identical for all of the different packages of the same pharmaceutical formulation. The Clinical Formulation ID (**GCN_SEQNO**) simplifies drug navigation by eliminating extraneous information and focusing on the core components of the pharmaceutical formulation.

A unique Clinical Formulation ID (GCN_SEQNO) is assigned to each different combination of active ingredient(s), route of administration, dosage form, and strength for a clinical formulation. The Clinical Formulation ID (GCN_SEQNO) Example Table below illustrates that there are many Clinical Formulation IDs (GCN_SEQNOs) for the ingredient Nitroglycerin to accommodate each unique combination of ingredient, route of administration, dosage form, and strength. The data for each column along with its corresponding description is provided below:

Clinical Formulation ID (GCN_SEQNO) Example Table

GCN_SEQNO	Ingredient List Identifier (HICL_SEQNO)	Description (HIC_DESC)	Route (GCRT)	Route Description (RT)	Dosage Form (GCDF)	Dosage Form Description (GCDF_DESC)	Strength (STR60)
000464	000159	nitroglycerin	T	TRANSDERM	OA	OINTMENT(GM)	2 %
000465	000159	nitroglycerin	T	TRANSDERM	PV	PATCH, TRANSDERMAL 24 HOURS	0.4 mg/hour
000466	000159	nitroglycerin	T	TRANSDERM	PV	PATCH, TRANSDERMAL 24 HOURS	0.6 mg/hour
000476	000159	nitroglycerin	S	SUBLINGUAL	TU	TABLET, SUBLINGUAL	0.6 mg
064720	000159	nitroglycerin	A	INTRAVEN	HV	VIAL (SKV,MDV OR ADDITIVE(ML))	50 mg/10 mL (5 mg/mL)

i Note that a difference in any of the components warrants the creation of another Clinical Formulation ID (GCN_SEQNO). For example, Clinical Formulation IDs (GCN_SEQNOs) 000465 and 000466 (on the above table) differ only in the strength value (0.4 mg/hour and 0.6 mg/hour), yet each is a unique clinical formulation and are therefore given a unique Clinical Formulation ID (GCN_SEQNO).

There is one exception to the rule that Clinical Formulation IDs (GCN_SEQNOs) are created based upon the unique combination of a formulation's active ingredient set, route of administration, dosage form, and strength. In special cases when supporting clinical data warrants it, the specific therapeutic classification (HIC3_SEQN) is used to differentiate between identical clinical formulations. In these rare circumstances, pharmaceutically equivalent formulations are given different Clinical Formulation IDs (GCN_SEQNOs) because each formulation has been assigned to a different therapeutic class.

For example, two Clinical Formulation IDs ([GCN_SEQNOs] 003703 and 011583) have DIPHENHYDRAMINE HCL (HICL_SEQNO 004480) as their primary ingredient, as well as the same dosage form, strength, and route. However the specific therapeutic class (HIC3_SEQN) of each formulation is different because this clinical formulation has indications in more than one therapeutic class.

GCN_SEQNO	HIC3_SEQN	HIC3_DESC	Indications
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003703	000257	SEDATIVE-HYPNOTICS,N ON-BARBITURATE	Insomnia
011583	003218	ANTIHISTAMINES - 1ST GENERATION	Parkinsonism, Extrapyramidal Disease, Allergic Conjunctivitis, Allergic Rhinitis, Nasal Congestion, Pruritus, Dermatographism, Urticaria, Vertigo, Insomnia, Sneezing, Cough, Nausea and Vomiting, Nausea, Vomiting, and Anaphylaxis

Clinical Formulation ID and Packaged Drug Products

The Clinical Formulation ID (**GCN_SEQNO**) has a one-to-many relationship with packaged drug products. A given Clinical Formulation ID (**GCN_SEQNO**) may be linked to many packaged drug products; however, a packaged drug product can have only one Clinical Formulation ID (**GCN_SEQNO**).

Examples of Formulation Differences

The following tables illustrate differences in the way a drug is formulated and assigned a Clinical Formulation ID (**GCN_SEQNO**):

Example—Similar products with different ingredients (pain relief)

GCN_SEQNO	DIN	LN
012080	02242365	CHILD'S MOTRIN 100 MG/5 ML (ibuprofen)
004481	00833223	CHILD'S ACETAMIN 160 MG/5ML (acetaminophen)

Example—Similar products with different ingredients (lowering cholesterol)

GCN_SEQNO	DIN	LN
006415	00599026	LOPID 300 MG CAPSULE (gemfibrozil)
062582	02210320	PMS-CHOLESTYRAMINE REGULAR PKT (cholestyramine/sucrose)
016579	00884359	ZOCOR 40 MG TABLET (simvastatin)

Example—Same ingredient products with different dosage forms

GCN_SEQNO	DIN	LN
008995	00406724	NOVAMOXIN 250 MG CAPSULE (amoxicillin trihydrate capsule)

008998	02230880	APO-AMOXI 250 MG/5 ML SUSP (amoxicillin trihydrate suspension)
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Example—Same ingredient products with different strength

GCN_SEQNO	DIN	LN
021694	02061562	LESCOL 20 MG CAPSULE (fluvastatin sodium 20 MG)
021695	02061570	LESCOL 40 MG CAPSULE (fluvastatin sodium 40 MG)

Example—Same ingredient products with different route

GCN_SEQNO	DIN	LN
004375	00582867	ASA 650 MG SUPPOSITORY (acetylsalicylic acid rectal)
004376	00040851	PMS-ASA 325 MG TABLET (acetylsalicylic acid oral)

Ingredient List Identifier (HICL_SEQNO)

The Ingredient List Identifier (**HICL_SEQNO**) is a permanent numeric identifier that identifies a unique combination of active ingredients, irrespective of the manufacturer, package size, dosage form, route of administration, or strength. For example, **HICL_SEQNO 000222** identifies the following set of active ingredients:

- Guaifenesin
- Dextromethorphan Hydrobromide
- Pseudoephedrine

Because the **HICL_SEQNO** uniquely identifies a specific list of active ingredients (such as Codeine Phosphate and Acetaminophen), it can be associated to multiple Clinical Formulation IDs (**GCN_SEQNO**), thus decreasing processing time, eliminating redundancy, and ensuring that the list of active ingredients is consistent and correct for each associated Clinical Formulation ID (**GCN_SEQNO**).

Individual ingredients are represented by the following:

- Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**)—a dumb number used to permanently identify a distinct ingredient and its specific therapeutic classification, such as HIC_SEQN 000590 for Digitalis Leaf
- Hierarchical Ingredient Code (**HIC**)—a smart number used to identify an ingredient and its specific therapeutic classification. FDB recommends using the **HIC_SEQN** instead of the **HIC** as a primary identifier since the **HIC_SEQN** is a permanent, dumb number.
- Hierarchical Ingredient Code Description (**HIC_DESC**)—a description of the ingredient identified by the **HIC_SEQN** (such as Digitalis Leaf).

The **HICL_SEQNO** has a one-to-many relationship with the Clinical Formulation ID (**GCN_SEQNO**). That is, one

HICL_SEQNO may be attached to just one or to many Clinical Formulation IDs (GCN_SEQNOs).

Generic Names

Long and short generic names for a HICL_SEQNO can be obtained through the Generic Name - Short Version (GNN) and Generic Name - Long Version, (GNN60) columns of the [Ingredient List Identifier Description Table](#) (RHICLSQ1_HICLSEQNO_MSTR). The table below illustrates the difference between the GNN and GNN60 descriptions.

Sample Valid Values Table

HICL_SEQNO	GNN	GNN60
1820	ASPIRIN	ASPIRIN
2073	ALBUTEROL SULFATE	ALBUTEROL SULFATE
4652	P-EPHED/ACETAMINOPHN/TRIPRO LID	PSEUDOEPHEDRINE HCL/ACETAMINOPHEN/TRIPROLIDI NE
5449	MAG HYDROX/AL HYDROX/OXETHAZ	MAGNESIUM HYDROXIDE/ALUMINUM HYDROXIDE/OXETHAZAINE
12233	BETAINE	BETAINE
22000	BIMATOPROST	BIMATOPROST
25663	D-METHORPHAN/ACETAMIN/DOXYL AMN	DEXTROMETHORPHAN HBR/ACETAMINOPHEN/DOXYLAMIN E
25998	CINACALCET HCL	CINACALCET HCL
33442	HEPARIN SODIUM,PORCINE/NS/PF	HEPARIN SODIUM,PORCINE/NORMAL SALINE/PF
33502	ANIDULAFUNGIN	ANIDULAFUNGIN
34493	ALISKIREN HEMIFUMARATE	ALISKIREN HEMIFUMARATE
34665	SITAGLIPTIN PHOS/METFORMIN HCL	SITAGLIPTIN PHOSPHATE/METFORMIN HCL
35852	NIFEDIPIINE/ASPIRIN	NIFEDIPIINE/ASPIRIN

Ingredient List (HICL_SEQNO)

The ingredient list, referenced by the [HICL_SEQNO](#), is commonly referred to as the HICL. Each active ingredient in the list is sequenced according to its clinical importance relative to other ingredients. The relative importance of an active ingredient is based on its clinical and therapeutic use. The HICL can be assembled using the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK).

- (i)** There is **not** a column named HICL in the standard relational product. HICL is simply a reasonable abbreviation for the concept of a HIC List that has a unique identifier (its HICL_SEQNO).

Included in this section is information about the following concepts related to the Ingredient List Identifier. Two diagrams are included to help illustrate the relationship of the ingredients and its identifiers. The following topics are discussed in this section:

Ingredient Identifier (HIC_SEQN)

The Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**) is a stable numeric identifier that represents a distinct active or inactive ingredient, including salts and esters. The HIC_SEQN is a dumb number, assigned by FDB. For example, as shown in the Ingredient to Ingredient Diagram below, HIC_SEQN 000724 will always represent the ingredient Guaifenesin.

Occasionally, a HIC_SEQN must be replaced. This usually happens when two HIC_SEQN values represent the same ingredient. Replaced HIC_SEQN values receive an Ingredient Status Code (**ING_STATUS_CD**) value of 1 (Replaced) and are listed in the Ingredient Replacement History Table (RHICRH0_ING_HIST, page 157) with a reference to the current HIC_SEQN value. For example, HIC_SEQN 000626 and HIC_SEQN 001350 both represent Lidocaine. To replace HIC_SEQN 000626 with HIC_SEQN 001350, HIC_SEQN 000626 received an ING_STATUS_CD value of 1 and is listed in the RHICRH0_ING_HIST table with a reference to HIC_SEQN 001350.

Replaced HIC_SEQN values are never deleted from the database. Replaced HIC_SEQN values can be removed from active use, such as in pick lists, but remain in the database to produce important user messages, such as allergy warnings and drug interaction alerts.

HIC_DESC

HIC_SEQNs for active and inactive ingredients have a HIC_DESC text description. For example, the HIC_DESC for HIC_SEQN 001653 is dextromethorphan hydrobromide, as shown in the Ingredient to Ingredient Diagram, page 65 later in this section.

HIC_REL_NO

The sequence of active ingredients in an ingredient list is identified by the HIC_REL_NO. The sequence of ingredient names in multi-ingredient products is determined by the following blend of legacy and new priorities:

- The order of ingredients used by FDB is guided by the order of ingredients and strengths presented in product labeling by the innovator on approved drug products in the Canadian drug market. FDB presents this order of ingredients as it is the most readily recognized for Canadian drug products.
- The order of ingredients used by FDB for OTC formulations varies depending on the type of formulation. For antihistamine-decongestant type cough and cold formulations for example FDB has a policy for the order based on the pharmacology of the ingredient. Older formulations, regardless of type may follow the legacy, "historic" market driven priority described below.
- Historic market driven priority—a legacy prioritization system based on historic market driven needs. For example, expectorants and related cough-cold ingredients were historically placed early in the ingredient

list to facilitate recognition as cough/cold formulations relative to billing and payor methods of using a variety of basic classifications (i.e., HIC3/GC3, TC, GTC) to determine reimbursement. For example, the active ingredients assigned to HICL_SEQNO 000222 are stored and identified in the following order: Guaiifenesin, Dextromethorphan Hydrobromide, and Pseudoephedrine.

- i Inactive ingredients identified in the Inactive Ingredient table do not have HIC_REL_NOs.

Hierarchical Ingredient Code (HIC)

The Hierarchical Ingredient Code (HIC) is a six-character smart identifier that represents an active or inactive ingredient and its specific therapeutic classification. The HIC provides links to the following information about the ingredient:

- Base Ingredient
- Therapeutic Classification
- Pharmacological Classification
- Organ System

- i FDB recommends using the HIC_SEQN instead of the HIC as a primary identifier since the HIC_SEQN is a permanent, dumb number.

Base Ingredient Identifier (HIC4_SEQN)

The HIC4_SEQN is a permanent numeric identifier that represents a base ingredient without salts or esters. For example, the description for HIC4_SEQN 00074 is and always will be Guaiifenesin.

If a HIC4_SEQN's ingredient is retired because it is a duplicate ingredient, a replacement history is kept for that HIC4_SEQN and the following events occur in order to uphold the requirements of a dumb number:

- A new HIC4_SEQN value is created and assigned to the changed ingredient
- The old HIC4_SEQN value is given an Ingredient Status Code (**ING_STATUS_CD**) value of 1 (Replaced)
- The old HIC4_SEQN value is listed in the **Ingredient Replacement History Table** (RHICRH0_ING_HIST) with a reference to the new HIC4_SEQN value

An ingredient may be retired without replacement.

Specific Therapeutic Classification Identifier (HIC3_SEQN)

The HIC3_SEQN is a permanent numeric identifier that represents the specific therapeutic classification of a given active ingredient (**HIC_SEQN**). The HIC3_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description for HIC3_SEQN 000160 is and will always be Expectorants.

Pharmacological Classification Identifier (HIC2_SEQN)

The HIC2_SEQN is a permanent numeric identifier that represents the pharmacological classification of a given active ingredient (**HIC_SEQN**). The HIC2_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description for HIC2_SEQN 000030 is and will always be Affect Primarily Trachea/Bronchi.

Organ System Identifier (HIC1_SEQN)

The HIC1_SEQN is a permanent numeric identifier that represents the organ system of a given active ingredient ([HIC_SEQN](#)). The HIC1_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description of HIC1_SEQN 000002 is and will always be Respiratory System.

Ingredient List Relationships

The Hierarchical Ingredient Code ([HIC](#)) represents one active ingredient in the list of active ingredients identified by the Ingredient List Identifier ([HICL_SEQNO](#)). All six characters of a HIC uniquely identify an active ingredient and its specific therapeutic classification.

HIC Character/Position Description Table

Column Name	Description	Example: HIC H6CAHB (Dextromethorphan Hydrobromide)
HIC1_SEQN	Identifies the organ system	H = NERVOUS SYSTEM (EXCEPT AUTONOMIC)
HIC2_SEQN	Identifies the pharmacological classification	H6 = DRUGS ACTING PRINCIPALLY ON THE MIDBRAIN
HIC3_SEQN	Identifies the therapeutic classification	H6C = ANTITUSSIVES, NON-NARCOTIC
HIC4_SEQN	Identifies the base ingredient	H6CA = DEXTROMETHORPHAN
HIC_SEQN	Identifies the ingredient and the salt (if applicable)	H6CAHB = DEXTROMETHORPHAN HYDROBROMIDE

The 5th and 6th characters of a HIC identify the salt/ester for a base ingredient, such as hydrochloride, sodium, sulfate, phosphate, or hydrobromide (if there is one). All six positions of the HIC are required to identify the ingredient, with the first four identifying the base ingredient and its specific therapeutic classification.

For each level of an ingredient's Hierarchical Ingredient Code ([HIC](#)), there is an associated sequence number (such as HIC1_SEQN) identifying that level. The root of one sequence number links to the sequence number of the next hierarchical level. For example, the HIC_ROOT links to the HIC4_SEQN, the HIC4_ROOT links to the HIC3_SEQN, and so on as described in the table below. It is important to follow the path of root and associated sequence number to obtain hierarchical information about an active ingredient, because the sequence numbers are permanent identifiers that never change meaning.

HIC Sequence Numbers and Associated Roots

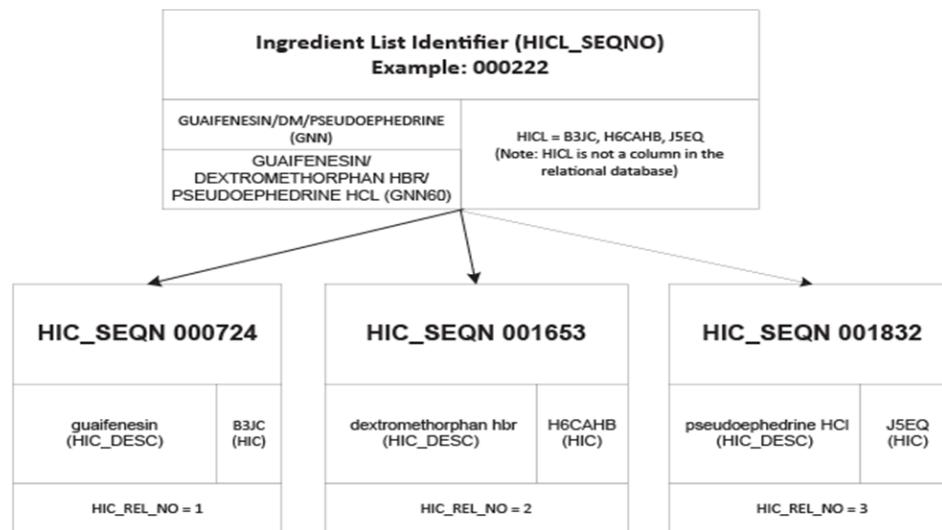
HIC	Identifier	Description with Example	Root	Associated to
HIC	HIC_SEQN	Ingredient - Dextromethorphan Hydrobromide	HIC_ROOT	HIC4_SEQN

HIC4	HIC4_SEQN	Base Ingredient - Dextromethorphan	HIC4_ROOT	HIC3_SEQN
HIC3	HIC3_SEQN	Specific Therapeutic Classification - Antitussives, Non-Narcotic	HIC3_ROOT	HIC2_SEQN
HIC2	HIC2_SEQN	Pharmacological Classification - Drugs Acting Principally on the Midbrain	HIC2_ROOT	HIC1_SEQN
HIC1	HIC1_SEQN	Organ System - Nervous System (Except Autonomic)	(n/a)	(n/a)

Refer to Ingredient to Ingredient Diagram and Ingredient Classification Diagram below for an illustration of ingredient identifier relationships.

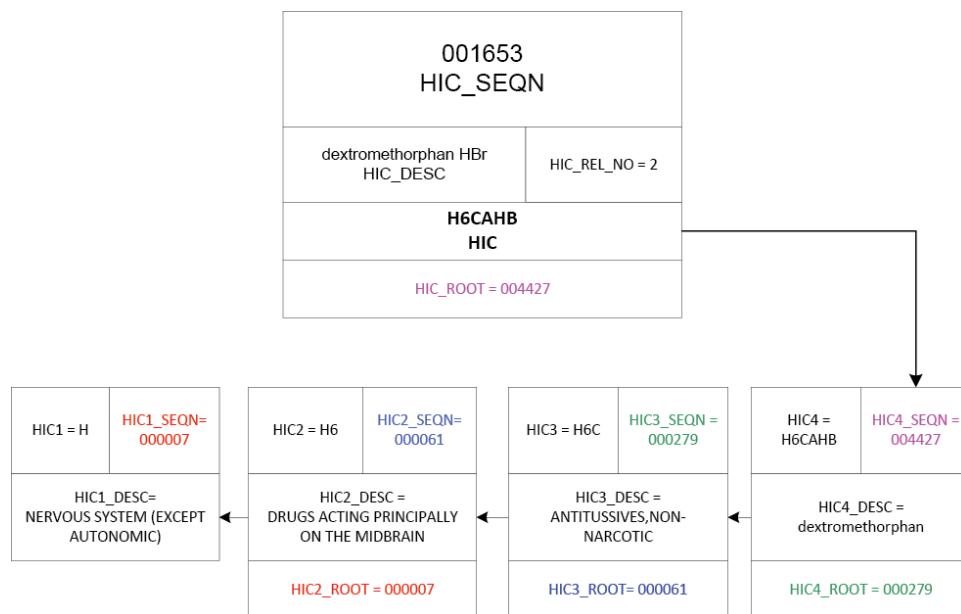
Ingredient to Ingredient Diagram

The following diagram graphically illustrates the relationship between the Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**) and the Ingredient List Identifier:



Ingredient Classification Diagram

The following diagram graphically illustrates the relationship between an active ingredient and its therapeutic classification:



Route of Administration

The route of administration refers to the normal site or method by which a drug is administered to the body, such as oral, injection, or topical. A Route of Administration Code (**GCRT**) is associated to each Clinical Formulation ID (**GCN_SEQNO**) to identify that component of the clinical formulation. For example, *Acetaminophen With Codeine Phosphate 325MG-15MG Tablet Oral* (**GCN_SEQNO** = 4164) has a GCRT value of **1** with a description of **Oral**. FDB maintains a robust list of routes with which to describe formulations. Only one route may be assigned to any Clinical Formulation ID (**GCN_SEQNO**). These routes fall into the following categories:

- Oral Routes
- Injection Routes
- Parenteral/Non-injection Routes

Oral Routes

Oral routes include, but are not limited to, the following:

Oral Routes

Route Code	Route Description	Route Definition
1	ORAL	ingested drug product
L	TRANSLINGUAL	drug product applied onto the tongue
B	BUCCAL	drug product held or adhered to inside of cheek
S	SUBLINGUAL	drug product held under the tongue

4	MUCOUS MEMBRANE (TOPICAL MOUTH & THROAT)	drug product applied topically to mouth or throat, such as mouth washes and throat rinses; administered directly to the mouth and/or pharynx
D	DENTAL	drug products that go in the mouth, such as toothpaste, tablets, gels and other products used for dental preparations; administered to the teeth

Injection Routes

Although there is a general route code for injection (unspecified parenteral), there are also routes that require specific injection sites. In cases where packaged drug products can be injected in more than one manner the preferred route is assigned.

For example, a product is primarily administered subcutaneously but according to its clinical information it can also be administered intramuscularly. In this case, the preferred route of Subcutaneous would be applied for the formulation.

Injection Routes

Route Code	Route Description	Route Definition
A	INTRAVENOUS (ONLY)	Injection in a vein
C	INTRAMUSCULAR (ONLY; REPOSITORY; ETC.)	Injection in a muscle
G	SUBCUTANEOUS	Injection made under the skin
2	INJECTION (UNSPECIFIED PARENTERAL ROUTES)	<i>Parenteral</i> drug administration by intravenous, intramuscular, or subcutaneous injection

Parenteral/Non-injection Routes

Parenteral/non-injection routes are for packaged drug products introduced to the body other than by way of the intestines. Following is a list of some of the parenteral/non-injection routes used by FDB:

Parenteral/Non-injection

Route Code	Route Description	Route Definition
E	EPIDURAL (ONLY)	Administered outside the dura mater
F	PERFUSION	The pumping of a fluid through an organ or tissue
H	INHALATION	Medication to be taken in by inhaling

I	INTRACAVERNOSAL	Administration within the dilatable spaces of the corpus cavernosa of the penis
J	INTRAARTERIAL	Administered into, or involving entry by way of an artery
K	INTRAARTICULAR	Administered by entering a joint
N	IMPLANTATION	Administered by the insertion or grafting into the body
O	INTRATHECAL	Introduced into the space under the arachnoid membrane of the brain or spinal cord
P	INTRAPERITONEAL	Administered by entering the peritoneum
Q	INTRAVESICAL	Administered within the bladder
R	IRRIGATION (BLADDER, WOUNDS, ETC.)	Administration to bathe or flush open wounds or body cavities
T	TRANSDERMAL	Supplying a medication in a form for absorption through the skin into the bloodstream
U	URETHRAL	Administered through the urethra
V	VAGINAL	Administered through the vagina
W	INTRAOCULAR	Administered by entering the eyeball
X	INTRAPLEURAL	Administered by entering the pleura or pleural cavity
3	RECTAL	Administered through the rectum
5	TOPICAL (HAIR, NAILS AND SKIN)	Administration to a particular spot on the outer surface of the body, including hair, nails, and skin
6	OPHTHALMIC (INCLUDES EYE-EAR PREPS)	Administration to the external eye
7	NASAL	Administration to or by way of the nose
8	OTIC	Administration to or by way of the ear
9	INTRADERMAL	Administered by entering the skin

Further Information on Routes

The route code M is for MISCELL. (NON-DRUG OR COMBO ROUTE DRUG). For additional information about clinical routes of administration, refer to Clinical Route in the Rules for Data Elements section in the **Dosing Modules** documentation or the **Prescriber Order Entry Module™ (POEM™) 2.0** documentation.

Dosage Form

The dosage form of a clinical formulation describes the physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug. A Dosage Form Code (**GCDF**) is associated to each Clinical Formulation ID (GCN_SEQNO) to identify that component of the formulation.

Determination of a dosage form for a new formulation is done by assessing:

- Delivery method
- Release mechanism
- Clinical uniqueness, including, but not limited to, side effects, indications, contraindications and conditions which may impact patient education and label warnings

Most formulations can be adequately described with FDB's existing dosage forms; however, new dosage forms are added when the clinical uniqueness of a novel dosage form has been established.

The U.S. Food and Drug Administration does not specify as many unique dosage forms as FDB; FDB supports all dosage forms identified by the Food and Drug Administration and observes similar naming conventions when possible. FDB also supplies additional dosage forms.

For example, FDB provides over 25 different dosage forms for tablets.

Tablet Dosage Forms

Dose Form Code (GCDF)	Dose Form Description
TA	TABLET
TV	TABLET, BUCCAL
TY	TABLET, BUCCAL EXTENDED RELEASE
TC	TABLET, CHEWABLE
TE	TABLET, DELAYED RELEASE (ENTERIC COATED)
TJ	TABLET, DISPERSIBLE
UL	TABLET, RAPID DISSOLVE
UD	TABLET, DOSE PACK
TF	TABLET, EFFERVESCENT
TN	TABLET, GRANULE-LIKE OR PACKETS
TH	TABLET, HYPODERMIC
UJ	TABLET, LINGUAL DELAYED RELEASE
UB	TABLET, MULTIPHASIC RELEASE
TR	TABLET, PARTICLES/CRYSTALS IN

UA	TABLET, SEQUENTIAL
TB	TABLET, SOLUBLE
TU	TABLET, SUBLINGUAL
TQ	TABLET, EXT.RELEASE,PARTICLES/CRYSTALS
TS	TABLET, EXTENDED RELEASE
UE	TABLET, EXTENDED RELEASE SEQUENTIAL
TM	TABLET, EXTENDED RELEASE 12HR
TI	TABLET, EXTENDED RELEASE 24HR
UF	TABLET, EXTENDED RELEASE 8HR
TO	TABLET, EXTENDED RELEASE 12HR SEQUENTIAL

Strength

The strength of a drug formulation refers to the potency of the drug and is most commonly expressed in a metric quantity, such as 500 mg, however other unit expressions are possible if consistent with product labeling and good clinical judgment. A Drug Strength Description (**STR**) is associated to each Clinical Formulation ID (**GCN_SEQNO**) to identify that component of the formulation.

Strength descriptions follow Good Vocabulary Practice (GVP) and accepted industry standards whenever possible, though space limitations create isolated exceptions. Identical products have identical strength descriptions.

When possible, strength units are identified. In some cases it may not be possible to identify the units, such as when a multi-ingredient product's strengths exceed the maximum length.

Example—A Multi-ingredient Product Strengths Exceeds the Maximum Length of Ten Bytes

The packaged drug product, Clavulin, contains a combination of multiple strengths and a volume (such as 250 mg-62.5 mg per 5 mL), that exceeds ten bytes. Thus its strength is reported as 250-62.5/5, no UNIT is displayed.

Conventions for Strength Units

The following conventions apply to all rendering of strength units.

- For single ingredients, decimals must have a leading zero (0.25MG). There are no zeroes trailing the decimal point (1MG, not 1.0MG). For multi-ingredients, the strength value might not contain the leading zero (.0375MG/24) due to space constraints.
- All abbreviations for grams are G.
- When units are identical, the units are stated after the second strength (for example, 800-160MG).
- When the units are “mixed,” both or none are stated, depending on space.

Character and Special Symbol Conventions

- Slashes (/) are to designate concentrations only (for example, 250MG/5ML).
- Hyphens (-) are to designate strengths only. For example, 250MG-125 is the strength of Calcium with Vitamin D 250 milligram-125 units.

Single Ingredient Products

Single ingredient products can be divided into five categories for the purposes of designating strength descriptions:

- Tablets, Capsules, Suppositories, Packets, and similar dose forms.
- Pure Substance
- Oral Liquid Preparations
- Topical Preparations
- Single-dose and Multi-dose Injections

Single Ingredient Products: Tablets, Capsules, Suppositories Packets, and Similar Dosage Forms

The value represented in the strength field is that strength which is used for dosing. Depending on the drug, it may be either the base strength, the base plus salt (total) strength, the elemental strength, or the weight of the ingredient component when a more specific description doesn't apply (for example 32 mg of grape leaf extract does not fit one of the previously mentioned strength types). At times strengths are represented in more than one way and we may represent it both ways, if needed, to ensure recognition. Sometimes the strength is stated as the base and sometimes it is stated as the base plus salt and elemental strength. In the table below the first example product contains phenylephrine hydrochloride and its strength is expressed in terms of phenylephrine hydrochloride. The second example shows a product containing telbivudine whose strength is in terms of telbivudine only. The third example shows a product containing ferrous sulfate where 325 mg is the strength of the base plus salt and 65 mg is the amount of iron in the ingredient.

Dosage Form and Strength in Single-Ingredient Drugs Examples

Example of Strength	Generic Name	Dosage Form	Strength	Strength - 60
1) Of base plus salt	PHENYLEPHRINE HCL	STRIP	2.5MG	2.5 mg
2) Of the base only	TELBIVUDINE	TABLET	600MG	600 mg
3) Of base plus salt and elemental strength	FERROUS SULFATE	TABLET	325(65)MG	325 mg (65 mg Iron)

Single Ingredient Products: Pure Substance

If a bulk chemical or dosage form is a pure substance, its strength number is displayed as 100%. If a bulk chemical does not have a strength, the strength is either not available or is pending clarification.

In the table below, the first example is 100% morphine sulfate and the second example (sodium fluoride) is either not available or is pending clarification.

Pure Substance Strength Example

Generic Name	Dosage Form	Strength	Strength - 60
MORPHINE SULFATE	POWDER	100%	100 %
SODIUM FLUORIDE	POWDER (GM)	(No strength displayed)	(No strength displayed)

Single Ingredient Products: Oral Liquid Preparations

The strength of oral liquid preparations is expressed in terms of the amount of active ingredient in five milliliters (/5ML), as illustrated below. The exception is for unique strength preparations that are usually administered or measured by drops, where the strength is expressed in terms of the amount of active ingredient in one milliliter (/ML).

Oral Liquid Preparations Strength Example

Generic Name	Dosage Form	Strength	Strength - 60
AMPICILLIN TRIHYDRATE	SUSPENSION, RECONSTITUTED, ORAL (ML)	125MG/5ML	125 mg/5 mL
AMPICILLIN TRIHYDRATE	SUSPENSION, RECONSTITUTED, ORAL (ML)	250MG/5ML	250 mg/5 mL
AMOXICILLIN TRIHYDRATE	DROP RECONSTITUTED, ORAL (ML)	50MG/ML	50 mg/mL

Single Ingredient Products: Topical Preparations

The strength for topical preparations is listed either as a percentage or the amount of active ingredient in one gram (/G).

Topical Preparations Examples

Generic Name	Dosage Form	Strength	Strength - 60
HYDROCORTISONE	OINTMENT(GM)	1%	1 %
ESTROGENS, CONJUGATED	CREAM	0.625MG/G	0.625 mg/gram

Single Ingredient Products: Single-dose and Multi-dose Injections

Pre-diluted multi-dose injections commonly have a strength representation of per mL (e.g., 10 mg/mL). Single-dose containers are preferentially represented as the total milligrams per the total volume per container. Single dose syringes, amps, or vials with volumes of less a mL are represented as the volume necessary to deliver the appropriate dose (e.g., Fondaparinux Sodium 7.5 mg/0.6 mL Sub-Q Disp Syringe. (See Piggyback Solution Products in this section for examples of single-dose and multi-dose strength examples). If a formulation represents a drug product which comes pre-diluted, strength is expressed as the amount per volume. When the preparation must be reconstituted before administration no volume is indicated. The table below references two examples: the first is a ready-to-use product, and the second product must be reconstituted prior to use.

Single-dose and Multi-dose Injections Strength Example

Generic Name	Dosage Form	Strength	Strength - 60
PENICILLIN G PROCAINE	INJECTION	300K U/ML	300,000 unit/mL
PENICILLIN G POTASSIUM	INJECTION	20MMU	20 million unit

- i** At this time, FDB avoids applying "U" or "UNIT" directly next to the strength expression (for example, 300K U/ML) to prevent confusion with the strength number (for example, confusing 300U with 3,000). The abbreviation for unit ("U") is not ISMP compliant and is therefore not used or allowed in the ISMP compliant strength field, STR60. Over time, the abbreviated "U" expression will also be removed from the old, short 10-character STR field. The "IU" expression (meaning international units) is not used because it has the potential to be mistaken for "IV" (meaning intravenous).

Multi-Ingredient Products

With products containing more than one active ingredient, the Drug Strength Description (**STR**) column information is displayed differently than single ingredient products.

If a clinical formulation has two active ingredients, the strength value is listed as a hyphenated pair. The strength values are listed in the same sequence as they appear in the generic name. Clinical Formulations with long strengths or with more than one or two ingredients may require strength abbreviations that exclude one or more ingredient strengths or units of measure based on space limitations in the STR (10-character strength field). For example:

Multi-Ingredient Tablet Strength Example

Generic Name (GNN)	Dosage Form	Drug Strength Description (STR)	Drug Strength Description - 60 (STR-60)
SULFAMETHOXAZOLE/TRI METHOPRIM	TABLET	800-160MG	800 mg-160 mg
PHENYLEPHRINE/DM/ACE TAMINOP/GG	TABLET	10-20-500	10 mg-20 mg-500 mg-400 mg

The STR must be unique for a specific Ingredient List, Route, Strength, and Dosage Form. We have limited space in STR in which to describe the differences between similar products. Drug Strength Description - 60 (**STR60**) is a more complete and ISMP-compliant strength field, which is recommended if a careful comparison of strengths is desired. The legacy length limitations of the older STR column require that we choose the ingredient strengths, which are represented to make the overall formulation unique. Therefore, the STR is not a complete listing of the strengths of the associated products. If one ingredient's strength in a multi-ingredient drug differs from the other ingredients, then the strength value of the ingredient with a different strength is listed.

For multi-ingredient liquids, the strengths of all active ingredients are listed. If it is not possible to list all strengths then the strengths that are most important are listed, such as codeine. For example:

Multi-Ingredient Liquid Strength Example

Generic Name (GNN)	Dosage Form Description (STR)	Drug Strength	Drug Strength Description - 60 (STR-60)
BROMPHENIRAMIN/PE/CO DEINE PHOS	LIQUID	3.3-6.3/5	1.33 mg-3.33 mg-6.33 mg/5 mL
PHENYLEPHRINE/DM/ACE TAMINOP/GG	LIQUID	5-325MG/15	5 mg-10 mg-325 mg-200 mg/15 mL

Older, legacy Clinical Formulations with active drugs in the ingredient lists, but blank strength fields require review to verify that associated products contain the same drug content and should not be assumed to be pharmaceutically equivalent.

Note that OTC vitamins are not uncommonly grouped based on general similarities but may differ in exact vitamin content and vitamin strength.

Piggyback Solution Products

Products that contain the drug already in solution and are specifically intended for intravenous piggyback (IVPB) administration (Dosage Form code of HP) have their strengths stated in terms of the total amount of drug per total volume. This permits the strengths to be expressed in the format normally used for these products in settings such as hospitals or home health care. Since these IVPB products have different amounts of total drugs in different package sizes (drug/volume), they have different Clinical Formulation IDs (GCN_SEQNOs), which makes it easier to distinguish between them. For example:

Piggyback Solution Strength Example

Label Name	Strength	Strength - 60
GENTAMICIN SULFATE IN NS	100MG/0.1L	100 mg/100 mL
GENTAMICIN SULFATE IN NS	80MG/100ML	80 mg/100 mL
AVELOX	400MG/.25L	400 mg/250 mL
DIFLUCAN	200MG/0.1L	200 mg/100 mL

Volume is expressed in terms of liters (L) when space constraints in the STR field prohibit the usual statement of milliliters (ML).

Apothecary to Metric Conversion

The following table lists standard FDB conversions from apothecary to metric units. These standard conversions are used when strengths or weights are given only in apothecary units.

Apothecary to Metric Conversion Table

Weight Apothecary	Metric	Liquids Apothecary	Metric
1 POUND	480 G	1 PINT	480 ML
1 OUNCE	30 G	8 FL. OZ	240 ML

12 GRAINS	750 MG	1 FL. OZ	30 ML
10 GRAINS	600 MG	10 MINIMS	0.6 ML
7.5 GRAINS	500 MG	1 MINIM	0.06 ML
6 GRAINS	400 MG		
5 GRAINS	300 MG		
4 GRAINS	250 MG		
3 GRAINS	200 MG		
2.5 GRAINS	150 MG		

Acetylsalicylic acid is an exception to these conversions. Five grains of acetylsalicylic acid is equivalent to 325MG by long-standing tradition.

Routed Generic

The routed generic is a formulation-based concept that enables clinical screening at the routed generic level. See [Formulation-based MAPs](#) for more information.

The Routed Generic concept includes the following list of identifiers and codes:

ROUTED_GEN_ID

The Routed Generic Identifier ([ROUTED_GEN_ID](#)) is an eight-character numeric identifier that represents a unique combination of the Ingredient List Identifier ([HICL_SEQNO](#)) and Route of Administration Code ([GCRT](#)).

- zero to many FDB International Drug Codes (IDCs)
- zero to many FDB Product Identifiers (FDB_PRODUCT_IDs)
- one to many Clinical Formulation IDs (GCN_SEQNOs)

However, an IDC, GCN_SEQNO, or FDB_PRODUCT_ID can only have one ROUTED_GEN_ID.

The ROUTED_GEN_ID will always represent the same HICL_SEQNO and GCRT, but if that combination of HICL_SEQNO and GCRT is no longer relevant, the ROUTED_GEN_ID might not appear in the data.

A Clinical Formulation ID ([GCN_SEQNO](#)) can be associated to a ROUTED_GEN_ID even if the Clinical Formulation ID (GCN_SEQNO) is not associated to any active NDCs.

The ROUTED_GEN_ID and its description ([ROUTED_GEN_DESC](#)) reside in the [Routed Generic Table](#) (RRTGN0_ROUTED_GEN_MSTR).

ROUTED_GEN_STATUS_CD

The Routed Generic Identifier Status Code ([ROUTED_GEN_STATUS_CD](#)) is a one-character, programmatically

derived code that indicates the availability of products on the market that match the Routed Generic. The ROUTED_GEN_STATUS_CD is determined by the status of associated IDCs or FDB_Product_IDs.

The following rules apply:

ROUTED_GEN_STATUS_CODE	Routed Generic Status Code Rule Description
0	Active —at least one associated NDC is not obsolete.
3	Inactive —all associated NDCs are obsolete.
9	Unassociated —no NDCs are associated.

The ROUTED_GEN_STATUS_CD and its description ([ROUTED_GEN_STATUS_CD_DESC](#)) reside in the Routed Generic Status Code Table (RRTGNSD0_RTD_GEN_STATUS_DSC).

Applications

This section provides information about the practical application of data contained in this module.

Retrieving the Ingredients for a Specified Clinical Formulation

Retrieving Related Drug Products Based on a Preferred Route and Ingredients List

Finding a Replacement Ingredient Identifier

Retrieving the Ingredients for a Specified Clinical Formulation

This example illustrates how to retrieve a clinical formulation ingredient list using the Clinical Formulation ID (GCN_SEQNO) of a product.

- (i) Some columns are provided for description purposes only; if they are not important to the success of the application their source tables may not be specified.

A product's clinical formulation is made up of a list of active ingredients. The following algorithm provides the steps for assembling the active ingredient list for vitamins A-C-E + lipase tablets (GCN_SEQNO 015137):

1. Retrieve the Ingredient List Identifier ([HICL_SEQNO](#)) for the given Clinical Formulation ID (GCN_SEQNO) from the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR). Each Clinical Formulation ID (GCN_SEQNO) has a corresponding HICL_SEQNO that represents the list of ingredients for its clinical formulation. For example:

GCN_SEQNO	HICL_SEQNO	GNN60
015137	005800	LIPASE/LECITHIN/VITAMIN A/ASCORBIC ACID/VITAMIN E

- (i) The Generic Name - Long Version (GNN60) column is shown for descriptive reasons only and is not necessary to this step. The GNN60 column is in the [Ingredient List Identifier Description Table](#) (RHICLSQ1_HICLSEQNO_MSTR).

2. Retrieve the Ingredient Code Sequence Numbers ([HIC_SEQN](#)) for the given HICL_SEQNO using the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK). The example product has more than one active ingredient, so the output has more than one row:

HICL_SEQNO	HIC_SEQN
005800	001000
005800	001010
005800	001020
005800	001138
005800	002049

3. Finally, retrieve each Hierarchical Ingredient Code Description ([HIC_DESC](#)) using the [Hierarchical Ingredient Code Description Table](#) (RHICD5_HIC_DESC).

HIC_SEQN	HIC	HIC_DESC

001000	C6AA	vitamin A
001010	C6CC	ascorbic acid
001020	C6EE	vitamin E
001138	D4GL	lipase
002049	M4EB	lecithin

-  The Hierarchical Ingredient Code (**HIC**) is not necessary to this application, but is useful as it tells each ingredient's specific therapeutic class.

Retrieving Related Drug Products Based on a Preferred Route and Ingredients List

This application illustrates how to retrieve a list of packaged products that have the same active ingredients and route of administration as a given product but with a variation of strengths and dosage forms.

- i** Some columns are provided for description purposes only; if they are not important to the success of the application their source tables may not be specified.

The following algorithm provides the steps for assembling a list of related drug products for the orally administered product LEVAQUIN 250 MG TABLET (DIN 02236841).

1. Retrieve the product's Clinical Formulation ID (**GCN_SEQNO**) using its DIN column value and the **IDDF Canada Drug Product Table** (RICAIDC1_DRUG_PRODUCT) table. For example:

DIN	GCN_SEQNO
02236831	029927

2. Retrieve the Clinical Formulation ID's (**GCN_SEQNO**'s) Ingredient List Identifier (**HICL_SEQNO**) and Route of Administration Code (GCRT) using the **Clinical Formulation ID Table** (RGCNSEQ4_GCNSEQNO_MSTR). The table below includes these codes' descriptions as well. For example:

GCN_SEQNO	HICL_SEQNO	GNN60	GCRT	RT
029927	012384	LEVOFLOXACIN	1	ORAL

- i** The Generic Name - Long Version (**GNN60**) column is in the **Ingredient List Identifier Description Table** (RHICLSQ1_HICLSEQNO_MSTR). The Route Description (**RT**) column is in the **Route of Administration Description Table** (RROUTED3_ROUTE_DESC).

3. Retrieve a list of Clinical Formulation IDs (**GCN_SEQNO**s) with the same ingredients and route code as the results above using the **Clinical Formulation ID Table** (RGCNSEQ4_GCNSEQNO_MSTR) table.

Variations of drug form and strength are possible and have been included below to illustrate the differences. For example:

GCN_SEQNO	HICL_SEQNO	RT	STR60	DOSE
029927	029927	ORAL	250 mg	TABLET
029928	029927	ORAL	500 mg	TABLET
046771	029927	ORAL	750 mg	TABLET

4. Finally, retrieve all DINs associated with the retrieved Clinical Formulation ID (**GCN_SEQNO**) values from

the RICAIDC1_DRUG_PRODUCT table. This will result in a table of products that have the same ingredients and route of administration as the initial product, but vary in strength and/or dosage form. The DIN value and Label Name (**LN**) column are displayed below. For example:

DIN	LN
02236842	LEVAQUIN 500 MG TABLET
02236841	LEVAQUIN 250 MG TABLET
02246804	LEVAQUIN 750 MG TABLET
02248262	NOVO-LEVOFLOXACIN 250 MG TAB
02248263	NOVO-LEVOFLOXACIN 500 MG TAB
02284677	PMS-LEVOFLOXACIN 250 MG TAB
02284685	PMS-LEVOFLOXACIN 500 MG TAB

 The results of this query can be numerous.

Finding a Replacement Ingredient Identifier

This application illustrates how to retrieve a replacement value for a replaced ingredient identifier.

1. Select the Ingredient Status Code (**ING_STATUS_CD**) values from the **Hierarchical Ingredient Code Description Table** (RHICD5_HIC_DESC) where the Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**) column equals the HIC_SEQN value of a given ingredient.
2. If the **ING_STATUS_CD** value equals 1 (indicating replaced), select the following columns from the **Ingredient Replacement History Table** (RHICRH0_ING_HIST) where the Previous Hierarchical Ingredient Code Sequence Number (**PREV_HIC_SEQN**) column equals the replaced HIC_SEQN value from step 1.
 - Replacement Hierarchical Ingredient Code Sequence Number (**REPL_HIC_SEQN**)
 - Hierarchical Ingredient Code Sequence Number Replacement Effective Date (**HIC_REPL_EFF_DT**)

In this step, the previous Ingredient Number column is populated with the replaced HIC_SEQN value queried in step 1 to retrieve its related replacement Ingredient Number.
3. Repeat steps 1 and 2 using the replacement HIC_SEQN values retrieved in the previous step until the **ING_STATUS_CD** value is 0 (indicating active) or 2 (indicating retired).

Example—Finding a Replacement Ingredient Code

For purposes of demonstrating this application, the following scenario is used: Upon selection of lidocaine (obsolete) (HIC_SEQN 626), a healthcare system first checks its status to determine if it has been replaced before attempting to locate its replacement value.

1. Select the Ingredient Status Code (**ING_STATUS_CD**) values from the **Hierarchical Ingredient Code Description Table** (RHICD5_HIC_DESC) where the Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**) column equals the HIC_SEQN value of a given ingredient.

HIC_SEQN	HIC_DESC	ING_STATUS_CD
626	lidocaine (obsolete)	1

2. If the **ING_STATUS_CD** value equals 1 (indicating replaced), select the following columns from the **Ingredient Replacement History Table** (RHICRH0_ING_HIST) where the Previous Hierarchical Ingredient Code Sequence Number (**PREV_HIC_SEQN**) column equals the replaced HIC_SEQN value from step 1.
 - Replacement Hierarchical Ingredient Code Sequence Number (**REPL_HIC_SEQN**)
 - Hierarchical Ingredient Code Sequence Number Replacement Effective Date (**HIC_REPL_EFF_DT**)

PREV_HIC_SEQN	REPL_HIC_SEQN	HIC_REPL_EFF_DT
626	1350	19990216

3. Repeat steps 1 and 2 using the replacement HIC_SEQN values retrieved in the previous step until the **ING_STATUS_CD** value is 0 (indicating active) or 2 (indicating retired).

HIC_SEQN	HIC_DESC	ING_STATUS_CD
1350	lidocaine	0

Clinical Formulation and Ingredient Data ERD and Technical Specifications

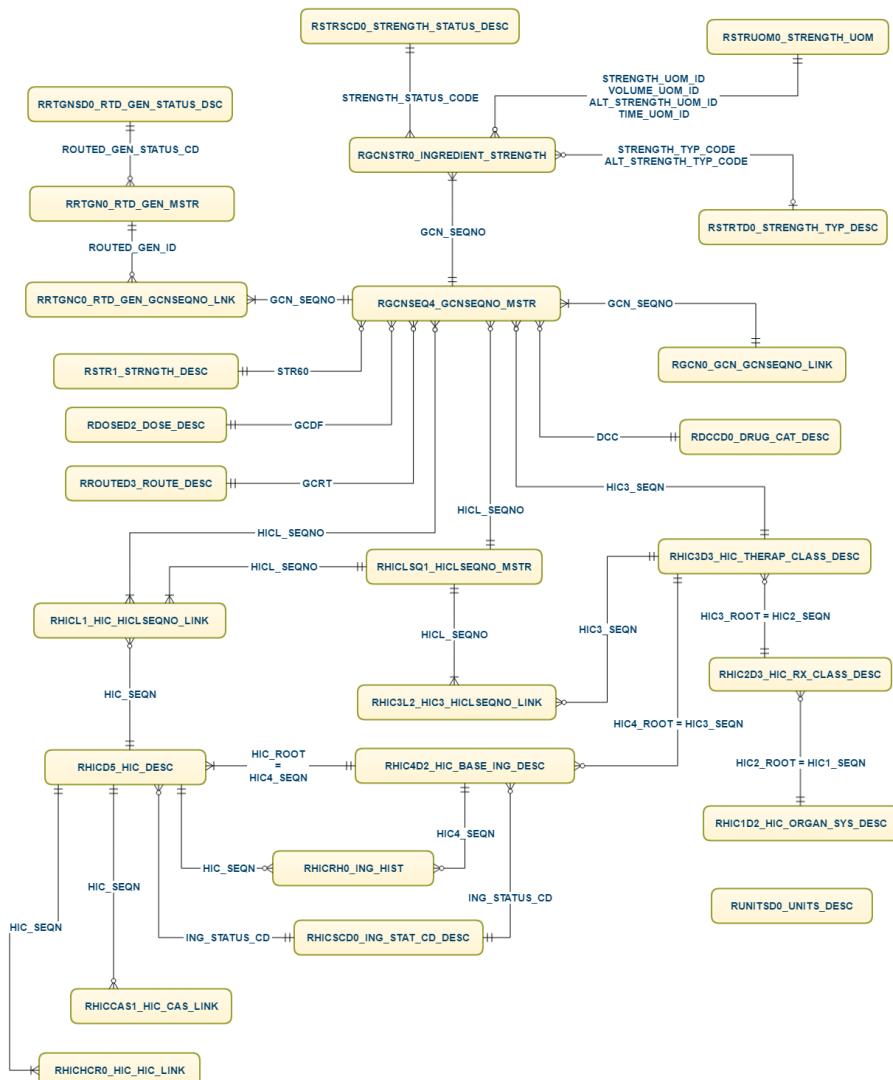
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Clinical Formulation and Ingredient Data Tables
- Clinical Formulation and Ingredient Data ERD

Clinical Formulation and Ingredient Data Tables

- Clinical Formulation ID Table
- Clinical Formulation Ingredient Strength Component Table
- Clinical Formulation Ingredient Strength Type Description Table
- Dosage Form Description Table
- Drug Category Description Table
- Drug Strength Component Table
- GCN_SEQNO/GCN Relation Table
- HIC_SEQN/HIC_SEQN Link Table
- HIC/Chemical Abstracts Service Registry Number Relation Table
- HICL_SEQNO/HIC3 Relation Table
- HICL_SEQNO/HIC Relation Table
- Hierarchical Base Ingredient Code Table
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- Hierarchical Ingredient Code Organ System Table
- Hierarchical Ingredient Code Pharmacological Class Table
- Ingredient List Identifier Description Table
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- Ingredient Status Code Description Table
- Ingredient Strength Unit of Measure Table
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- Routed Generic Table
- Route of Administration Description Table
- Strength Status Code Description Table
- Units Description Table

Clinical Formulation and Ingredient Data ERD



Clinical Formulation Ingredient Strength Component Table

Table Name	RGCNSTR0_INGREDIENT_STRENGTH
Revision Activity	Add.03-31-2005
Purpose	Provides detailed strength data for each ingredient in a clinical formulation.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	HIC_SEQN	Ingredient Identifier (Stable ID)	N	6	9(6)
F	STRENGTH_STATUS_CODE	Ingredient Strength Status Code	N	1	9(1)
	STRENGTH	Clinical Formulation Ingredient Strength	N	20	9(13).9(6)
F	STRENGTH_UOM_ID	Clinical Formulation Ingredient Strength Unit of Measure Identifier	N	8	9(8)
F	STRENGTH_TYPE_CODE	Ingredient Strength Type Code	N	1	9(1)
	VOLUME	Clinical Formulation Ingredient Volume	N	20	9(13).9(6)
F	VOLUME_UOM_ID	Clinical Formulation Ingredient Volume Unit of Measure Identifier	N	8	9(8)
	ALT_STRENGTH	Ingredient Alternate Strength Type Code	N	20	9(13).9(6)

F	ALT_STRENGTH_UOM_ID	Clinical Formulation Ingredient Alternate Strength Unit of Measure Identifier	N	8	9(8)
F	ALT_STRENGTH_TYP_CODE	Ingredient Strength Type Code	N	1	9(1)
	TIME-VALUE	Clinical Formulation Ingredient Time	N	7	9(3).9(3)
F	TIME_UOM_ID	Clinical Formulation Ingredient Time Unite of Measure Identifier	N	8	9(8)
	RANGE_MAX	Clinical Formulation Ingredient Range Maximum	N	20	9(13).9(6)
	RANGE_MIN	Clinical Formulation Ingredient Range Minimum	N	20	9(13).9(6)

Clinical Formulation ID Table

Table Name	RGCNSEQ4_GCNSEQNO_MSTR				
Revision Activity	rev.07-29-2004				
Purpose	Provides attributes of a Clinical Formulation ID (GCN_SEQNO) drug formulation.				

Key	Column Name	Column Description	Format	Length	Picture
P	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
F	HIC3	Hierarchiacal Specific Therapeutic Class Code (Stable ID)	AN	3	X(3)
F	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
F	GCDF	Dosage Form Code (2-character)	AN	2	X(2)
F	GCRT	Route of Administration Code (1-character)	AN	1	X(1)
F	STR	Drug Strength Description	AN	10	X(10)
F	GTC	Therapeutic Class Code, Generic	N	2	9(2)
F	TC	Therapeutic Class Code, Standard	N	2	9(2)
F	DCC	Drug Category Code	AN	1	X(1)
	GCNSEQ_GI	GCN_SEQNO-Level Multi-Source/Single Source Indicator	AN	1	X(1)
	GENDER	Gender-Specific Drug Indicator	AN	1	X(1)

F	HIC3_SEQN	Hierarchical Specific Therapeutic Class Code Sequence Number (Stable ID)	N	6	9(6)
F	STR60	Drug Strength Description - 60	AN	60	X(60)

Clinical Formulation Ingredient Strength Type Description Table

Table Name	RSTRTD0_STRENGTH_TYP_DESC
Revision Activity	add.03-31-2005
Purpose	Provides descriptions for the strength type.

Key	Column Name	Column Description	Format	Length	Picture
P	STRENGTH_TYP_CODE	Strength Type Code	N	1	9(1)
	STRENGTH_TYP_DESC	Strength Type Description	AN	100	X(100)

Dosage Form Description Table

Table Name	RDOSED2_DOSE_DESC
Revision Activity	rev. 7-29-2004
Purpose	Relates the various dosage form codes to their descriptions/abbreviations.

Key	Column Name	Column Description	Format	Length	Picture
P	GCDF	Dosage Form Code (2-character)	AN	2	X(2)
	DOSE	Dosage Form Description	AN	10	X(10)
	GCDF_DESC	Dosage Form Code Description	AN	40	X(40)

Drug Category Description Table

Table Name	RDCCD0_DRUG_CAT_DESC				
Revision Activity	add. 5-12-1992				
Purpose	Relates the Drug Category Code to its text description				

Key	Column Name	Column Description	Format	Length	Picture
P	DCC	Drug Category Code	AN	1	X(1)
	DCC_DESC	Drug Category Code Description	AN	40	X(40)

Drug Strength Component Table

Table Name	RSTR1_STRNGTH_DESC
Revision Activity	rev. 11-18-2004
Purpose	Provides attributes of a drug's potency.

Key	Column Name	Column Description	Format	Length	Picture
P	STR60	Drug Strength Description - 60	AN	60	X(60)
	STRNUM	Drug Strength Number	N	12	9(8).9(3)
	VOLNUM	Drug Strength Volume Number	N	8	9(4).9(3)
	STRUN50	Drug Strength Units - 50	AN	50	X(50)
	VOLUN50	Drug Strength Volume Units - 50	AN	50	X(50)

GCN_SEQNO-GCN Relation Table

Table Name	RGCN0_GCN_GCNSEQNO_LINK
Revision Activity	original
Purpose	Links a unique drug formulation to a slightly broader clinical formulation.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	GCN	Formulation ID	N	5	9(5)

HIC_SEQN-HIC_SEQN Link Table

Table Name	RHICHCR0_HIC_HIC_LINK				
Revision Activity	add.07-29-2004				
Purpose	Links related Ingredients.				

Key	Column Name	Column Description	Format	Length	Picture
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number (Stable ID)	N	6	9(6)
P	RELATED_HIC_SEQN	Related Hierarchical Ingredient Code Sequence Number	N	6	9(6)

HIC-Chemical Abstracts Service Registry Number Relation Table

Table Name		RHICCAS1_HIC_CAS_LINK			
Revision Activity		rev.07-29-2004			
Purpose		Links an active ingredient to its chemical ingredient.			
Key	Column Name	Column Description	Format	Length	Picture
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number	N	6	9(6)
P	CAS9_TBL	Chemical Abstracts Service Registry Number	N	9	9(9)
	HIC	Hierarchical Ingredient Code (Stable ID)	AN	6	X(6)

HICL_SEQNO-HIC3 Relation Table

Table Name	RHIC3L2_HIC3_HICLSEQNO_LINK				
Revision Activity	rev.05-01-1999				
Purpose	Links an ingredient list to a parent therapeutic class.				
Key	Column Name	Column Description	Format	Length	Picture
PF	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
PF	HIC3_SEQN	Hierarchical Specific Therapeutic Class Code Sequence Number (Stable ID)	N	6	9(6)
F	HIC3	Hierarchical Specific Therapeutic Class Code	AN	3	X(3)
	HIC3_RELNO	Hierarchical Specific Therapeutic Class Code Relative Number	N	1	9(1)

HICL_SEQNO-HIC Relation Table

Table Name		RHICL1_HIC_HICLSEQNO_LINK			
Revision Activity		rev.09-01-1997			
Purpose		Links individual ingredients to an ingredient list.			
Key	Column Name	Column Description	Format	Length	Picture
PF	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number (Stable ID)	N	6	9(6)
	HIC_REL_NO	Hierarchical Ingredient Code Relative Number	N	1	9(1)
F	HIC	Hierarchical Ingredient Code	AN	6	X(6)

Hierarchical Base Ingredient Code Table

Table Name	RHIC4D2_HIC_BASE_ING_DESC				
Revision Activity	rev.07-29-2004				
Purpose	Provides attributes of a base ingredient.				

Key	Column Name	Column Description	Format	Length	Picture
P	HIC4_SEQN	Hierarchical Base Ingredient Code Sequence Number(Stable ID)	N	6	9(6)
	HIC4	Hierarchical Base Ingredient Code	AN	4	X(4)
	HIC4_DESC	Hierarchical Base Ingredient Code Description	AN	50	X(50)
	HIC4_ROOT	Hierarchical Base Ingredient Parent HIC3 Sequence Number	N	6	9(6)
F	HIC4_POTENTIAL_INACTIV_IND	Hierarchical Base Ingredient Code Sequence Number Potentially Inactive Indicator	N	1	9(1)
F	ING_STATUS_CD	Ingredient Status Code	N	1	9(1)

Hierarchical Ingredient Code Description Table

Table Name	RHICD5_HIC_DESC
Revision Activity	rev.07-29-2004
Purpose	Relates the HIC_SEQN to its text description and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	HIC_SEQN	Hierarchical Ingredient Code Sequence Number (Stable ID)	N	6	9(6)
	HIC	Hierarchical Ingredient Code	AN	6	X(6)
	HIC_DESC	Hierarchical Ingredient Code Description	AN	50	X(50)
	HIC_ROOT	Hierarchical Ingredient Parent HIC4 Sequence Number	N	6	9(6)
F	HIC_POTENTIALLY_INACTIV_IND	Hierarchical Ingredient Code Sequence Number Potentially Inactive Indicator	N	1	9(1)
F	ING_STATUS_CD	Ingredient Status Code	N	1	9(1)

Hierarchical Ingredient Code Organ System Table

Table Name	RHIC1D2_HIC_ORGAN_SYS_DESC				
Revision Activity	rev.10-03-2002				
Purpose	Provides attributes of an organ class.				
Key	Column Name	Column Description	Format	Length	Picture
P	HIC1_SEQN	Hierarchical Organ System Code Sequence Number (Stable ID)	N	6	9(6)
	HIC1	Hierarchical Organ System Code	AN	1	X(1)
	HIC1_DESC	Hierarchical Organ System Code Description	AN	50	X(50)

Hierarchical Ingredient Code Pharmacological Class Table

Table Name	RHIC2D3_HIC_RX_CLASS_DESC				
Revision Activity	rev.10-03-2002				
Purpose	Provides attributes of a pharmacological class.				

Key	Column Name	Column Description	Format	Length	Picture
P	HIC2_SEQN	Hierarchical Pharmacological Class Code Sequence Number (Stable ID)	N	6	9(6)
	HIC2	Hierarchical Pharmacological Class Code	AN	2	X(2)
	HIC2_DESC	Hierarchical Pharmacological Class Code Description	AN	50	X(50)
	HIC2_ROOT	Hierarchical Pharmacological Class Code Parent HIC1 Sequence Number	N	6	9(6)

Ingredient List Identifier Description Table

Table Name	RHICLSQ1_HICLSEQNO_MSTR
Revision Activity	rev.11-01-1996
Purpose	Relates the HICL_SEQNO to the generic drug ingredient list.

Key	Column Name	Column Description	Format	Length	Picture
P	HICL_SEQNO	Ingredient List Identifier (Stable ID)	N	6	9(6)
	GNN	Generic Name - Short Version	AN	30	X(30)
	GNN60	Generic Name - Long Version	AN	60	X(60)

Ingredient Replacement History Table

Table Name	RHICRH0_ING_HIST				
Revision Activity	add.07-29-2004				
Purpose	Tracks the ingredient's replacement history.				
Key	Column Name	Column Description	Format	Length	Picture
P	REPL_HIC_SEQ_N	Replacement Hierarchical Ingredient Code Sequence Number	N	6	9(6)
P	PREV_HIC_SEQ_N	Previous Hierarchical Ingredient Code Sequence Number	N	6	9(6)
	HIC_REPL_EFF_DT	Hierarchical Ingredient Code Sequence Number Replacement Effective Date	N	8	9(8)

Ingredient Status Code Description Table

Table Name	RHICSCD0_ING_STAT_CD_DESC				
Revision Activity	add.07-29-2004				
Purpose	Provides the description of the Ingredient Status Code.				

Key	Column Name	Column Description	Format	Length	Picture
P	ING_STATUS_CD	Ingredient Status Code	N	1	9(1)
	ING_STATUS_CD_DESC	Ingredient Status Code Description	AN	50	X(50)

Ingredient Strength Unit of Measure Table

Table Name	RSTRUOM0_STRENGTH_UOM
Revision Activity	add.03-31-2005
Purpose	Provides abbreviations and descriptions of the strength unit of measure.

Key	Column Name	Column Description	Format	Length	Picture
P	UOM_ID	Strength Unit of Measure Identifier	N	8	9(8)
	UOM_DESC	Strength Unit of Measure Description	AN	50	X(50)
	UOM_ABBR	Strength Unit of Measure Abbreviation	AN	10	X(10)
	UOM_PREFERRED_DESC	Strength Unit of Measure Preferred Description	AN	50	X(50)

Routed Generic Clinical Formulation Identifier Link Table

Table Name	RRTGNGC0_RTD_GEN_GCNSEQNO_LNK				
Revision Activity	originaladd.09-24-2015				
Purpose	Links a clinical formulation to a routed generic.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation Identifier (Stable ID)	N	6	9(6)
F	ROUTED_GEN_ID	Routed Generic Identifier	N	8	9(8)

Routed Generic Status Code Table

Table Name	RRTGNSD0_RTD_GEN_STATUS_DSC				
Revision Activity	originaladd.09-24-2015				
Purpose	Links a routed generic status code to its description.				

Key	Column Name	Column Description	Format	Length	Picture
P	ROUTED_GEN_STATUS_CD	Routed Generic Status Code	AN	1	X(1)
	ROUTED_GEN_STATUS_CD_DESC	Routed Generic Status Code Description	AN	30	X(30)

Routed Generic Table

Table Name	RRTGN0_ROUTE GEN_MSTR				
Revision Activity	originaladd.09-24-2015				
Purpose	Provides the description and attributes of the routed generic.				
Key	Column Name	Column Description	Format	Length	Picture
P	ROUTED_GEN_ID	Routed Generic Identifier	N	8	9(8)
	ROUTED_GEN_DESC	Routed Generic Identifier Description	AN	100	X(100)
F	GCRT	Clinical Formulation Identifier Route	AN	1	X(1)
F	HICL_SEQNO	Ingredient List Identifier Route (Stable ID)	N	6	9(6)
F	ROUTED_GEN_STATUS_CD	Routed Generic Identifier Status Code	AN	1	X(1)

Route of Administration Description Table

Table Name	RROUTED3_ROUTE_DESC
Revision Activity	rev.07-29-2004
Purpose	Relates the various routes of administration codes to their descriptions/abbreviations.

Key	Column Name	Column Description	Format	Length	Picture
P	GCRT	Route of Administration Code (1-character)	AN	1	X(1)
	RT	Route Description	AN	10	X(10)
	GCRT2	Route of Administration Code (2-character)	AN	2	X(2)
	GCRT_DESC	Route Code Interpretation	AN	40	X(40)
	SYSTEMIC	Systemic Route Indicator	AN	1	X(1)

Strength Status Code Description Table

Table Name	RSTRSCD0_STRENGTH_STATUS_DESC				
Revision Activity	add.03-31-2005				
Purpose	Provides descriptions of the strength statuses.				
Key	Column Name	Column Description	Format	Length	Picture
P	STRENGTH_STATUS_CODE	Ingredient Strength Status Code	N	1	9(1)
	STRENGTH_STATUS_DESC	Strength Status Description	AN	100	X(100)

Units Description Table

Table Name	RUNITSD0_UNITS_DESC
Revision Activity	add.09-30-2004
Purpose	Relates the units description fields from the Min/Max, DRCM, NEOM, POEM, IVM modules to the TJC-compliant units descriptions.

Key	Column Name	Column Description	Format	Length	Picture
P	DOSING_MODULE_UNIT_ABBREV	Dosing Module Unit Abbreviation	AN	30	X(30)
	UNIT_DESC_ABBREV	Unit Description Abbreviation	AN	30	X(30)
	UNIT_DESC_EXPANDED	Units Description Expanded	AN	60	X(60)

-  The DOSING_MODULE_UNIT_ABBREV column might contain abbreviations considered inappropriate by The Joint Commission (TJC) and the Institute for Safe Medication Practices (ISMP). For TJC- and ISMP-compliant unit descriptions, use the UNIT_DESC_EXPANDED or UNIT_DESC_ABBREV columns.

Packaged Product

- General Information
- Packaged Product Editorial Policies
- Applications
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- Overview
- Definitions
 - DIN
 - NPN
 - Packaged Product
- Concepts
 - Manufactured Product Information
 - Packaging Information Provided by McKesson Canada
 - Packaged Product Data Uses

Overview

Packaged Product data covers information about medications and natural health products available in Canada.

Medications with a Drug Identification Number (DIN) have product attributes and identifiers assigned by Health Canada as well as attributes defined by FDB. This information includes product names, Federal classification schedule, data change identifiers, etc.

Some medications with a DIN also have packaging information available. Packaging information, created and maintained by McKesson Canada Wholesale, provides product attributes and identifiers that describe packaging information. Packaging information includes GTIN, UPC, package size, availability, and Provincial and Federal tax information for packaged products distributed by McKesson Canada.

Natural Health Products with a Natural Product Number (NPN) or a Homeopathic Medicine Number (DIN-HM) have product attributes and identifiers assigned by Health Canada. A subset of the most clinically relevant natural health products have additional FDB attributes and links to FDB clinical knowledge assigned.

FDB does not have packaging information for natural health products at this time.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)), Routed Medication ID ([ROUTED_MED_ID](#)), and Routed Generic ID ([ROUTED_GEN_ID](#)) levels in the FDB knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also defined.

DIN

A Drug Identification Number (DIN) is a computer-generated eight digit number assigned by Health Canada to a

drug product prior to being marketed in Canada. It uniquely identifies all drug products sold in a dosage form in Canada and is located on the label of prescription and over-the-counter drug products that have been evaluated and authorized for sale in Canada.

A DIN uniquely identifies the following product characteristics: manufacturer; product name; active ingredient(s); strength(s) of active ingredient(s); pharmaceutical form; route of administration.

NPN

The Natural Product Number (NPN) is an eight-character numeric identifier assigned by Health Canada to all natural health products that have been evaluated and approved for sale in Canada.

Health Canada defines "natural health products (NHPs)" as follows: "NHPs must be safe to use as over-the-counter products and not need a prescription to be sold." These products include:

- Vitamins and minerals
- Herbal remedies
- Homeopathic medicines
- Traditional medicines such as traditional Chinese medicines
- Probiotics

Other products like amino acids and essential fatty acids

Packaged Product

A packaged product is the drug, supply, or device in the container received from the labeler.

Concepts

This section describes the concepts and database elements that are important for understanding the two-levels of information that comprise the Packaged Product:

Manufactured Product Information

Manufactured product information of a drug product is found in the [IDDF Canada Drug Product Table \(RICAIDC1_DRUG_PRODUCT\)](#) and is supported by the [IDDF Canada Labeler \(MFG\) Identifier Description Table \(RLBLRCA1_LBLR_DESC\)](#). This data provides the following:

- Stable drug product identifiers that include links to Clinical Formulation IDs and flexible product names
- Canadian regulatory information that provides product grouping according to their ingredient list and classification schedule
- Tracking of changed or obsolete data
- Manufacturer information

Drug Product Identifiers

FDB uses the International Drug Code ([IDC](#)) and the Drug Identification Number ([DIN](#)) to provide manufactured product information of drug products.

FDB International Drug Code (IDC)

The IDC is a stable identifier, created and maintained by FDB, that represents the country and record number of a drug product. The IDC is the key column in the RICAIDC1_DRUG_PRODUCT table and can be used for navigating to a specific drug product or for storing a drug product in a patient's profile.

Drug Identification Number (DIN)

The DIN is a unique identifier assigned by Health Canada to all drug products (prescription and over-the-counter) that have been evaluated by the Therapeutic Products Directorate (TPD) and are approved for sale in Canada.

- i** Formerly, General Public (GP) numerical identifiers were issued by the Therapeutic Programme to identify proprietary medicines - products that may be purchased without prescriptions in any retail outlet. The Therapeutic Programme no longer issues General Public (GP) numerical identifiers. They have now been replaced by DINs.

- i** DINs are not specific to package sizes. The Canadian Federal Government has no plans to add package size specificity to DINs.

Cross-mapping between the DIN in FDB MedKnowledge™ Canada and U.S.

You can cross-map between Canadian DINs and U.S. NDCs through the Clinical Formulation ID ([GCN_SEQNO](#)), as the Clinical Formulation identifier is an element common to both Canadian and U.S. MedKnowledge data files.

The following example shows two products that may be considered related drug products because they share the same name and the same GCN_SEQNO 000015.

- i** Note that when cross-mapping through the Clinical Formulation ID one DIN may return multiple NDCs. This example demonstrates one of the returned NDCs.

DIN (Canada)	IDC	LN (Canada)	GCN_SEQNO	NDC (U.S.)	LN25 (U.S.) Description
00017671	03000000438	HALOPERIDOL 2 MG TABLET	3975	00045024276	HALDOL 2MG TABMNEI

Cross-mapping between Canadian packaged drugs (GTIN) and U.S. packaged drugs (NDC) through the Clinical Formulation ID only provides a list of "candidates" for generic substitution. Therapeutic equivalence is determined by such factors as having the same ingredient(s) in the same concentration with the same pharmacokinetics (the way the body absorbs, distributes, metabolizes and eliminates the drug). If it is found that two similar drugs differ by any of these factors, then these drugs are not substitutable. In the U.S., FDB provides the FDA Orange Book Code ratings to aid in this determination. Orange Book Codes do not cover Canadian drugs, nor does FDB provide an alternative code system covering Canadian drugs. The final decision to substitute must include a review of local Board of Pharmacy regulations relative to drug substitution and the dispensing pharmacist's best professional judgment.

FDB collects and publishes inactive ingredient (excipient ingredient) information within our U.S. drug file. FDB

does not collect or publish excipient ingredient information within our Canada drug file. Excipient ingredients must also be considered when deciding to substitute drugs and appropriateness for dispensing.

Data Change Identifiers

Manufactured product data provides discontinued and obsolete dates, as well as replacement and previous DIN numbers that can be used to track changes in product data.

Obsolete Date Identifiers

FDB maintains obsolete dates within the IDDF CA Ottawa Disc Date (**ICAOTDTE**) column and the IDDF Obsolete Date (**IOBSDTE**) column. The ICAOTDTE column contains the obsolete dates supplied by the Drug Product Database (DPD), which is maintained by Health Canada. Health Canada marks products as discontinued when they receive notification from the manufacturer. It is possible that a product may still be on pharmacy shelves after the DIN has been marked as discontinued.

-  Since Health Canada relies on status information from the manufacturer, a product may still appear as active on the DPD despite being obsolete.

The IOBSDTE column contains the date or estimated date (as provided by the manufacturer or Health Canada) on which a product's obsolete status begins. The date format is CCYYMMDD.

FDB applies an obsolete date to those products that are no longer maintained on MedKnowledge because they are discontinued, no longer marketed, no longer produced, or otherwise made unavailable to the marketplace. FDB also applies an obsolete date to products that provide an insufficient basis for an assessment of their safety and efficacy or otherwise present regulatory compliance issues.

FDB never deletes DINs (except duplicates). Customers may need them for activities such as drug utilization reviews or other retrospective activities. Thus, FDB has more DINs than occur in the federal government's database.

Change History Identifiers

Change history on a DIN can be tracked using the Canadian Previous Drug Identification Number (**ICAPDIN**) and the Replacement DIN (**ICAREPDIN**) identifiers. The ICAPDIN identifies a previous number for a selected product while the ICAREDIN ties a pre-existing DIN to the new DIN replacing it.

Product Names

Manufactured product data provides flexible product descriptions that can be used to display the appropriate product name information determined by your business needs. Located in the **IDDF Canada Drug Product Table** (RICAIDC1_DRUG_PRODUCT), the Brand Name (**BN**), Label Name (**LN**), Canadian Product Name (**ICABN**), and Additional Descriptor (**AD**) columns provide various levels of specificity for each drug product.

The BN column contains the drug name that usually appears on the package label and frequently the trademark. The LN column contains the drug name on the package label, but also includes the strength description and the dosage form description for a specified product. The ICABN column supplies the product name issued by the Therapeutic Products Directorate. For example, DIN 00353027 has the following descriptions:

BN	LN	ICABN
LOESTRIN	LOESTRIN 1.5/30 TABLET	LOESTRIN 1.5/30 28DAY PACK

The AD column provides additional drug product information that can be used to distinguish a drug product record by color or type, trademarked dosage forms, special packaging, and other unique characteristics. The example below shows how the Additional Descriptor distinguishes the above drug product (DIN 00353027) as a 28-day pack.

BN	DIN	AD
LOESTRIN	00353027	28 DAY PACK

Manufacturer/Labeler Information

MedKnowledge provides labeler information in the **IDDF Canada Labeler (MFG)** Identifier Description Table (RLBLRCA1_LBLR_DESC) that identifies product manufacturers/labelers. FDB provides the IDDF MFG/Labeler Unique Identifier (**ILBLRID**), Manufacturer/Distributor Name (**MFG**), and Manufacturer Description (IDDF) (**IMFGD**) to identify a manufacturer for a specified product.

For example, *Motrin Tablets 600 mg* has the following labeler information:

ILBLRID	MFG	IMFGD
CA1787	MCNEIL CONSUMER	MCNEIL CONSUMER PRODUCTS CO DIV J&J IN

Canadian Federal Regulatory Codes

MedKnowledge contains drug information from the Drug Product Database (DPD), which is compiled and maintained by Health Canada. DPD data provides the Canadian Product Name (**ICABN**) and IDDF CA Ottawa DISC Date (**ICAOTDTE**), as well as the following data:

- Canadian Federal Regulatory Code (**ICAFSCH**)—The federal classification schedule for a specified drug. If a drug's schedule has changed, the previous schedule for the drug is maintained in the Canadian Federal Regulatory Code-Prev (**ICAPFSCH**) column.
- Canadian Active Ingredient Group (**ICAAIG**)—Assigned by the Therapeutic Products Programme, the AIG is a 10-digit number that designates products that have the same active ingredients and strengths.
- Company Code (**ICACOMP_CD**)—a six-digit company abbreviation assigned to each distributor by Health Canada.

Packaging Information Provided by McKesson Canada

Packaging information is licensed from McKesson Canada and is created and maintained by McKesson Canada. Only packaging information supplied by McKesson Canada is available in the Canadian version of FDB MedKnowledge™.

McKesson Canada's packaging data resides in the **IDDF Canada Packaged Product Master Table** (RICAPP0_PACKAGED_PRODUCT_MSTR) and is supported by the **IDDF Canada Packaged Product Status**

Description Table (RICASCD0_PKG_PRDCT_STATUS_DSC).

- i** MedKnowledge packaging information is limited to what McKesson Canada has made available, therefore packaging attributes within MedKnowledge (Canada) do not match the packaging information in MedKnowledge (U.S.). For example, MedKnowledge (Canada) packaging information does not have the Home Health Indicator (HOME), Mini Selection Indicator (MINI), Shelf Pack (SHLF_PCK), or Shipper Quantity (SHIPPER) attributes found in MedKnowledge (U.S.).

Global Trade Item Number (GTIN)

The GTIN is a unique identifier assigned to a packaged product by the manufacturer according to guidelines specified by the GS1 Standards Organization (www.gs1.org).

Used to identify trade items (products and services), GTIN numbers are 14-digits in length and are constructed from one of several different formats, including:

- GTIN-8 (EAN-8)
- GTIN-12 (UPC)
- GTIN-13 (EAN-13)
- GTIN-14 (EAN/UCC-128 or ITF-14)

Within the **IDDF Canada Packaged Product Master Table** (RICAPP0_PACKAGED_PRODUCT_MSTR), the Global Trade Item Number (**GTIN**) column contains the 14-digit GTIN number. The RICAPP0_PACKAGED_PRODUCT_MSTR table maintains three columns that segment the GTIN number into sections without the final check digit. The following table defines the GTIN sections and identifies the associated package level column for each segment:

GTIN Definition

Digit Segments	Definition
First digit	Provides the package level. This value is contained in the UPC Package Code (UPC_PACKAGE_CODE) column.
Following 7 digits	Provides the manufacturer number. This value is contained in the UPC Vendor Code (UPC_VENDOR_CODE) column.
Following 5 digits	Indicates a specific product; assigned by the manufacturer. This value is contained in the UPC Product Code (UPC_PRODUCT_CODE) column.
Last digit	Check digit. This value is not contained in a separate MedKnowledge column.

- i** Because the 14-digit GTINs are built of different formats, you cannot always construct a complete UPC from the UPC subcomponent fields included in this file.

Please be aware that unusual records (such as a single GTIN representing a pack and a case) may appear in the packaging data when manufacturers assign values to a GTIN that do not meet GS1

standards.

Cross-mapping between the GTIN in FDB MedKnowledge™ Canada and U.S.

You can cross-map between GTINs and U.S. packaged drugs NDCs through the Clinical Formulation ID (**GCN_SEQNO**), as the Clinical Formulation ID identifier is an element common to both Canadian and U.S. MedKnowledge data files. The following example shows two products that may be considered related drug products because they share the same name and the same GCN_SEQNO 000015.

- i Note that when cross-mapping through the Clinical Formulation ID one GTIN may return multiple NDCs. This example demonstrates one of the returned NDCs.

GTIN (Canada)	IDC	LN (Canada)	GCN_SEQNO	NDC (U.S.)	LN25 (U.S.) Description
00817290517022	03000047232	LANOXIN 0.25MG/ML VIAL	000015	00081026010	LANOXIN250MC G/ML AMPB-W

Cross-mapping between Canadian packaged drugs (**GTIN**) and U.S. packaged drugs (NDC) through the Clinical Formulation ID only provides a list of “candidates” for generic substitution. Therapeutic equivalence is determined by such factors as having the same ingredient(s) in the same concentration with the same pharmacokinetics (the way the body absorbs, distributes, metabolizes and eliminates the drug). If it is found that two similar drugs differ by any of these factors, then these drugs are not substitutable. In the U.S., FDB provides the FDA Orange Book Code ratings to aid in this determination. Orange Book Codes do not cover Canadian drugs, nor does FDB provide an alternative code system covering Canadian drugs. The final decision to substitute must include a review of local Board of Pharmacy regulations relative to drug substitution and the dispensing pharmacist's best professional judgment.

FDB collects and publishes inactive ingredient (excipient ingredient) information within our U.S. drug file. FDB does not collect or publish excipient ingredient information within our Canada drug file. Excipient ingredients must also be considered when deciding to substitute drugs and appropriateness for dispensing.

Package Size Formats

McKesson Canada's package size formats describe the number and type of dispensable units in a packaged product, for example 100 each or 120 mL. Use the Product Format (**PRODUCT_FORMAT**) value with the Package Size Unit (**PACKAGE_SIZE_UNIT**) to display a numeric or alphanumeric representation of the package size. Use the Supplier Product Format (**SUPPLIER_PRODUCT_FORMAT**) value with the PACKAGE_SIZE_UNIT to display a numeric or metric decimal representation of the package size.

The following example demonstrates the two formats:

GTIN	LN	PRODUCT_FORMAT	SUPPLIER_PRODUCT_FORMAT	PACKAGE_SIZE_UNIT
00063806510173	VITAMIN C 500 MG TABLET	100+20	0120.000	EACH

00076290102530	SYNTHROID 0.025 MG TABLET	100	0100.000	EACH
00882135488829	SODIUM CHLORIDE 0.9% VIAL	25X10	0250.000	ML

- The first product, Vitamin C 500 MG Tablet, has a total package size of 120 each per package (SUPPLIER_PRODUCT_FORMAT and PACKAGE_SIZE_UNIT). The PRODUCT_FORMAT column value of 100+20 reports that this product contains 100 each, plus an additional 20 each for a total of 120 each per package.
- The third product, Sodium Chloride 0.9% Vial, has a total package size of 250 mL per package (SUPPLIER_PRODUCT_FORMAT and PACKAGE_SIZE_UNIT). The PRODUCT_FORMAT column value of 25X10 reports that this product contains 25 vials at 10 mL per vial for a total of 250 mL per package.

Package Size Indicators

Package Size indicators identify whether the Global Trade Item Number (**GTIN**) of the product represents a unit, pack, or case.

The following table shows a single product (**DIN**) distributed as a unit, pack, and case. A value of 1 in either the Unit Indicator (**UNIT_IND**), Pack Indicator (**PACK_IND**), or Case Indicator (**CASE_IND**) column indicates that the GTIN represents that package size. Notice that the GTIN value for each DIN changes when the distribution indicator changes.

GTIN	00057606120809	20057606120803	40057606120807
DIN	02231208	02231208	02231208
LN	PMS-MEFENAMIC 250 MG CAPSULE	PMS-MEFENAMIC 250 MG CAPSULE	PMS-MEFENAMIC 250 MG CAPSULE
UNIT_IND	1	0	0
PACK_IND	0	1	0
CASE_IND	0	0	1

On occasion a packaged product may be assigned a GTIN that does not follow GS1 standards resulting in a single GTIN representing two package sizes. For example, a single GTIN may represent a pack and a case.

Product Availability

Product availability of packaging information, determined by McKesson Canada, resides in the Status Code (**STATUS_CODE**) column of the **IDDF Canada Packaged Product Master Table** (**RICAPP0_PACKAGED_PRODUCT_MSTR**) table. This column indicates if a product (**GTIN**) is Active, Discontinued by the Manufacturer, Discontinued by the Data Supplier (McKesson Canada), or Marked for Deletion. The following table describes each status code:

STATUS_CODE_DESC	Expanded Description
Active	McKesson Canada is currently distributing the product.
Discontinued by Manufacturer	The manufacturer has notified McKesson Canada that the product has been discontinued. Packaging information for the product may remain on the database for about 3 years. McKesson Canada does not update information on discontinued products.
Discontinued by Data Supplier (McKesson Canada)	McKesson Canada has discontinued distributing the product. Packaging information for the product may remain on the database for about 3 years. McKesson Canada does not update information on discontinued products.
Marked for Deletion	The product will be removed from the database by McKesson Canada within a few weeks.

Packaged Product Data Uses

The following sections demonstrate Packaged Product data and provides some possible uses that incorporate manufactured product and McKesson Canada packaging information.

Inventory Control and Purchasing

Packaged product data provides attributes, such as packaging indicators that are useful in inventory control and purchasing applications.

The following example shows information the inventory system may receive after a pharmacist scans a case of Atasol-15 tablets into inventory.

GTIN	10058738056438
IDC	03000003464
DIN	00293504
LN	ATASOL-15 TABLET
PRODUCT_FORMAT	100
PACKAGE_SIZE_UNIT	EACH
UNIT_IND	0
PACK_IND	0
CASE_IND	1
UNIT_QTY_PER_CASE	12
ILBLRID	CA1076
MFG	CHURCH & DWIGHT

Packaged product data shows that this package of Atasol-15 Tablets is manufactured by Church & Dwight and

contains 100 tablets in each unit. The product is packaged as a case with each case containing 12 units. 1,200 tablets are received into inventory.

- i** Packaging information for a product may appear without manufactured product information if a Global Trade Item Number (**GTIN**) is attached to an IDC that was filtered out of the **IDDF Canada Drug Product Table** (RICAIDC1_DRUG_PRODUCT) due to an obsolete date filter. See "Record Counts" in the **About FDB MedKnowledge™** section for more information. To avoid this, either filter your packaged product file by the obsolete date of your IDCs, or opt for an RICAIDC1_DRUG_PRODUCT file that is not filtered based on obsolete years.

Retail Applications

Packaged product data provides attributes such as GST, HST, and Provincial sales tax indicators, which are useful in determining tax information for retail applications. A value of one, as shown in the example below, indicates that the product is subject to that column's sales tax.

GTIN	00058739701439	00055599481129	00055325218623
IDC	03000038195	03000028544	03000004143
DIN	02201712	02156563	00344923
LN	BALMINIL DM + EXPECT SYRUP	SUDAFED COLD AND FLU CAP	DIPROSONE 0.05% OINTMENT
GST_IND	1	1	0
PST_IND_AB	1	0	0
PST_IND_BC	1	0	0
PST_IND_MB	1	1	0
PST_IND_NB	1	1	1
PST_IND_NL	1	1	1
PST_IND_NT	0	0	0
PST_IND_NS	1	1	1
PST_IND_NU	0	0	0
PST_IND_ON	1	1	0
PST_IND_PE	1	0	0
PST_IND_QC	1	1	0
PST_IND_SK	1	1	0
PST_IND_YT	0	0	0
PST_IND_AB	1	0	0

The first column shows that Balminil DM + Expectorant Syrup (GTIN 00058739701439) is subject to GST and HST sales tax, as well as Provincial sales tax in Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan.

Packaged Product Applications

This section provides information about the practical application of data contained in this module.

[Finding the Product Labeler](#)

[Filtering Data for Product Attributes](#)

[Retrieving a List of Candidates for Substitution](#)

[Retrieving a Product's Active Ingredients](#)

[Accessing Clinical Screening Using the GTIN](#)

[Retrieving Canadian Natural Health Products for a MED Medication ID \(MEDID\)](#)

[Retrieving Indications for Canadian Natural Health Products Linked to FDB Clinical Information](#)

[Retrieving Indications for Canadian Natural Health Products Not Linked to FDB Clinical Information](#)

Finding the Product Labeler

This application illustrates how to determine a product's labeler.

For the purposes of demonstrating this application, the following scenario is used: A prescriber wants to find the labeler for the packaged product Prozac 20 mg capsule (IDC 03000011151).

1. Select the IDDF MFG/Labeler Unique Identifier (**LBLW_VCODE**) value from the **IDDF Canada Drug Product Table** (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the IDC value of the packaged product

IDC	BN	ILBLRID
03000011151	Prozac	CA1279

2. Select the Manufacturer Name (**MFG**) and Manufacturer Description (**IMFGD**) values from the **IDDF Canada Labeler (MFG) Identifier Description Table** (RLBLRCA1_LBLR_DESC) (**MFG**) where the **ILBLRID** column equals the value from the previous step.

ILBLRID	MFG	IMFGC
CA1279	Eli Lilly CAN	Eli Lilly Canada Inc

 The IDDF MDF/Labeler Unique Identifier (**LBLW_VCODE**) and Manufacturer Name (**MFG**) columns represent manufacturers and distributors.

Packaged Product - Canada Filtering Data for Product Attributes

This application illustrates how to filter data to display only active products. The following list provides some common attributes that can be used to filter products:

- Status Code (**STATUS_CODE**)
- Unit Indicator (**UNIT_IND**)
- Pack Indicator (**PACK_IND**)
- Case Indicator (**CASE_IND**)

For the purposes of demonstrating this application, the following scenario is used: For inventory purposes, a pharmacist wishes to view product information for active products packaged as either units or packs (or both).

1. Select the FDB International Drug Code (**IDC**) values from the **IDDF Canada Packaged Product Master Table** (RICAPP0_PACKAGED_PRODUCT_MSTR) where each of the following attribute columns equals the listed values:
 - STATUS_CODE = 1 (indicates the product is actively distributed)
 - UNIT_IND = 1 (indicates the product is packaged as a unit) or PACK_IND = 1 (indicates the product is packaged as a pack)
2. Select the Label Name (**LN**) from the RICAPP0_PACKAGED_PRODUCT_MSTR table where the IDC column equals the values from the previous step.

The following table displays a sample list of the data retrieved in the example:

IDC	LN	STATUS_CODE	UNIT_IND	PACK_IND
03000013028	RATIO-LACTULOSE 667 MG/ML	1	1	0
03000022217	BALMINIL 0.1% DECONG SPRAY	1	1	0
03000040619	AMETOP 4% GEL	1	1	0
03000050999	FLEXOGAN CREAM	1	0	1
03000021363	A.C. & C. TABLET	1	1	0
03000008244	SCOPOLAMINE 0.4 MG/ML AMP	1	0	1
03000030571	MINOCIN 50 MG CAPSULE	1	1	0
03000050151	STRESS B W/ 1000 MG VIT C TB	1	1	0

Packaged Product - Canada Retrieving a List of Candidates for Substitution

You can use the Clinical Formulation ID ([GCN_SEQNO](#)) to generate a list of candidates for substitution. The Clinical Formulation ID allows the identification of packaged products with the same ingredient list, dosage form, strength, and route. The Clinical Formulation ID used in combination with other drug product data can be used to manipulate drug product lists, support substitution practices in pharmacies, manage your formulary, and analyze purchasing.

Nutritional formulations (such as, baby formulas, specialized foods, related nutritional foods, most OTC multivitamins, etc.) and medical supplies are often broadly grouped and categorized in association with a Clinical Formulation ID. They are categorized as such so that they may be included in the database for purposes of commerce only and commonly have not been rigorously evaluated for “pharmaceutical equivalence” as is the case for prescription drug items.

Orange Book codes are available only in the U.S. and are not available for use in MedKnowledge.

The Clinical Formulation ID groups packaged products from different manufacturers and distributors and can be used to develop a list of candidates for substitution.

Example—Partial List of Drug Products included in the Clinical Formulation ID 009258

Label Name (LN)	Manufacturer/Distributor
ERYC 250 MG CAPSULE EC	PFIZER CANADA
APO-ERYTHRO E-C 250 MG CAP	APOTEX INC

Although the Clinical Formulation ID groups pharmaceutically equivalent products, clinical judgment must be the final arbiter when determining candidates for substitution.

Example—Retrieving a List of Candidates for Substitution

For the purposes of demonstrating this application, the following scenario is used: A prescriber wants to retrieve a list of candidates for substitution for the product Flutamide 250 MG Tablet (GTIN 00057606010421).

1. Select the FDB International Drug Code ([IDC](#)) value from the [IDDF Canada Packaged Product Master Table](#) (RICAPP0_PACKAGED_PRODUCT_MSTR) where the GTIN column equals the GTIN value of the product.

GTIN	IDC
00057606010421	03000030516

2. Select the Clinical Formulation ID ([GCN_SEQNO](#)) value from the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the value from the previous step.

IDC	GCN_SEQNO	IDC

03000030516	11782	PMS-FLUTAMIDE 250 MG TABLET
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3. Select the IDC values from the RICAIDC1_DRUG_PRODUCT table where the Obsolete Date (**IOBSDTE**) equals 0 and the GCN_SEQNO column equals the value from the previous step.

To retrieve the Manufacturer Name (**MFG**), see the [Finding the Product Labeler](#) application.

GCN_SEQNO	IDC	LN	MFG
011782	03000011184	EUFLEX 250 MG TABLET	SCHERING CANADA
011782	03000030509	NOVO-FLUTAMIDE 250 MG TABLET	NOVOPHARM LTD
011782	03000030516	PMS-FLUTAMIDE 250 MG TABLET	PHARMASCIENCE
011782	03000030752	DOM-FLUTAMIDE 250MG TABLET	DOMINION PHARM
011782	03000030816	FLUTAMIDE 250 MG TABLET	PHARMASCIENCE
011782	03000031164	PENTA-FLUTAMIDE 250MG TAB	PENTAPHARM LTD
011782	03000037369	FLUTAMIDE 250 MG TABLET	PHARMACO CANADA
011782	03000044762	APO-FLUTAMIDE 250 MG TABLET	APOTEX INC
011782	03000044859	FLUTAMIDE 250 MG TABLET	PHARMEI INC
011782	03000044894	NU-FLUTAMIDE 250MG TABLET	NU-PHARM INC
011782	03000044927	FLUTAMIDE 250 MG TABLET	PRO DOC LAB

4. Select the GTIN, Unit Indicator (**UNIT_IND**), Pack Indicator (**PACK_IND**), and Case Indicator (**CASE_IND**) values from the RICAPP0_PACKAGED_PRODUCT_MSTR table where the Status Code column equals 1 and the IDC column equals the values from the previous step.

IDC	GTIN	UNIT_IND	PACK_IND	CASE_IND
03000011184	00056219281006	1	0	0
03000030509	00068510984401	1	0	0
03000030516	00057606010421	1	0	0
03000030516	20057606010425	0	1	0
03000030516	40057606010429	0	0	1

03000044762	00771313130820	1	0	0
03000044927	00779219393882	1	0	0

i The IDC values not listed in the example table do not have product packaging information associated with them. Product packaging data is licensed from McKesson Canada and is created and maintained by McKesson Canada. Only product packaging information supplied by this McKesson Canada is available in MedKnowledge.

5. Prompt the pharmacist to select a drug.

Retrieving a Product's Active Ingredients

This application illustrates how to find a packaged product's active ingredients.

For the purposes of demonstrating this application, the following scenario is used: A prescriber wants to find all active ingredients that are associated with the packaged product Extra Strength Tylenol Cold Nighttime 15 mg Caplets (GTIN 20064541310114).

1. Select the FDB International Drug Code (**IDC**) value from the **IDDF Canada Packaged Product Master Table** (RICAPP0_PACKAGED_PRODUCT_MSTR) where the GTIN column equals the GTIN of the product to screen.

GTIN	IDC
20064541310114	03000014646

2. Select the Clinical Formulation ID (**GCN_SEQNO**) value from the **IDDF Canada Drug Product Table** (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the value from the previous step.

IDC	ICABN	GCN_SEQNO
03000014646	EXTRA STRENGTH TYLENOL COLD NIGHTTIME CAPLET	46480

3. Select the Ingredient List Identifier (**HICL_SEQNO**) value from the **Clinical Formulation ID Table** (RGCNSEQ4_GCNSEQNO_MSTR) where the GCN_SEQNO column equals the value from the previous step.

GCN_SEQNO	HICL_SEQNO
46480	386

4. Select the Ingredient Code Sequence Numbers (**HIC_SEQN**) value from the **HICL_SEQNO/HIC Relation Table** (RHICL1_HIC_HICLSEQNO_LINK) where the HICL_SEQNO column equals the value from the previous step.

HICL_SEQNO	HIC_SEQN
386	1605
386	1653
386	1832
386	4430

5. Select the HIC_SEQN Description (**HIC_DESC**) value from the **Hierarchical Ingredient Code Description Table** (RHICD5_HIC_DESC) where the HIC_SEQN column equals the value from the previous step.

HIC_SEQN	HIC_DESC

1605	Acetaminophen
1653	Dextromethorphan Hbr
1832	Pseudoephedrine HCl
4430	Chlorpheniramine

Packaged Product-Canada Accessing Clinical Screening Using the GTIN

1. Select the FDB International Drug Code (**IDC**) from the **IDDF Canada Packaged Product Master Table** (**RICAPPO_PACKAGED_PRODUCT_MSTR**) where the GTIN column equals the GTIN value from the previous step.

GTIN	IDC
00771313080217	03000044774

2. Select the Clinical Formulation ID (**GCN_SEQNO**) from the **IDDF Canada Drug Product Table** (**RICAIDC1_DRUG_PRODUCT**) where the IDC column equals the value from the previous step.

IDC	GCN_SEQNO	LN
03000044774	17037	APO-CETIRIZINE 10 MG TABLET

3. Use the GCN_SEQNO to access the desired clinical screening information. See the Clinical Screening applications for more information.

Retrieving Canadian Natural Health Products for a MED Medication ID MEDID

For purposes of demonstrating this application, the following scenario is used: A pharmacist is filling an order for Calcium Citrate 350 mg orally every day (MEDID 582700). The system retrieves a list of active products, whether a Canadian Drug Identification Number (DIN) or Canadian Natural Health Product (NPN), that may be used to fill the order.

1. Retrieve the MED Medication ID (**MEDID**) from the **MED Medication Table** (RMIID2_MED) that is associated with the ordered medication.

MEDID	MED_MEDID_DESC
582700	calcium citrate 350 mg calcium tablet

2. Select the FDB International Drug Code (**IDC**) values from the **MED IDC to Medication ID Cross-Reference Table** (RMEDIDC0_IDC_MEDID_LINK) where the MEDID is equal to the value retrieved in step 1 (582700).

i In this scenario, step 2 will not return any results. This indicates that the ordered MED Medication ID (**MEDID**) is a Canadian Natural Health Product.

3. Retrieve the FDB Product Identifier (**FDB_PRODUCT_ID**) from the **MED Product to Medication ID Cross-Reference Table** (RMEDFPM0_FDB_PRD_MEDID) where the MEDID is equal to the value retrieved in the step 1 (582700).

MEDID	FDB_PRODUCT_ID
582700	498563
582700	507698

4. Retrieve the Product Label Name (**PRODUCT_LABEL_NAME**) and filter the previous results using the **Product Master Table** (RCANPM0_PRODUCT_MASTER) where the FDB_PRODUCT_ID equals the value(s) retrieved in the previous step and the Product Obsolete Date (**PRODUCT_OBSOLETE_DATE**) is equal to 0 (indicating an active Canadian Natural Health Product), and if preferred, obsolete less than a specified date.

FDB_PRODUCT_ID	PRODUCT_OBSOLETE_DATE	PRODUCT_LABEL_NAME
498563	0	Calcium Citrate 350 mg tablet
507698	0	Calcium Citrate 350 mg tablet

5. Retrieve the External Identifier (**EXT_IDENTIFIER**) value(s) from the **Products Master Link Table** (RCANPML0_PRODUCT_MASTER_LINK) where the FDB_PRODUCT_ID is equal to the value(s) retrieved in Step 3 (498563 or 507698) and the External Identifier (**EXT_IDENTIFIER_TYPE_ID**) is equal to 1 (for NPN).

FDB_PRODUCT_ID	EXT_IDENTIFIER_TYPE_ID	EXT_IDENTIFIER
498563	1	80001724
507698	1	02158728

6. Display results to user.

Retrieving Indications for Canadian Natural Health Products Linked to FDB Clinical Information

For purposes of demonstrating this application, the following scenario is used: A pharmacist is filling an order for Calcium Citrate 350 mg orally every day (MEDID 582700). The system retrieves a list of active products, whether a Canadian Drug Identification Number (**DIN**) or Canadian Natural Health Product (NPN), that may be used to fill the order.

- i** While indications is the example content for this application, steps 1 and 2 are used to navigate to an FDB Clinical Formulation to retrieve any FDB information for a Natural Health Product. For Natural Health Products linked to FDB Clinical Information, steps 1 and 2 allow you to then navigate from the clinical formulation to FDB clinical screening such as drug-drug interactions.

1. Retrieve the FDB Product Identifier (**FDB_PRODUCT_ID**) from the **Product Master Link Table** (RCANPML0_PRODUCT_MASTER_LINK) where the External Identifier (**EXT_IDENTIFIER**) is equal to the product NPN (0031089) and the External Identifier Type Identifier (**EXT_IDENTIFIER_TYPE_ID**) is equal to 1 (for NPN).

EXT_IDENTIFIER	EXT_IDENTIFIER_TYPE_ID	FDB_PRODUCT_ID
0031089	1	499107

2. Retrieve the Clinical Formulation ID (**GCN_SEQNO**) from the **Product Master Table** (RCANPM0_PRODUCT_MASTER) where the FDB_PRODUCT_ID is equal to the value retrieved in the previous step (499107).

FDB_PRODUCT_ID	GCN_SEQNO
499107	1616

3. Retrieve the INDM Indications Code (**INDCTS**) from the **INDM GCN_SEQNO/Indications Code Relation Table** (RINDMGC0_INDCTS_GCNSEQNO_LINK) where the GCN_SEQNO is equal to the value retrieved in the previous step (1616).

GCN_SEQNO	INDCTS
1616	1867

4. Retrieve the following columns from the **INDM Master Table** (RINDMMA2_INDCTS_MSTR) where the INDCTS is equal to the value retrieved in the previous step (1867) and the INDM Proxy Indicator (**PROXY_IND**) is equal to *N*:

- INDM Sequence Number (**INDCTS_SN**)
- INDM Labeled Code (**INDCTS_LBL**)
- FML Disease Identifier (**DXID**)

INDCTS	PROXY_IND	INDCTS_SN	INDCTS_LBL	DXID

1867	N	0	1	803
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5. Retrieve and display the FML 100-character Description (**DXID_DESC100**) from the [FML Disease Identifier \(DxID\) Table](#) (RFMLDX0_DXID) where the DXID is equal to the value retrieved in the previous step (803).

DXID	DXID_DESC100
803	Iron Deficiency Anemia

Retrieving Indications for Canadian Natural Health Products Not Linked to FDB Clinical Information

For the purposes of demonstrating this application, the following scenario is used: A pharmacist wants to find the indications for the Canadian Natural Health Product Huoxue Tongmai Wan (NPN 80025747).

- i** While Indications is the example content for this application, this same method is used to retrieve Health Canada information for a Natural Health Product.

1. Retrieve the FDB Product Identifier ([FDB_PRODUCT_ID](#)) from the Product Master Link Table (RCANPML0_PRODUCT_MASTER_LINK) where the External Identifier ([EXT_IDENTIFIER](#)) is equal to 80025747 and the External Identifier Type Identifier ([EXT_IDENTIFIER_TYPE_ID](#)) is equal to 1 (for NPN).

- i** In this scenario, step 1 will not return any results. This indicates that the Canadian Natural Health Product in focus is not linked to any FDB Clinical Information. Using the Health Canada Product ID ([HC_PRODUCT_ID](#)) in step 2 you can navigate to information provided by Health Canada such as Purpose, Warnings, Ingredients, etc.

2. Retrieve the Health Canada Canadian NHP Product Identifier ([HC_PRODUCT_ID](#)) from the [Canadian Natural Health Products Product Name Table](#) (RCANPD0_NHP_PRODUCT) where the Health Canada Canadian NHP Product License Number ([HC_LICENSE_NUMBER](#)) is equal to 80025747 (Huoxue Tongmai Wan).

HD_LICENSE_NUMBER	HC_PRODUCT_NAME	HC_PRODUCT_ID
80025747	Huoxue Tongmai Wan	67168

3. Retrieve either the Health Canada Product Purpose (English) ([HC_PURPOSE_E](#)) or Product Purpose (French) ([HC_PURPOSE_F](#)) value from the [Canadian Natural Health Products Purpose Table](#) (RCANPP0_NHP_PRODUCT_PURPOSE) where the [HC_PRODUCT_ID](#) is equal to the value retrieved in the previous step (67168).

HC_PRODUCT_ID	HC_PURPOSE_E	HC_PURPOSE_F
67168	Traditional Chinese medicine use to active blood and unblock meridians, strengthen the heart qi and relieve pain.	S.O.

- i** Each Health Canada Canadian NHP Product Identifier ([HC_PRODUCT_ID](#)) will have either a Health Canada Product Purpose (English) ([HC_PURPOSE_E](#)) or Product Purpose (French) ([HC_PURPOSE_F](#)) value present.

4. Display the Health Canada Product Purpose value retrieved in the previous step to user.

HC_PRODUCT_ID	HD_LICENSE_NUMBER	HC_PURPOSE_E
67168	80025747	Traditional Chinese medicine use to active blood and unblock meridians, strengthen the heart qi and relieve pain.

67168	80025747	Traditional Chinese medicine use to activate blood and unblock meridians, strengthen the heart qi and relieve pain.
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- When the HC_PURPOSE_E value is equal to N/A, do not display the HC_PURPOSE_E value.
- When the HC_PURPOSE_F value is equal to S.O., do not display the HC_PURPOSE_F value.

Packaged Product ERD and Technical Specifications Canada

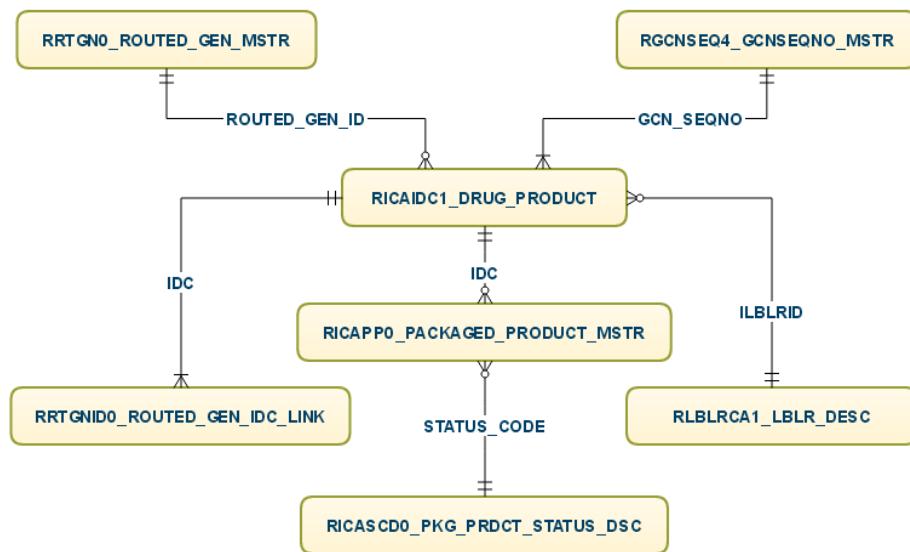
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Packaged Product Tables
- Packaged Product ERD
- Canadian Natural Health Products ERD

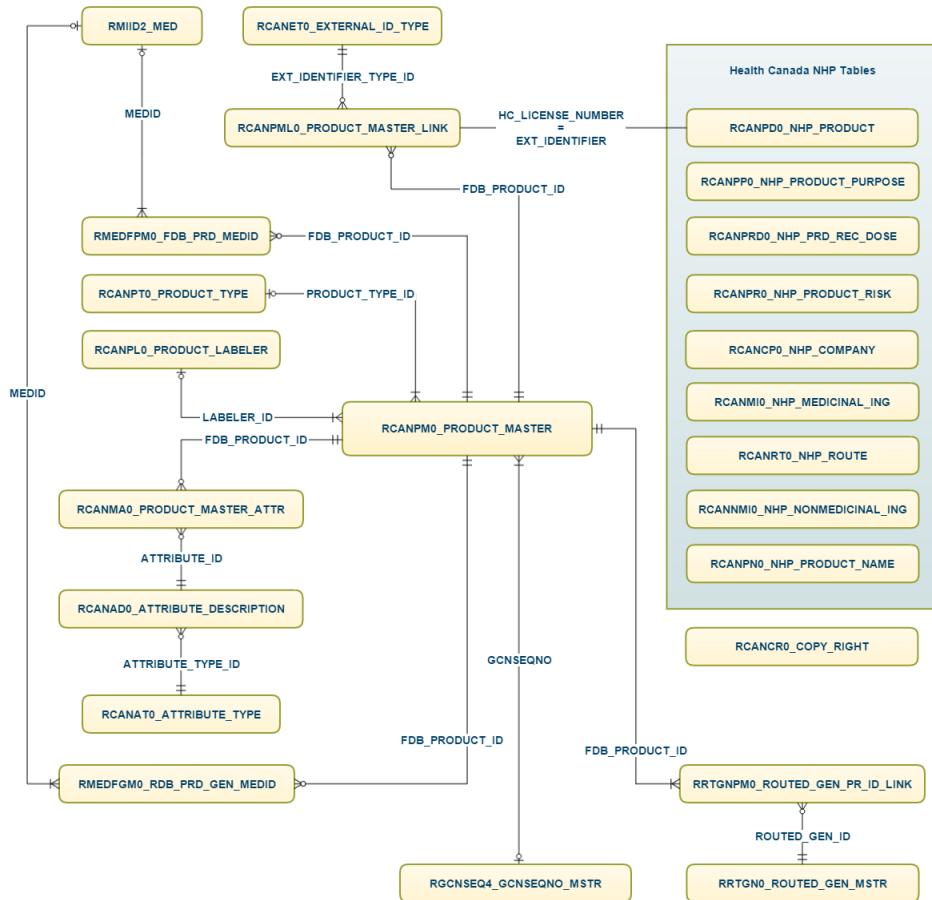
Packaged Product Tables

- Attribute Description Table
- Attribute Type Table
- Canadian Natural Health Products Company Table
- Canadian Natural Health Products Medicinal Ingredient Table
- Canadian Natural Health Products Non-Medicinal Ingredient Table
- Canadian Natural Health Products Product File Table
- Canadian Natural Health Products Product Name Table
- Canadian Natural Health Products Purpose Table
- Canadian Natural Health Products Recommended Dose Table
- Canadian Natural Health Products Risk Table
- Canadian Natural Health Products Route Table
- Copyright Table
- External Identifier Type Table
- IDDF Canada Drug Product Table
- IDDF Canada Labeler (MFG) Identifier Description Table
- IDDF Canada Packaged Product Master Table
- IDDF Canada Packaged Product Status Description Table
- Product Labeler Table
- Product Master Attribute Table
- Product Master Link Table
- Product Master Table
- Product Type Table
- Routed Generic IDC Link Table
- Routed Generic Product ID Link Table

Packaged Product ERD



Canadian Natural Health Products ERD



Attribute Description Table

Table Name	RCANADO_ATTRIBUTE_DESCRIPTION
Revision Activity	add.03-19-2015
Purpose	Contains Attribute IDs, descriptions and types for the Products in the Product Master Attribute file. This table is associated with products having a Natural Product Number (NPN).

Key	Column Name	Column Description	Format	Length	Picture
P	ATTRIBUTE_ID	Attribute Identifier	N	8	9(8)
	ATTRIBUTE_DESC	Attribute Description	AN	100	X(100)
F	ATTRIBUTE_TYPE_ID	Attribute Description Type Identifier	N	8	9(8)

Attribute Type Table

Table Name	RCANAT0_ATTRIBUTE_TYPE
Revision Activity	add.03-19-2015
Purpose	Contains Attribute Type IDs and associated descriptions. This table is associated with products having a Natural Product Number (NPN).

Key	Column Name	Column Description	Format	Length	Picture
P	ATTRIBUTE_TYPE_ID	Attribute Type Identifier	N	8	9(8)
	ATTRIBUTE_TYPE_DESC	Attribute Type Description	AN	100	X(100)
	ATTRIBUTE_TYPE_LENGTH	Length of Attribute	N	8	9(8)
	ATTRIBUTE_TYPE_PRECISION	Precision of the Attribute Type	N	8	9(8)

Canadian Natural Health Products Company Table

Table Name	RCANCP0_NHP_COMPANY
Revision Activity	add.03-19-2015
Purpose	Contains the company data for manufacturers in the Canadian Natural Health products as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
P	HC_PRODUCT_ID	Health Canada Canadian NHP Product Identifier	N	8	9(8)
	HC_COMPANY_NAME	Health Canada Company Name	AN	200	X(200)
	HC_COMPANY_ADDRESS	Health Canada Company Address	AN	120	X(120)
	HC_CITY	Health Canada City	AN	40	X(40)
	HC_PROVINCE	Health Canada Province	AN	40	X(40)
	HC_COUNTRY	Health Canada Country	AN	40	X(40)
	HC_POSTAL_CODE	Health Canada Postal Code	AN	40	X(40)

Canadian Natural Health Products Medicinal Ingredient Table

Table Name	RCANM10_NHP_MEDICINAL_ING
Revision Activity	add.03-19-2015
Purpose	Contains the medicinal ingredients associated to the Canadian Natural Health products as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
PF	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
	HC_PROPER_NAME	Health Canada Proper Name of Ingredient	AN	200	X(200)
	HC_PROPER_NAME_F	Health Canada Proper Name of Ingredient (French)	AN	200	X(200)
	HC_COMMON_NAME	Health Canada Common Name of Ingredient	AN	200	X(200)
	HC_COMMON_NAME_F	Health Canada Common Name of Ingredient (French)	AN	200	X(200)
	HC_POTENCY_AMOUNT	Health Canada Potency Amount	AN	255	X(255)
	HC_POTENCY_UNIT_OF_MEASURE	Health Canada Potency Unit of Measure	AN	120	X(120)
	HC_POTENCY_UNIT_OF_MEASURE_F	Health Canada Potency Unit of Measure (French)	AN	120	X(120)
	HC_POTENCY_CONSTITUENT	Health Canada Potency Constituent	AN	120	X(120)
	HC_QUANTITY	Health Canada Quantity	AN	255	X(255)
	HC_QUANTITY_MINIMUM	Health Canada Minimum Quantity	AN	255	X(255)

	HC_QUANTITY_MAXIMUM	Health Canada Maximum Quantity	AN	255	X(255)
	HC_QUANTITY_UNIT_OF_MEASURE	Health Canada Quantity Unit of Measure	AN	120	X(120)
	HC_QUANTITY_UNIT_OF_MEASURE_F	Health Canada Quantity Unit of Measure (French)	AN	120	X(120)
	HC_RATIO_NUMERATOR	Health Canada Ratio Numerator	AN	10	X(10)
	HC_RATIO_DENOMINATOR	Health Canada Ratio Denominator	AN	10	X(10)
	HC_DRIED_Herb_EQUIVALENT	Health Canada Dried Herb Equivalent	AN	10	X(10)
	HC_DHE_UNIT_OF_MEASURE	Health Canada Dried Herb Equivalent Unit of Measure	AN	120	X(120)
	HC_DHE_UNIT_OF_MEASURE_F	Health Canada Dried Herb Equivalent Unit of Measure (French)	AN	120	X(120)
	HC_EXTRACT_TYPE_DESC	Health Canada Extract Type Description	AN	120	X(120)
	HC_EXTRACT_TYPE_DESC_F	Health Canada Extract Type Description (French)	AN	120	X(120)
	HC_SOURCE_MATERIAL	Health Canada Source Material	AN	120	X(120)
	HC_SOURCE_MATERIAL_F	Health Canada Canada Source Material (French)	AN	120	X(120)

Canadian Natural Health Products Non-Medicinal Ingredient Table

Table Name	RCANNM10_NHP_NONMEDICINAL_ING
Revision Activity	add.03-19-2015
Purpose	Contains the non-medicinal ingredients associated to the Canadian Natural Health products as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
PF	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
	HC_PROPER_NAME	Health Canada Proper Name of Ingredient	AN	200	X(200)
	HC_PROPER_NAME_F	Health Canada Proper Name of Ingredient (French)	AN	200	X(200)
	HC_COMMON_NAME	Health Canada Common Name of Ingredient	AN	200	X(200)
	HC_COMMON_NAME_F	Health Canada Common Name of Ingredient (French)	AN	200	X(200)

Canadian Natural Health Products Product File Table

Table Name	RCANPD0_NHP_PRODUCT
Revision Activity	add.03-19-2015
Purpose	Contains the attributes of the Canadian Natural Health Product Identifier, including license number, product name, status, dosage form, and license date as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
P	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
	HC_LICENSE_NUMBER	Health Canada NHP Product License Number	AN	200	X(200)
	HC_PRODUCT_NAME	Health Canada NHP Product Name	AN	200	X(200)
	HC_DOSAGE_FORM	Health Canada NHP Product Dosage Form	AN	120	X(120)
	HC_DOSAGE_FORM_F	Health Canada NHP Product Dosage Form (French)	AN	120	X(120)
	HC_LICENSE_DATE	Health Canada NHP Granted License Date	AN	255	X(255)
	HC_STATUS	Health Canada NHP Product Status	AN	20	X(20)
	HC_STATUS_F	Health Canada NHP Product Status (French)	AN	20	X(20)

Canadian Natural Health Products Product Name Table

Table Name	RCANPNO_NHP_PRODUCT_NAME
Revision Activity	add.03-19-2015
Purpose	Contains the various product names for the Canadian Natural Health products with an indicator for the primary name as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
F	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
	HC_PRODUCT_NAME	Health Canada Product Name	AN	200	X(200)
	HC_PRIMARY_NAME	Health Canada Primary Name Indicator	AN	1	X(1)

Canadian Natural Health Products Purpose Table

Table Name	RCANPP0_NHP_PRODUCT_PURPOSE
Revision Activity	add.03-19-2015
Purpose	Contains the purpose for the associated Canadian Natural Health product as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
P	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
	HC_PURPOSE_E	Health Canada Product Purpose (English)	AN	4000	X(4000)
	HC_PURPOSE_F	Health Canada Product Purpose (French)	AN	4000	X(4000)

Canadian Natural Health Products Recommended Dose Table

Table Name	RCANPRD0_NHP_REC_DOSE
Revision Activity	add.03-19-2015
Purpose	Contains the recommended Dose for the associated Canadian Natural Health products as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
PF	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
	HC_POPULATION_TYPE_DESC	Health Canada Population Type Description	AN	120	X(120)
	HC_POPULATION_TYPE_DESC_F	Health Canada Population Type Description (French)	AN	120	X(120)
	HC_AGE	Health Canada Age	AN	255	X(255)
	HC_AGE_MINIMUM	Health Canada Minimum Age	AN	255	X(255)
	HC_AGE_MAXIMUM	Health Canada Maximum Age	AN	255	X(255)
	HC_UOM_TYPE_DESC_AGE	Health Canada Unit of Measure Type for Age	AN	120	X(120)
	HC_UOM_TYPE_DESC_AGE_F	Health Canada Unit of Measure Type for Age (French)	AN	120	X(120)
	HC_QUANTITY_DOSE	Health Canada Dose Quantity	AN	255	X(255)
	HC_QUANTITY_MINIMUM_DOSE	Health Canada Minimum Dose Quantity	AN	255	X(255)
	HC_QUANTITY_MAXIMUM_DOSE	Health Canada Maximum Dose Quantity	AN	255	X(255)

	HC_UOM_TYPE_DESC_QTY_DOSE	Health Canada Dose Quantity Unit of Measure Type Description	AN	120	X(120)
	HC_UOM_TYPE_DESC_QTY_DOSE_F	Health Canada Dose Quantity Unit of Measure Type Description (French)	AN	120	X(120)
	HC_FREQUENCY	Health Canada Dosage Frequency	AN	255	X(255)
	HC_FREQUENCY_MINIMUM	Health Canada Dosage Frequency Minimum	AN	255	X(255)
	HC_FREQUENCY_MAXIMUM	Health Canada Dosage Frequency Maximum	AN	255	X(255)
	HC_UOM_TYPE_DESC_FREQUENCY	Health Canada Dose Frequency Unit of Measure Type Description	AN	120	X(120)
	HC_UOM_TYPE_DESC_FREQUENCY_F	Health Canada Dose Frequency Unit of Measure Type Description (French)	AN	120	X(120)

Canadian Natural Health Products Risk Table

Table Name	RCANPR0_NHP_PRODUCT_RISK				
Revision Activity	add.03-19-2015				
Purpose	Contains the risks for the associated to Canadian Natural Health product as provided by Health Canada.				

Key	Column Name	Column Description	Format	Length	Picture
F	HC_PRODUCT_ID	Health Canada Canadian NHP Product Identifier	N	8	9(8)
	HC_RISK_TYPE_DESC	Health Canada Risk Type Description	AN	120	X(120)
	HC_RISK_TYPE_DESC_F	Health Canada Risk Type Description (French)	AN	120	X(120)
	HC_SUB_RISK_TYPE_DESC	Health Canada Sub Risk Type Description	AN	120	X(120)
	HC_SUB_RISK_TYPE_DESC_F	Health Canada Sub Risk Type Description (French)	AN	120	X(120)
	HC_RISK_TEXT_E	Health Canada Risk Description	AN	4000	X(4000)
	HC_RISK_TEXT_F	Health Canada Risk Description (French)	AN	4000	X(4000)

Canadian Natural Health Products Route Table

Table Name	RCANRT0_NHP_ROUTE
Revision Activity	add.03-19-2015
Purpose	Contains the route(s) associated to a given Canadian Natural Health product as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
PF	HC_PRODUCT_ID	Health Canada NHP Product Identifier	N	8	9(8)
P	HC_ROUTE_TYPE_DESC	Health Canada Route Type Description	AN	120	X(120)
	HC_ROUTE_TYPE_DESC_F	Health Canada Route Type Description (French)	AN	120	X(120)

Copyright Table

Table Name	RCANCR0_COPY_RIGHT
Revision Activity	add.03-19-2015
Purpose	Provides an individual text line of the copyright statement as provided by Health Canada.

Key	Column Name	Column Description	Format	Length	Picture
P	DATASET_CODE	Dataset Code	AN	6	X(6)
P	SEQUENCE_NO	Sequence Number	N	3	9(3)
	COPYRIGHT_TEXT	Copyright Text	AN	80	X(80)

External Identifier Type Table

Table Name	RCANET0_EXTERNAL_ID_TYPE				
Revision Activity	add.03-19-2015				
Purpose	Associates additional values for an Attribute when that attribute can have multiple codified values.				

Key	Column Name	Column Description	Format	Length	Picture
F	EXT_IDENTIFIER_TYPE_ID	External Identifier Type Identifier	N	8	9(8)
	EXT_IDENTIFIER_TYPE_DESC	External Identifier Type Description	AN	60	X(60)

IDDF Canada Drug Product Table

Table Name	RICAIDC1_DRUG_PRODUCT				
Revision Activity	rev.10-9-2002				
Purpose	Describes federal regulatory and drug product information.				

Key	Column Name	Column Description	Format	Length	Picture
P	IDC	FDB International Drug Code	AN	11	X(11)
	DIN	Canadian Drug Identification No.	AN	8	X(8)
	ICAPROVCE	Province Abbreviation	AN	2	X(2)
	AD	Additional Descriptor	AN	20	X(20)
	BN	Brand Name	AN	30	X(30)
	LN	Label Name	AN	30	X(30)
	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
	IADDTDE	IDDF Add Date (ccyyymmdd)	N	8	9(8)
	ICAAIG	Canadian Active Ingredient Group	AN	10	X(10)
	ICABN	Canadian Product Name	AN	64	X(64)
	ICAOTDTE	IDDF CA Ottawa Disc Date (ccyyymmdd)	N	8	9(8)
	ICAFSCH	Canadian Federal Regulatory Code	AN	1	X(1)
	ICAPFSCH	Canadian Federal Regulatory Code-Prev	AN	1	X(1)
	IOBSDTE	IDDF Obsolete Date	N	8	9(8)
	DF	Drug Form Code	AN	1	X(1)

	ILBLRID	IDDF MFG/Labeler Unique Identifier	AN	6	X(6)
	ICAPDIN	Canadian Previous Drug Identification Number	AN	8	X(8)
	ICAREPDIN	Replacement DIN	AN	8	X(8)
	ICANMKDIN	NOT Marketed DIN Indicator	AN	1	X(1)

IDDF Canada Labeler (MFG) Identifier Description Table

Table Name	RLBLRCA1_LBLR_DESC				
Revision Activity	rev.1-29-2004				
Purpose	Provides manufacturer/labeler information.				

Key	Column Name	Column Description	Format	Length	Picture
P	ILBLRID	DDF MFG/Labeler Unique Identifier	AN	6	X(6)
	MFG	Manufacturer Name	AN	15	X(15)
	IMFGD	Manufacturer Description (IDDF)	AN	50	X(50)
	ICACOMP_CD	Company Code	N	6	9(6)

IDDF Canada Packaged Product Master Table

Table Name	RICAPP0_PACKAGED_PRODUCT_MSTR				
Revision Activity	add.05-03-2007				
Purpose	Provides packaging attributes of a packaged product.				

Key	Column Name	Column Description	Format	Length	Picture
P	GTIN	Global Trade Item Number	AN	14	X(14)
	IDC	FDB International Drug Code	AN	11	X(11)
	UPC_PACKAGE_CODE	UPC Package Code	N	1	9(1)
	UPC_VENDOR_CODE	UPC Vendor Code	N	7	9(7)
	UPC_PRODUCT_CODE	UPC Product Code	N	5	9(5)
	PRODUCT_FORMAT	Product Format	AN	9	X(9)
	SUPPLIER_PRODUCT_FORMAT	Supplier Product Format	N	8	9(4).9(3)
	PACKAGE_SIZE_UNIT	Package Size Unit	AN	3	X(3)
	SUPPLIER_PRODUCT_NUMBER	Supplier Product Number	AN	10	X(10)
	UNIT_QTY_PER_CASE	Unit Quantity Per Case	N	5	9(5)
	UNIT_IND	Unit Indicator	N	1	9(1)
	PACK_IND	Pack Indicator	N	1	9(1)
	CASE_IND	Case Indicator	N	1	9(1)
	GST_IND	GST/HST Indicator	N	1	9(1)
	PST_IND_AB	Provincial Sales Tax - Alberta	N	1	9(1)
	PST_IND_BC	Provincial Sales Tax - British Columbia	N	1	9(1)

	PST_IND_MB	Provincial Sales Tax - Manitoba	N	1	9(1)
	PST_IND_NB	Provincial Sales Tax - New Brunswick	N	1	9(1)
	PST_IND_NL	Provincial Sales Tax - Newfoundland and New Labrador	N	1	9(1)
	PST_IND_NS	Provincial Sales Tax - Nova Scotia	N	1	9(1)
	PST_IND_NT	Provincial Sales Tax - Northwest Territory	N	1	9(1)
	PST_IND_NU	Provincial Sales Tax - Nunavut	N	1	9(1)
	PST_IND_ON	Provincial Sales Tax - Ontario	N	1	9(1)
	PST_IND_PE	Provincial Sales Tax - Prince Edward Island	N	1	9(1)
	PST_IND_QC	Provincial Sales Tax - Quebec	N	1	9(1)
	PST_IND_SK	Provincial Sales Tax - Saskatchewan	N	1	9(1)
	PST_IND_YT	Provincial Sales Tax - Yukon	N	1	9(1)
F	STATUS_CODE	Status Code	N	1	9(1)

IDDF Canada Packaged Product Status Description Table

Table Name	RICASCD0_PKG_PRDCT_STATUS_DSC				
Revision Activity	add.05-03-2007				
Purpose	Provides packaging status codes and descriptions for packaged products.				

Key	Column Name	Column Description	Format	Length	Picture
P	STATUS_CODE	Status Code	N	1	9(1)
	STATUS_CODE_DESC	Status Code Description	AN	50	X(50)

Product Labeler Table

Table Name	RCANPL0_PRODUCT_LABELER				
Revision Activity	add.03-19-2015				
Purpose	Relates the Labeler ID to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
PF	LABELER_ID	Labeler Identifier	N	8	9(8)
	REGION_LABELER_ID	Region Labeler Identifier	AN	6	X(6)
	LABELER_DESC	Labeler Description	AN	100	X(100)
	LABELER_DESC_SHORT	Labeler Description Short	AN	15	X(15)

Product Master Attribute Table

Table Name	RCANMA0_PRODUCT_MASTER_ATTR
Revision Activity	add.03-19-2015
Purpose	Provides attributes related to Canadian Natural Health Products.

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
PF	ATTRIBUTE_ID	Attribute Identifier	N	8	9(8)
P	SEQUENCE_NO	Sequence Number	N	4	9(4)
P	VALUE_SEQUENCE_NO	Value Sequence Number	N	4	9(4)
	ATTRIBUTE_VALUE	Attribute Value	AN	255	X(255)

Product Master Link Table

Table Name	RCANPML0_PRODUCT_MASTER_LINK				
Revision Activity	add.03-19-2015				
Purpose	Contains the associations between Canadian Natural Health Products and Package Products to external identifiers.				
Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
P	EXT_IDENTIFIER	External Identifier	AN	100	X(100)
PF	EXT_IDENTIFIER_TYPE_ID	External Identifier Type ID	N	8	9(8)
P	EXT_IDENTIFIER_START_DT	External Identifier Start Date	N	8	9(8)
	EXT_IDENTIFIER_END_DT	External Identifier End Date	N	8	9(8)
	PRODUCT_TYPE_ID	Product Type ID	N	8	9(8)

Product Master Table

Table Name	RCANPM0_PRODUCT_MASTER
Revision Activity	add.03-19-2015
Purpose	Contains a complete list of the Product and Package Product concepts related to the Canadian Natural Health Product distributed by Health Canada that have been identified as being clinically significant by First Databank.

Key	Column Name	Column Description	Format	Length	Picture
P	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
	PRODUCT_BRAND_NAME	Product Brand Name	AN	60	X(60)
	PRODUCT_LABEL_NAME	Product Label Name	AN	100	X(100)
	PRODUCT_ADD_DATE	Product Add Date	N	8	9(8)
F	GCN_SEQNO	Product Formulation Identifier	N	6	9(6)
	PRODUCT_OBSOLETE_DATE	Product Obsolete Date	N	8	9(8)
	PRODUCT_PACKAGE_DESC	Product Package Description	AN	25	X(25)
	PRODUCT_PACKAGE_UNIT	Product Package Unit	AN	1	X(1)
	PRODUCT_PACKAGE_COUNT	Product Package Count	N	8	9(8)
F	LABELER_ID	Product Labeler Identifier	N	8	9(8)
F	PRODUCT_TYPE_ID	Product Type Identifier	N	8	9(8)
	PARENT_PRODUCT_ID	Product Parent Identifier	N	8	9(8)
	NOT_MARKETED_INDICATOR	Product Not Marketing Identifier	AN	1	X(1)

Product Type Table

Table Name	RCANPT0_PRODUCT_TYPE				
Revision Activity	add.03-19-2015				
Purpose	Contains the text description for a product type.				

Key	Column Name	Column Description	Format	Length	Picture
P	PRODUCT_TYPE_ID	Product Type Identifier	N	8	9(8)
	PRODUCT_TYPE_DESC	Product Type Description	AN	60	X(60)

Routed Generic IDC Link Table

Table Name	RRTGNID0_ROUTED_GEN_IDC_LINK				
Revision Activity	add.09-24-2015				
Purpose	Links a routed generic to a packaged product (IDC).				

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	N	11	9(11)
F	ROUTED_GEN_ID	Routed Generic Identifier	N	8	9(8)

Routed Generic Product ID Link Table

Table Name	RRTGNPM0_ROUTE_GEN_PR_ID_LINK				
Revision Activity	add.09-24-2015				
Purpose	Links a routed generic to a packaged product concept (FDB Product Identifier).				

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
F	ROUTED_GEN_ID	Routed Generic Identifier	N	8	9(8)

Medication Name Concepts MED

Medication Name Concepts™ (MED) 3.1

- General Information
- Medication Name Concepts Editorial Policies
- MED Applications
- ERD and Technical Specifications

MED General Information

- Overview
 - Changes from MED v3.0 to MED v3.1
- Concepts
 - MED_NAME_ID
 - ROUTED_MED_ID
 - ROUTED_DOSAGE_FORM_MED_ID
 - MEDID
 - MED_CONCEPT_ID
 - MED_CONCEPT_HICL_SRC_CD
 - GENERIC_MED_CONCEPT_ID
 - MED_NAME_SOURCE_CD
 - MEDID Reference Attributes
 - MED Concept/HICL_SEQNO Relation Table
 - Medication Name Concept History Tables

Overview

Medication name concepts represent unique product trade and generic names. Healthcare providers typically use medication name concepts with variable levels of specificity, depending on the application and the amount of information available at the time. For example, when dispensing a prescription medication, a packaged product is selected for dispensing and the related Drug Identification Number ([DIN](#)) or other numerical product identifier is used for processing a claim with a payer. In contrast, when interviewing a patient to obtain a medical history, all that may be available is the product name, route of administration (for example, “oral”), and the dosage form (for example, “tablet”). In both situations, the health care professional needs to capture the medication concept and perform a drug utilization review (DUR) to identify possible drug allergies, interactions, or contraindications.

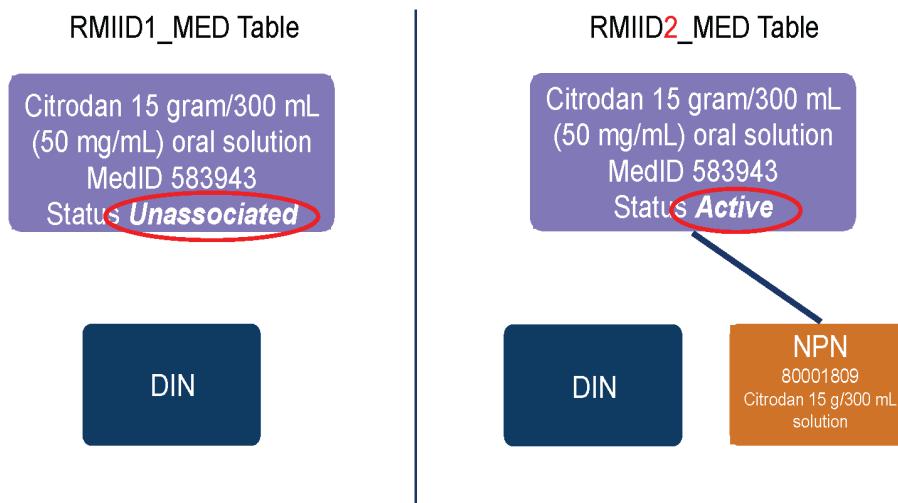
i Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Changes from MED v3.0 to MED v3.1

With the introduction of natural health products to MedKnowledge Canada, FDB has revised MED v3.0 to v3.1 to accommodate the following changes:

- Introduction of new tables to support linking from natural health products (NPNs) to medication name concepts (through an FDB Product ID)
- Introduction of new tables to support natural health product (NPNs) to medication concepts associations/history tables (through an FDB Product ID)

- Reversioning of existing Medication Concept tables in order to account for new status values for medication concepts that are linked to natural products (through an FDB Product ID)



i To utilize natural health products content, you must migrate to MED 3.1 in order to have the correct status associations to medication concepts representing natural health products.

Concepts

Medication Name Concepts (MED) provides descriptive names with stable numerical identifiers and related attributes relative to the level of specificity of the identifier. For example, if the product name and route of administration are all that is available, then the Routed Medication concept would be the appropriate medication name concept. This medication name concept can then provide links to the clinical data appropriate to that level of specificity. Although a great deal of clinical screening can be done at the routed medication level, a more specific concept provides a greater number of associated attributes (such as route, dosage form, strength), and therefore, greater specificity and more clinical detail.

- The medication name concepts are:
- Medication Name
- Routed Medication
- Routed Dosage Form Medication
- Medication

Each concept builds upon the previous, moving from general to more specific by adding more information at each level (when necessary).

Example—Medication Name Concepts

Concept	Example
---------	---------

Medication Name	ampicillin
Routed Medication	ampicillin Oral
Routed Dosage Form Medication	ampicillin Oral Susp
Medication	ampicillin 250 mg/5 mL Oral Susp



i The Medication Name only contains the generic product name. If a generic manufacturer includes its name in a product name, the manufacturer name does not appear in the Medication Name. For example, APO-Amoxi appears as amoxicillin.

MED_NAME_ID

The MED Medication Name ID (**MED_NAME_ID**) represents the most general concept. It is a permanent numeric identifier that represents a unique product or generic name and is used primarily for navigational purposes when presenting name concepts to the end user. One MED Medication Name ID (**MED_NAME_ID**) is linked to zero-to-many MED Routed Medication IDs (**ROUTED_MED_ID**).

ROUTED_MED_ID

The MED Routed Medication ID (**ROUTED_MED_ID**) is a permanent numeric identifier that represents the product or generic name and route of administration. It is used for navigational purposes or to profile patient medications when the dosage form is unknown or not required. It is also used for entry into some clinical modules. One ROUTED_MED_ID is linked to zero-to-many MED Routed Dosage Form Medication IDs (**ROUTED_DOSAGE_FORM_MED_ID**).

ROUTED_DOSAGE_FORM_MED_ID

The MED Routed Dosage Form Medication ID (**ROUTED_DOSAGE_FORM_MED_ID**) is a permanent numeric identifier that represents the product or generic name, route of administration, and dosage form. It is used for navigational purposes, for profiling patient medications when the strength is unknown, or for ordering prescriptions in an in-patient setting when the dosage form strength is not required. For example, when prescribing "Oral amoxicillin Capsules, 500 mg every morning" in an in-patient setting, the prescriber is not concerned about whether it is administered as one 500 mg capsule, two 250 mg capsules, or four 125 mg capsules. One ROUTED_DOSAGE_FORM_MED_ID is linked to zero-to-many Medication IDs (**MEDID**).



i The description of the Routed Dosage Form Medication ID contains the route and dosage form only when necessary to resolve ambiguity, provide clarification, or to aid in patient safety.

MEDID

The MED Medication ID (**MEDID**) represents the most specific name concept. It is a permanent numeric identifier that represents the unique combination of product or generic name, route of administration, dosage form, strength, and strength unit-of-measure. Examples of its use include outpatient prescribing and patient medication

profiling. In contrast to the in-patient setting, outpatient prescribing must be specific as to dosage form and strength. For example, when prescribing “Oral amoxicillin Capsules, 500 mg every morning” the dose required could be achieved using different strengths. The prescription could be written using oral amoxicillin 500 mg, 250 mg, or 125 mg tablets. Each prescription would use a different MEDID to identify the specific dosage form and strength of the drug that should be dispensed to the patient. Attributes of the MEDID provide drug information and access to clinical and patient education modules.

- i The description of the Medication ID contains the route, dosage form, and strength only when necessary to resolve ambiguity, provide clarification, or to aid in patient safety.

MED_CONCEPT_ID

The MED Concept ID ([MED_CONCEPT_ID](#)) column is located in the following two tables:

- The [MED Concept/HICL_SEQNO Relation Table](#) (RMEDMHL0_MED_HICLSEQNO_LINK), which links a given MED concept to its associated list of ingredients ([HICL_SEQNO](#))
- The [MED Concept/Generic MED Relation Table](#) (RMEDMGL0_MED_GENERIC_MED_LINK), which links a given MED concept to its generically named companion ([GENERIC_MED_CONCEPT_ID](#))

The MED_CONCEPT_ID represents one of the following MED identifiers:

- MED_NAME_ID
- ROUTED_MED_ID
- ROUTED_DOSAGE_FORM_MED_ID
- MEDID

The MED Concept ID Type ([MED_CONCEPT_ID_TYP](#)) identifies which of these four concepts the corresponding MED_CONCEPT_ID value reflects.

MED_CONCEPT_HICL_SRC_CD

The MED Concept HICL_SEQNO Source Code ([MED_CONCEPT_HICL_SRC_CD](#)) identifies the source of the associated MED concept's HICL_SEQNO. The MED_CONCEPT_HICL_SRC_CD is necessary because a given MED_CONCEPT_ID may have HICL_SEQNO data based on its Clinical Formulation ID ([GCN_SEQNO](#)) or on a specific IDC.

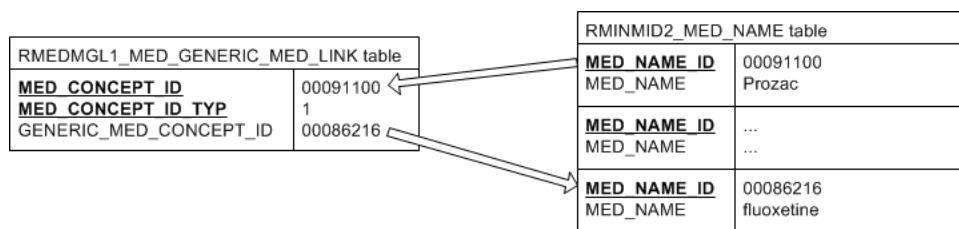
To check the obsolete status of the MED Concept/HICL_SEQNO association consult the MED Concept Obsolete Date ([MED_CONCEPT_OBSDATEC](#)) column. If all DINs or Clinical Formulation IDs (GCN_SEQNOs) linked to both the MED Concept and HICL_SEQNO are now obsolete and no longer on the market, the MED_CONCEPT_OBSDATEC reflects the most recent obsolete date. If this column does not contain a date then products are still on the market to support the association, and therefore the association is not considered out of date.

- i General MED Concepts (like MED Name) are likely to return multiple HICL_SEQNO. Systems should be able to accommodate multiple HICL_SEQNO results.

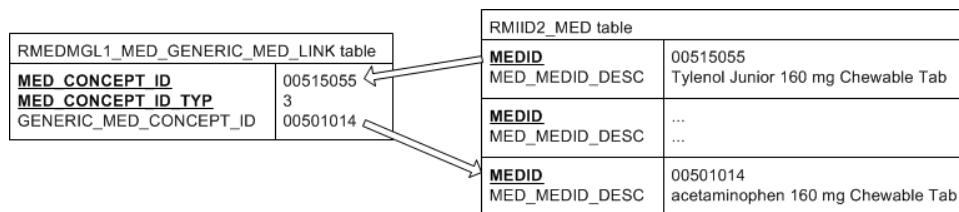
GENERIC_MED_CONCEPT_ID

The Generically Named MED Concept ID (**GENERIC_MED_CONCEPT_ID**) identifies a MED concept's generically named companion. This generically named companion exists at the same level of abstraction as its branded companion, but it does not reflect brand information. For example, Prozac's generically named companion is fluoxetine.

Each of the example concepts (Prozac and fluoxetine) has a **MED_NAME_ID** listed in the **MED Medication Name Table** (RMINMID1_MED_NAME), and these two **MED_NAME_ID**s are associated with each other in the **MED MED Concept/Generic MED Relation Table** (RMEDMGL0_MED_GENERIC_MED_LINK). The following diagram illustrates the relationship between Prozac and its generically named companion:



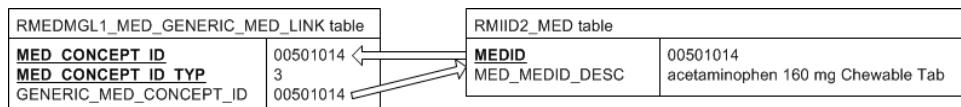
This example illustrates the association between the MEDID for Tylenol Junior 160 mg Oral Tab and its generically named companion, as listed in the **MED Medication Table** (RMIID1_MED). In this example the **MED_CONCEPT_ID_TYP**'s value is 3 instead of 1, as the value of 3 means the associated **MED_CONCEPT_ID** is a Medication, not a Medication Name:



To obtain the **GENERIC_MED_CONCEPT_ID**'s text description (**MED_NAME**) use the appropriate MED table. In the example above the MED Concept ID Type (**MED_CONCEPT_ID_TYP_DESC**) value was 3, so the Medication table was used. The four possible values for **MED_CONCEPT_ID_TYP** are listed below:

- If **MED_CONCEPT_ID_TYP** = 1, use **RMINMID1_MED_NAME**
- If **MED_CONCEPT_ID_TYP** = 2, use **RMIRMID1_ROUTED_MED**
- If **MED_CONCEPT_ID_TYP** = 7, use **RMIDFID2_ROUTED_DOSE_FORM_MED**
- If **MED_CONCEPT_ID_TYP** = 3, use **RMIID1_MED**

If a MED Concept links to itself in the **RMEDMGL0_MED_GENERIC_MED_LINK** table, the MED Concept does not have a different generically named companion because it is a generically named companion. For example, the following listing exists for the generically named companion acetaminophen 160 mg Oral Tab:



See [Retrieving a MED Concept's Generically Named Companion](#) for more information.

MED_NAME_SOURCE_CD

The MED Medication Name Source Code ([MED_NAME_SOURCE_CD](#)) provides information about the origin of the MEDID. It designates that the name concept was created to represent a Clinical Formulation, a product, or both. The value is programmatically determined based upon the relationship between the MEDID and the Clinical Formulation ID (GCN_SEQNO) and/or the MEDID and the IDC. Retired MEDIDs and MEDIDs that have never been associated to a formulation concept will have a MED_NAME_SOURCE_CD of 9 (Unassociated).

MEDID Reference Attributes

The MEDID has 10 reference attributes in the [MED Medication Table](#) (RMIID2_MED) that provide information about U.S. products. Since data are available for the U.S. market only, these 10 attributes are not relevant to other markets. Therefore, the following columns will always have reference values of 9 (No Value):

- MED Reference Federal Legend Indicator
- MED Reference Federal DEA Class Code
- MED Reference Multi-Source Code
- MED Reference Generic Medication Name Code
- MED Reference Generic Comparative Price Code
- MED Reference Generic Price Spread Code
- MED Reference Innovator Indicator
- MED Reference Generic Therapeutic Equivalence Code
- MED Reference DESI Indicator
- MED Reference DESI2 Indicator

MED Concept/HICL_SEQNO Relation Table

The [MED MED Concept/HICL_SEQNO Relation Table](#) (RMEDMHL0_MED_HICLSEQNO_LINK) provides linkage between medication concept identifiers (Medication ID, Routed Dosage Form Medication ID, Routed Medication ID, and Medication Name ID) and their list of ingredients. The medication concepts contained within the table have one of the following statuses:

- Active
- Inactive
- Replaced
- Unassociated

The only type of medication concept that does not appear within RMEDMHL0_MED_HICLSEQNO_LINK table are those marked with a status of *Retired*.

- i** A small number of Replaced concepts do not appear in the RMEDMHL0_MED_HICLSEQNO_LINK table as they have been determined to be too broad to be useful in allergy checking (for example, Bulk Chemicals Liquid), or they are medical supplies that would not normally participate in allergy checking.

Medication Name Concept History Tables

MED History tables support the stability of the Medication Name Concepts by providing replaced concept identifier history information.

The following Medication Name Concept identifier history tables indicate when a given identifier has been replaced; and provide the replacement identifier.

- MED Medication Name Replacement History Table (RMINMRH1_MED_NAME_HIST)
- MED Routed Dosage Form Medication Replacement History Table (RMIDFRH1_ROUTED_DOSE_FORM_HIST)
- MED Routed Medication Replacement History Table (RMIRMRH1_ROUTED_MED_HIST)
- MED Medication Replacement History Table (RMIRRH1_MED_HIST)

MED Applications

This section provides information about the practical applications of Medication Name Concept data.

Navigating the Medication Name Concepts

Retrieving Active Products for a Medication

Retrieving Related Active Ingredients for a Medication Name Concept

Retrieving the Generically Named Companion for a Medication Name Concept

Finding a Replacement MED Concept at Any Level of Specificity

Retrieving and Displaying the Representative Brand Medication Names for a Generically Named Medication

- Example—Using the MED_MEDID_DESC in Your Display to Illustrate That a Single Concept May Have Multiple Recognizable Brands
- Example—Using the MED_MEDID_DESC in Your Display to Distinguish Between Similarly Named but Clinically Different Medications
- Example—Using the MED_NAME in Your Display to Distinguish Between Similarly Named but Clinically Different Medications

Implementing Change Management of Stored MEDIDs

- Example—Monitoring IDC/MEDID Changes Within a Dispensing Environment
- Example—Creating a Weekly MEDID Change History Report

Navigating the Medication Name Concepts

This application illustrates how to retrieve drug information using the Medication Name Concepts. Refer to the [Medication Name Concepts Editorial Policies](#) for more information on the variable levels of specificity in Medication Name Concepts.

For the purposes of demonstrating this application, the following scenario is used: A healthcare professional wishes to retrieve all drugs for the generic drug, amoxicillin.

1. Select the MED Medication Name ([MED_NAME](#)) from the [MED Medication Name Table](#) (RMIID2_MED) where the MED_NAME column equals the Medication Name of the product to screen.

MED_NAME
amoxicillin

2. Select the MED Routed Medication Description ([MED_ROUTED_MED_ID_DESC](#)) values from the [MED Routed Medication Table](#) (RMIRIMD2_ROUTED_MED) where the MED_NAME column equals the value from the previous step.

MED_NAME	MED_ROUTE_ID_DESC
amoxicillin	amoxicillin Oral

3. Select the MED Routed Medication Description ([MED_ROUTED_DF_MED_ID_DESC](#)) values from the [MED Routed Dosage Form Medication Table](#) (RMIDFID2_ROUTED_DOSE_FORM_MED) where the MED_ROUTE_ID_DESC column equals the values from the previous step.

MED_ROUTE_ID_DESC	MED_ROUTED_DF_MED_ID_DESC
amoxicillin Oral	amoxicillin Chewable Tab
amoxicillin Oral	amoxicillin Oral Susp
amoxicillin Oral	amoxicillin Cap
amoxicillin Oral	amoxicillin Chewable Tab
amoxicillin Oral	amoxicillin Oral Susp
amoxicillin Oral	amoxicillin Oral Susp
amoxicillin Oral	amoxicillin Cap

4. Select the MED Strength ([MED_STRENGTH](#)) and the MED Strength Unit of Measure ([MED_STRENGTH_UOM](#)) from the [MED Medication Table](#) (RMIID2_MED) where the MED_ROUTED_DF_MED_ID_DESC column equals the values from the previous step.

MED_ROUTED_DF_MED_ID_DESC	MED_STRENGTH	MED_STRENGTH_UOM
amoxicillin Chewable Tab	125	mg

amoxicillin Oral Susp	125	mg/5 mL
amoxicillin Cap	250	mg
amoxicillin Chewable Tab	250	mg
amoxicillin Oral Susp	250	mg/5 mL
amoxicillin Oral Susp	50	mg/mL
amoxicillin Cap	500	mg

Retrieving Active Products for a Medication

This application illustrates how to retrieve active products that are associated to branded and/or generically named MED Medication IDs (MEDIDs). When developing your application, please keep that your business needs might also require the retrieval of obsolete products up to a specified number of years, such as one or three years.

The steps are listed below:

1. Select the FDB International Drug Code (**IDC**) values from the [MED IDC to Medication ID Cross-Reference Table](#) (RMEDIDC0_IDC_MEDID_LINK) where the MED Medication ID (**MEDID**) column equals the MEDID values of the prescribed medication.
2. Select the MEDID values from the [MED IDC to Generic Medication ID Cross-Reference Table](#) (RMEDIGM0_IDC_GEN_MEDID) where the IDC column equals the IDC values from the previous step.
3. Select the IDC values from the RMEDIGM0_IDC_GEN_MEDID table where the MEDID column equals the MEDID values from the previous step.
4. Remove duplicates from the list of IDCs returned in the previous step.
5. Filter the list of IDCs from the previous step using the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) where the IDDF Obsolete Date (**IOBSDTE**) equals “0” (indicating Active), and, if preferred, obsolete less than a specified date.
6. Select the Clinical Formulation ID (**GCN_SEQNO**) values from the RICAIDC1_DRUG_PRODUCT table where the IDC column equals the IDC values from the previous step.

The following examples illustrate this application from a prescribing perspective. Therefore, the example scenarios consider brand substitution and pharmaceutical equivalence.

- Example—Retrieving Products Associated to a MED Medication ID (**MEDID**)
- Example—Retrieving Active Products for a “Do not Substitute” Prescription

Example—Retrieving Products Associated to a MED Medication ID (**MEDID**)

For purposes of demonstrating this application, the following scenario is used: A physician prescribes Acet Codeine 300 mg-30 mg Tab (MED Medication ID [**MEDID**] 00548824) allowing substitution. The system retrieves a list of active products and products up to three years obsolete to present as potential candidates to fill the prescription. Prior to beginning this application, the system stores the prescribed medication’s Clinical Formulation ID (**GCN_SEQNO**) value of 004165 for use later in the process.

1. Select the FDB International Drug Code (**IDC**) values from the [MED IDC to Medication ID Cross-Reference Table](#) (RMEDIDC0_IDC_MEDID_LINK) where the MEDID column equals the MEDID values of the prescribed medication.

MEDID	IDC
00548824	03000021786

2. Select the MEDID values from the [MED IDC to Generic Medication ID Cross-Reference Table](#) (RMEDIGM0_IDC_GEN_MEDID) where the IDC column equals the IDC values from the previous step.

IDC	MEDID	MED_MEDID_DESC
03000021786	00501042	acetaminophen-codeine 300 mg-30 mg Tab

3. Select the IDC values from the RMEDIGM0_IDC_GEN_MEDID table where the MEDID column equals the MEDID values from the previous step.

MEDID	IDC
00501042	03000009745
00501042	03000010263
00501042	03000011993
00501042	03000015939
00501042	03000021786
00501042	03000052255
00501042	03000056364

4. Remove duplicates from the list of IDCs returned in the previous step.

In this example, no duplicates were removed.

5. Filter the list of IDCs from the previous step using the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) where the IDDF Obsolete Date ([IOBSDTE](#)) equals “0 (indicating Active) or up to three years obsolete (for example, >20090301).”

IDC	LN	IOBSDTE
03000010263	RATIO-EMTEC-30 TABLET	0
03000015939	TRIATEC-30 TABLET	0
03000021786	ACET-CODEINE 30 TABLET	0
03000052255	PHL-ACET-CODEIN 30-300 MG TAB	0
03000056364	PROCET-30 TABLET	0

6. Select the Clinical Formulation ID (GCN_SEQNO) values from the RICAIDC1_DRUG_PRODUCT table where the IDC column equals the IDC values from the previous step.

IDC	LN	GCN_SEQNO
03000010263	RATIO-EMTEC-30 TABLET	004165

03000015939	TRIATEC-30 TABLET	004165
03000021786	ACET-CODEINE 30 TABLET	004165
03000052255	PHL-ACET-CODEIN 30-300 MG TAB	004165
03000056364	PROCET-30 TABLET	004165

In this example, all products have the same Clinical Formulation ID (GCN_SEQNO) as the prescribed product (stored prior to this application) and are pharmaceutically equivalent. Therefore, all returned IDCs are displayed to the end-user to select from.

Example—Retrieving Active Products for a “Do not Substitute” Prescription

For purposes of demonstrating this application, the following scenario is used: A physician prescribes acebutolol 100 mg Tab (MED Medication ID [MEDID] 00501008) without allowing substitution. The system retrieves a list of active products and products up to three years obsolete to present as potential candidates to fill the prescription. The system retrieves a list of active products and products that are up to three years obsolete to present as potential candidates to fill the prescription. Prior to beginning this application, the system stores the prescribed medication’s Clinical Formulation ID (GCN_SEQNO) value of 013223 for use later in the process.

Retrieve All Products Associated to the Medication

1. Select the FDB International Drug Code (IDC) values from the [MED IDC to Medication ID Cross-Reference Table](#) (RMEDIDC0_IDC_MEDID_LINK) where the MEDID column equals the MEDID values of the prescribed medication.

MEDID	IDC
00501008	03000025140
00501008	03000025661
00501008	03000025868
00501008	03000029141
00501008	03000039855
00501008	03000039948
00501008	03000052295
00501008	03000057803
00501008	03000059084

In this example, the prescription does not allow substitution when filling this prescription. *Therefore, the application skips steps 2 through 4.*

2. Select the MEDID values from the [MED IDC to Generic Medication ID Cross-Reference Table](#) (RMEDIGM0_IDC_GEN_MEDID) where the IDC column equals the IDC values from the previous step.

3. Select the IDC values from the RMEDIGM0_IDC_GEN_MEDID table where the MEDID column equals the MEDID values from the previous step.
4. Remove duplicates from the list of IDCs returned in the previous step.
5. Filter the list of IDCs from the previous step using the **IDDF Canada Drug Product Table (RICAIDC1_DRUG_PRODUCT)** where the IDDF Obsolete Date (**IOBSDTE**) equals “0 (indicating Active) or up to three years obsolete (for example, >20090301).”

IDC	LN	IOBSDTE
03000025140	APO-ACEBUTOLOL 100 MG TABLET	0
03000025661	ACEBUTOLOL 100 MG TABLET	0
03000025868	NU-ACEBUTOLOL 100 MG TABLET	0
03000029141	TEVA-ACEBUTOLOL 100 MG TABLET	0
03000039855	MYLAN-ACEBUTOLOL 100 MG TABLET	0
03000039948	MYLAN-ACEBUTOLOL (TYPE S) 100	0
03000052295	SANDOZ ACEBUTOLOL 100 MG TAB	0
03000057803	ACEBUTOLOL 100 MG TABLET	0
03000059084	AVA-ACEBUTOLOL 100 MG TABLET	0

6. Select the Clinical Formulation ID (GCN_SEQNO) values from the RICAIDC1_DRUG_PRODUCT table where the IDC column equals the IDC values from the previous step.

IDC	LN	GCN_SEQNO
03000025140	APO-ACEBUTOLOL 100 MG TABLET	013223
03000025661	ACEBUTOLOL 100 MG TABLET	013223
03000025868	NU-ACEBUTOLOL 100 MG TABLET	013223
03000029141	TEVA-ACEBUTOLOL 100 MG TABLET	013223
03000039855	MYLAN-ACEBUTOLOL 100 MG TABLET	013223

03000039948	MYLAN-ACEBUTOLOL (TYPE S) 100	013223
03000052295	SANDOZ ACEBUTOLOL 100 MG TAB	013223
03000057803	ACEBUTOLOL 100 MG TABLET	013223
03000059084	AVA-ACEBUTOLOL 100 MG TABLET	013223

In this example, all products have the same Clinical Formulation ID (GCN_SEQNO) as the prescribed product (stored prior to this application) and are pharmaceutically equivalent. Therefore, all returned IDCs are displayed to the end-user to select from.

Retrieving Related Active Ingredients for a Medication Name Concept

MED Concept IDs ([MED_CONCEPT_ID](#)) usually reference multiple FDB International Drug Codes ([IDC](#)). This application illustrates how to find the active ingredients associated to a given MED_CONCEPT_ID.

For purposes of demonstrating this application, the following scenario is used: A patient is prescribed two Routed Medications ([ROUTED_MED_ID](#)): benazepril Oral (ROUTED_MED_ID 00100268), and Tylenol Oral (ROUTED_MED_ID 00107545). Allergy screening software must retrieve all active ingredients associated to the ROUTED_MED_ID to ensure that the patient is not administered an ingredient that will induce an allergic reaction.

1. Select the MED Concept ID Type ([MED_CONCEPT_ID_TYP](#)) values from the [MED MED Concept ID Type Description Table](#) (RMEDCD0_MED_CONCEPT_TYP_DESC) where the MED Concept ID Type Description ([MED_CONCEPT_ID_TYP_DESC](#)) column equals the appropriate identifier type of the products to screen.
For this example, Benazepril Oral and Tylenol Oral are both routed medications, therefore they use a MED_CONCEPT_ID_TYP value of 002.
2. Select the Ingredient List Identifier ([HICL_SEQNO](#)), MED Concept HICL_SEQNO Source Code ([MED_CONCEPT_HICL_SRC_CD](#)), and MED Concept Obsolete Date ([MED_CONCEPT_OBSDATEC](#)) from the [MED MED Concept/HICL_SEQNO Relation Table](#) (RMEDMHL1_MED_HICLSEQNO_LINK) where the MED_CONCEPT_ID column equals the Routed MEDIDs of the products to screen, and the MED_CONCEPT_ID_TYP column equals the value from the previous step. For example:

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	HICL_SEQNO	MED_CONCEPT_HICL_SRC_CD	MED_CONCEPT_OBSDATEC
00100268	002	006113	0	0
00100268	002	006113	1	0
00107545	002	001866	1	0

If a record has a value listed for its MED_CONCEPT_OBSDATEC, the MED_CONCEPT_ID/HICL_SEQNO association is expired and should only be used if the end user knows s/he has a packaged product that was produced prior to the obsolete date.

3. Select the Hierarchical Ingredient Code Sequence Number ([HIC_SEQN](#)) from the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK) where the HICL_SEQNO column equals the HICL_SEQNO values from the previous step. For example:

HICL_SEQNO	HIC_SEQN	HIC_DESC
006113	003598	benazepril HCl
001866	001605	acetaminophen

Retrieving the Generically Named Companion for a Medication Name Concept

This application illustrates how to use the MED MED Concept/Generic MED Relation Table to find a given MED Concept's generically named companion.

For purposes of demonstrating this application, the following scenario is used: A prescriber wishes to find the generically named companion of the medication *Robitussin DM Oral Liquid* at the MED Medication ID (MEDID) level. This product's MEDID is 00514052.

1. Select the MED Concept ID Type (MED_CONCEPT_ID_TYP) values from the MED MED Concept ID Type Description Table (RMEDCD0_MED_CONCEPT_TYP_DESC) where the MED Medication Description (MED_CONCEPT_ID_TYP_DESC) column equals the appropriate identifier type of the products to screen. For example, Robitussin DM Oral Liquid is a MEDID, therefore it uses a MED_CONCEPT_ID_TYP value of 3.
2. Select the Generically Named MED Concept ID (GENERIC_MED_CONCEPT_ID) values from the MED MED Concept/Generic MED Relation Table (RMEDMGL1_MED_GENERIC_MED_LINK) where the MED_CONCEPT_ID column equals the MEDID of the product to screen, and the MED_CONCEPT_ID_TYP column equals the value from the previous step.

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	GENERIC_MED_CONCEPT_ID
00514052	3	00558417

3. Select the MED Medication Description (MED_MEDID_DESC) value from the MED Medication Table (RMIID2_MED) where the GENERIC_MED_CONCEPT_ID column equals the values from the previous step.

MEDID	MED_MEDID_DESC
00558417	dextromethorphan-guaifenesin 15 mg-100 mg/5 mL Oral Liquid

Finding a Replacement MED Concept at Any Level of Specificity

This application illustrates how to retrieve a replacement MED Concept value at any level of specificity.

1. Depending on the FDB concept type, perform one of the following:

- Select the MED Medication Status Code (**MED_STATUS_CD**) values from the **MED Medication Name Table** (RMINMID2_MED_NAME) where the MED Medication Name ID (**MED_NAME_ID**) column equals the **MED_NAME_ID** value of a given medication name.
- Select the MED Medication Status Code (**MED_STATUS_CD**) values from the **MED Routed Medication Table** (RMIR MID2_ROUTED_MED) where the MED Routed Medication ID (**ROUTED_MED_ID**) column equals the **ROUTED_MED_ID** value of a given routed medication.
- Select the MED Medication Status Code (**MED_STATUS_CD**) values from the **MED Routed Dosage Form Medication Table** (RMIDFID2_ROUTED_DOSE_FORM_MED) where the MED Routed Dosage Form Medication ID (**ROUTED_DOSAGE_FORM_MED_ID**) column equals the **ROUTED_DOSAGE_FORM_MED_ID** value of a given routed dosage form medication.
- Select the MED Medication Status Code (**MED_STATUS_CD**) values from the **MED Medication Table** (RMIID2_MED) where the MED Medication ID (**MEDID**) column equals the **MEDID** value of a given medication.

2. If the **MED_STATUS_CD** value from the previous step equals **1** (indicating replaced), select the MED Replacement Medication Name ID (**MED_REPL_NAME_ID**) values from the **MED Medication Name Replacement History Table** (RMINMRH1_MED_NAME_HIST) where the MED Previous Medication Name ID (**MED_PREV_NAME_ID**) column equals one of the following:
 - the replaced **MED_NAME_ID** value from step 1
 - the replaced **ROUTED_MED_ID** value from step 1
 - the replaced **ROUTED_DOSAGE_FORM_MED_ID** value from step 1
 - the replaced **MEDID** value from step 1



In this step, the *previous Medication Name Identifier* column is populated with the replaced MED Concept value queried in step 1 to retrieve its related *replacement* Medication Name Identifier.

3. Repeat steps 1 and 2 using the replacement Medication Name concept values retrieved in the previous step until the **MED_STATUS_CD** equals **0** (indicating Active), **3** (indicating Inactive), or **9** (indicating Unassociated).

Example—Finding a Replacement MEDID

For purposes of demonstrating this application, the following scenario is used: Upon selection of Corrective Laxative 100-65 mg Tab (MEDID 151200) for prescribing, a healthcare system first checks its status to determine if it has been replaced. After determining that it has been replaced, the system retrieves its related replacement value.

1. Select the MED Medication Status Code (**MED_STATUS_CD**) values from the **MED Medication Table** (RMIID2_MED) where the MED Medication ID (**MEDID**) column equals the **MEDID** value of a given

medication.

MEDID	MED_STATUS_CD	MED_STATUS_CD_DESC
00151200	1	Replaced

 Retrieve the MED Medication Status Code Description (**MED_STATUS_CD_DESC**) values from the **MED Status Code Description Table** (RMISCD1_STATUS_DESC).

2. Select the MED Replacement Medication ID (**MED_REPL_MEDID**) values from the **MED Medication Replacement History Table** (RMIRH1_MED_HIST) where the MED Previous Medication ID (**MED_PREV_MEDID**) column equals the replaced MEDID value from step 1.

MED_PREV_MEDID	MED_REPL_MEDID
00151200	00434238

3. Repeat step 1 and 2 using the **MED_REPL_MEDID** values retrieved in the previous step until the **MED_STATUS_CD** equals **0** (indicating Active), **3** (indicating Inactive), or **9** (indicating Unassociated).

MEDID	MED_STATUS_CD	MED_STATUS_CD_DESC
00434238	3	Inactive

Retrieving and Displaying the Representative Brand Medication Names for a Generically Named Medication

When displaying generically named concepts, it may be useful to display a representative brand name to distinguish between concepts with similar components (name, route, dosage form, and strength). This application is useful to aid in visual recognition and to distinguish between similarly described generic representations of drug formulations. This functionality is useful in a number of settings:

- for the display of generic drug terms to healthcare providers
- when messaging drug descriptive data from a provider to a pharmacy
- for display in lay or professional drug information systems
- for display in a list of patient medications

This application illustrates how to retrieve a representative brand name for a generically named concept, when the MED Medication Description ([MED_MEDID_DESC](#)) is known.

The following examples demonstrate the application:

- Example—Using the MED_MEDID_DESC in Your Display to Illustrate That a Single Concept May Have Multiple Recognizable Brands
- Example—Using the MED_MEDID_DESC in Your Display to Distinguish Between Similarly Named but Clinically Different Medications
- Example—Using the MED_NAME in Your Display to Distinguish Between Similarly Named but Clinically Different Medications

Part 1: Retrieve the MEDID of the generically named medication.

1. Select the MED Medication ID ([MEDID](#)) values from the [MED Medication Table](#) (RMIID2_MED) where the MED Medication Description ([MED_MEDID_DESC](#)) column equals the MED_MEDID_DESC of the generically named concept.
2. Verify that the MEDID value for the generically named concept appears in the [MED GCN_SEQNO to Medication ID Cross-Reference Table](#) (RMIGC1_MEDID_GCNSEQNO_LINK) to ensure that the MEDID is associated with the generically named concept.
 - If the MEDID does not appear in the RMIGC1_MEDID_GCNSEQNO_LINK table, alert the user that the MEDID is not associated with the generically named concept.
 - If the MEDID appears in this table, continue to the next step.

Part 2: Retrieve the MEDID of the brand medications associated with the generically named medication.

Select the MEDID values from the [MED Medication Table](#) (RMIID2_MED)

where the GENERIC_MEDID column equals the MEDID value of the generically named medication retrieved in Part 1. This step retrieves all brand name medications associated with the generically named medication concept.

Part 3: Retrieve the MED_NAME of the brand medications.

1. Select the MED Routed Dosage Form Medication ID ([ROUTED_MED_ID](#)) values from the [MED](#)

Medication Table (RMIIID2_MED) where the MEDID column equals the MEDID values from Part 2.

2. Select the MED Routed Medication ID (**ROUTED_MED_ID**) values from the **MED Routed Dosage Form Medication Table** (RMIDFID1_ROUTED_DOSE_FORM_MED RMIDFID2_ROUTED_DOSE_FORM_MED) where the ROUTED_DOSAGE_FORM_MED_ID column equals the ROUTED_DOSAGE_FORM_MED_ID values from the previous step.
3. Select the MED Medication Name ID (**MED_NAME_ID**) values from the **MED Routed Medication Table** (RMIRMID2_ROUTED_MED) where the ROUTED_MED_ID column equals the ROUTED_MED_ID values from the previous step.
4. Select the MED Medication Name (**MED_NAME**) values from the **MED Medication Name Table** (RMINMID2_MED_NAME) where the MED_NAME_ID column equals the MED_NAME_ID values from the previous step.

Part 4: Display the generically named medication and the associated brand medication names.

Display the MED_NAME of the associated brand medication from Part 3 in parentheses next to the generically named medication. Depending on your business needs, you may choose to display either the MED_MEDID_DESC or the MED_NAME of the generically named medication. See the application examples for these display options.

-  If the list of brand name medications exceeds two or three, the user may want to create a custom list of the concept and choose the brand names they wish to display.

Example - Using the MED_MEDID_DESC in Your Display to Illustrate That a Single Concept May Have Multiple Recognizable Brands

For purposes of demonstrating this application, the following scenario is used: A healthcare system would like to display the brand medication names associated with the generically named medication nifedipine ER 10 mg Tab (**MED_MEDID_DESC**). A single concept may have multiple recognizable brands.

For this example, the healthcare system displays the MED_MEDID_DESC of the generically named medication along with the MED_NAMEs of the brands.

Part 1: Retrieve the MEDID of the generically named medication.

Retrieve the MEDID of the generically named medication.

1. Select the MED Medication ID (**MEDID**) values from the **MED Medication Table** (RMIID2_MED) where the MED Medication Description (**MED_MEDID_DESC**) column equals the MED_MEDID_DESC of the generically named concept.

MED_MEDID_DESC	MEDID
nifedipine ER 10 mg Tab	00505144

2. Verify that the MEDID value for the generically named concept appears in the **MED GCN_SEQNO to Medication ID Cross-Reference Table** (RMIGC1_MEDID_GCNSEQNO_LINK) to ensure that the MEDID is associated with the generically named concept.
 - If the MEDID does not appear in the RMIGC1_MEDID_GCNSEQNO_LINK table, alert the user that the MEDID is not associated with the generically named concept.
 - If the MEDID appears in this table, continue to the next step.

In this example, the MEDID appears in the RMIGC1_MEDID_GCNSEQNO_LINK table. The application continues to the next step.

Part 2: Retrieve the MEDID of the brand medications associated with the generically named medication.

Select the MEDID values from the **MED Medication Table** (RMIID2_MED) where the GENERIC_MEDID column equals the MEDID value of the generically named medication retrieved in Part 1.

This step retrieves all brand name medications associated with the generically named medication concept.

GENERIC_MEDID	MEDID	MED_MEDID_DESC
00505144	00512875	Nifedipine PA 10 mg Tab
00505144	00509054	Adalat PA 10 mg Tab

Part 3: Retrieve the MED_NAME of the brand medications.

1. Select the MED Routed Dosage Form Medication ID (**ROUTED_DOSAGE_FORM_MED_ID**) values from the **MED Medication Table** (RMIID2_MED) where the MEDID column equals the MEDID values from Part 2.

The MED Routed Dosage Form Medication Description (**MED_ROUTED_DF_MED_ID_DESC**) column is found within the **MED Routed Dosage Form Medication Table** (RMIDFID1_ROUTED_DOSE_FORM_MED RMIDFID2_ROUTED_DOSE_FORM_MED).

MEDID	MED_MEDID_DESC	ROUTED_DOSAGE_FORM_MED_ID	MED_ROUTED_DF_MED_ID_DESC
00512875	Nifedipine PA 10 mg Tab	00126926	Nifedipine PA Tab
00509054	Adalat PA 10 mg Tab	00123981	Adalat PA Tab

2. Select the MED Routed Medication ID (**ROUTED_MED_ID**) values from the RMIDFID1_ROUTED_DOSE_FORM_MED table where the ROUTED_DOSAGE_FORM_MED_ID column equals the ROUTED_DOSAGE_FORM_MED_ID values from the previous step.

ROUTED_DOSAGE_FORM_MED_ID	ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00126926	00106155	Nifedipine PA Oral
00123981	00103610	Adalat PA Oral

3. Select the MED Medication Name ID (**MED_NAME_ID**) values from the **MED Routed Medication Table** (RMIR MID2_ROUTED_MED) where the ROUTED_MED_ID column equals the ROUTED_MED_ID values from the previous step.

ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC	MED_NAME_ID
00106155	Nifedipine PA Oral	00090558
00103610	Adalat PA Oral	00088160

4. Select the MED Medication Name (**MED_NAME**) values from the **MED Medication Name Table** (RMINMID2_MED_NAME) where the MED_NAME_ID column equals the MED_NAME_ID values from the previous step.

MED_NAME_ID	MED_NAME
00090558	Nifedipine PA
00088160	Adalat PA

Part 4: Display the generically named medication and the associated brand medication names.

Display the MED_NAME for the brand medication name from Part 3 in parentheses next to the MED_MEDID_DESC for the generically named medication from Part 1:nifedipine ER 10 mg Tab (Nifedipine PA, Adalat PA).

nifedipine ER 10 mg Tab (Nifedipine PA, Adalat PA)

Example - Using the MED_MEDID_DESC in Your Display to Distinguish Between Similarly Named but Clinically Different Medications

For purposes of demonstrating this application, the following scenario is used: A healthcare system would like to display the brand medication names associated with the following generically named medications:

- metformin 500 mg Tab (**MED_MEDID_DESC**)
- metformin ER 500 mg 24 hr Tab, GR (**MED_MEDID_DESC**)

When clinically different medications have similar generic presentations, display of the brand name(s) can clarify the choice because the clinical differences of the displayed Brands are known to the clinician.

For this example, the healthcare system displays the MED_MEDID_DESC of the generically named medication along with the MED_NAME of the associated brand medication.

Part 1: Retrieve the MEDID of the generically named medication.

1. Select the MED Medication ID (**MEDID**) values from the **MED Medication Table** (RMIID2_MED) where the MED Medication Description (**MED_MEDID_DESC**) column equals the MED_MEDID_DESC of the generically named concept.

MED_MEDID_DESC	MEDID
metformin 500 mg Tab	00504732
metformin ER 500 mg 24 hr Tab, GR	00504733

2. Verify that the MED Medication ID (**MEDID**) value for the generically named concept appears in the **MED GCN_SEQNO to Medication ID Cross-Reference Table** (RMIGC1_MEDID_GCNSEQNO_LINK) to ensure that the MEDID is associated with the generically named concept.

- If the MEDID does not appear in the RMIGC1_MEDID_GCNSEQNO_LINK table, alert the user that the MEDID is not associated with the generically named concept.
- If the MEDID appears in this table, continue to the next step.

In this example, the MEDID appears in the RMIGC1_MEDID_GCNSEQNO_LINK table. The application continues to the next step.

Part 2: Retrieve the MEDID of the brand medications associated with the generically named medication.

Select the MEDID values from the **MED Medication Table** (RMIID2_MED) where the GENERIC_MEDID column equals the MEDID value of the generically named medication retrieved in Part 1. This step retrieves all brand name medications associated with the generically named medication concept.

GENERIC_MEDID	MEDID	MED_MEDID_DESC
00504732	00511471	Glucophage 500 mg Tab
00504733	00511478	Glumetza 500 mg 24 hr Tab

Part 3: Retrieve the MED_NAME of the brand medications.

- Select the MED Routed Dosage Form Medication ID (**ROUTED_DOSAGE_FORM_MED_ID**) values from the **MED Medication Table** (RMIIID2_MED) where the MEDID column equals the MEDID values from Part 2.

The MED Routed Dosage Form Medication Description (**MED_ROUTED_DF_MED_ID_DESC**) column is found within the **MED Routed Dosage Form Medication Table** (RMIDFID1_ROUTE_DOSE_FORM_MED RMIDFID2_ROUTE_DOSE_FORM_MED).

MEDID	MED_MEDID_DESC	ROUTED_DOSAGE_FORM_MED_ID	MED_ROUTED_DF_MED_ID_DESC
00511471	Glucophage 500 mg Tab	00125864	Glucophage Tab
00511478	Glumetza 500 mg 24 hr Tab	00125868	Glumetza 24 hr Tab

Select the MED Routed Medication ID (**ROUTED_MED_ID**) from the RMIDFID1_ROUTE_DOSE_FORM_MED table where the ROUTED_DOSAGE_FORM_MED_ID column equals the ROUTED_DOSAGE_FORM_MED_ID values from the previous step.

ROUTED_DOSAGE_FORM_MED_ID	ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00125864	00105226	Glucophage Oral
00125868	00105230	Glumetza Oral

Select the MED Medication Name ID (**MED_NAME_ID**) values from the **MED Routed Medication Table** (RMIRMID2_ROUTE_MED) where the ROUTED_MED_ID column equals the ROUTED_MED_ID values from the previous step.

ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC	MED_NAME_ID
00105226	Glucophage Oral	00089681
00105230	Glumetza Oral	00089685

Select the MED Medication Name (**MED_NAME**) values from the **MED Medication Name Table** (RMINMID2_MED_NAME) where the MED_NAME_ID column equals the MED_NAME_ID values from the previous step.

MED_NAME_ID	MED_NAME
00089681	Glucophage
00089685	Glumetza

Part 4: Display the generically named medication and the associated brand medication names.

- Display the MED_NAME values in parentheses next to the MED_MEDID_DESC for the generically named medication from step 1:

metformin 500 mg Tab (Glucophage)

metformin ER 500 mg 24 hr Tab, GR (Glumetza)

- i** If the list of brand name medications exceeds two or three, the user may want to create a custom list of the concept and choose the brand names they wish to display.

Example - Using the MED_NAME in Your Display to Distinguish Between Similarly Named but Clinically Different Medications

For purposes of demonstrating this application, the following scenario is used: A healthcare system needs to display medications in a pick list used by physicians for selecting orders. The following generically named medications have similar extended release dosage form expressions. To help physicians distinguish between similarly named, but clinically different medications in the pick list, key brand names can be retrieved and displayed next to the generically named medication (**MED_NAME**). The innovator flag is used to limit the list of names to brand names to simplify and clarify the choices.

- metformin 500 mg Tab (**MED_MEDID_DESC**)
- metformin SR 500 mg 24 hr Tab, GR (**MED_MEDID_DESC**)

For this example, the healthcare system displays the MED_NAME of the generically named medication along with the MED_NAME of the associated brand medication.

Part 1: Retrieve the MEDID of the generically named medication.

1. Select the MED Medication ID (**MEDID**) values from the **MED Medication Table** (RMIID2_MED) where the MED Medication Description (**MED_MEDID_DESC**) column equals the **MED_MEDID_DESC** of the generically named concept.

MED_MEDID_DESC	MEDID
metformin 500 mg Tab	00504732
metformin SR 500 mg 24 hr Tab, GR	00504733

2. Verify that the MED Medication ID (**MEDID**) value for the generically named concept appears in the **MED GCN_SEQNO to Medication ID Cross-Reference Table** (RMIGC1_MEDID_GCNSEQNO_LINK) to ensure that the MEDID is associated with the generically named concept.
 - If the MEDID does not appear in the RMIGC1_MEDID_GCNSEQNO_LINK table, alert the user that the MEDID is not associated with the generically named concept.
 - If the MEDID appears in this table, continue to the next step.

In this example, the MEDID appears in the RMIGC1_MEDID_GCNSEQNO_LINK table. The application continues to the next step.

Part 2: Retrieve the MEDID of the brand medications associated with the generically named medication.

1. Select the MEDID values from the **MED Medication Table** (RMIID2_MED) where the **GENERIC_MEDID** column equals the MEDID value of the generically named medication retrieved in Part 1. This step retrieves all brand named medications associated with the generically named medication concept.

GENERIC_MEDID	MEDID	MED_MEDID_DESC
00504732	511471	Glucophage 500 mg Tab
00504733	511478	Glumetza 500 mg 24 hr Tab

Part 3: Retrieve the MED_NAME of the brand medications.

1. Select the MED Routed Dosage Form Medication ID (**ROUTED_DOSAGE_FORM_MED_ID**) values from the **MED Medication Table** (RMIIID2_MED) where the MEDID column equals the MEDID values from Part 2.

The MED Routed Dosage Form Medication Description (**MED_ROUTED_DF_MED_ID_DESC**) column is found within the **MED Routed Dosage Form Medication Table** (RMIDFID1_ROUTE_DOSE_FORM_MED RMIDFID2_ROUTE_DOSE_FORM_MED).

MEDID	MED_MEDID_DESC	ROUTED_DOSAGE_FORM_MED_ID	MED_ROUTED_DF_MED_ID_DESC
00511471	Glucophage 500 mg Tab	00125864	Glucophage Tab
00511478	Glumetza 500 mg 24 hr Tab	00125868	Glumetza 24 hr Tab

2. Select the MED Routed Medication ID (**ROUTED_MED_ID**) from the RMIDFID1_ROUTE_DOSE_FORM_MED table where the ROUTED_DOSAGE_FORM_MED_ID column equals the ROUTED_DOSAGE_FORM_MED_ID values from the previous step.

ROUTED_DOSAGE_FORM_MED_ID	ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00125864	00105226	Glucophage Oral
00125868	00105230	Glumetza Oral

3. Select the MED Medication Name ID (**MED_NAME_ID**) values from the **MED Routed Medication Table** (RMIRMID2_ROUTE_MED) where the ROUTED_MED_ID column equals the ROUTED_MED_ID values from the previous step.

ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC	MED_NAME_ID
00105226	Glucophage Oral	00089681
00105230	Glumetza Oral	00089685

4. Select the MED Medication Name (**MED_NAME**) values from the **MED Medication Name Table** (RMINMID2_MED_NAME) where the MED_NAME_ID column equals the MED_NAME_ID values from the previous step.

MED_NAME_ID	MED_NAME
00089681	Glucophage
00089685	Glumetza

Part 4: Display the generically named medication and the associated brand medication names.

1. Display the MED_NAME of the associated brand medication from Part 3 in parentheses next to the MED_NAME of the generically named medication. To retrieve the MED_NAME for the generically named medication, use the MEDID for the generically named medication from Part 1 and follow the steps in Part 3.

metformin (Glucophage)
metformin (Glumetza)

 If the list of brand name medications exceeds two or three, the user may want to create a custom list of the concept and choose the brand names they wish to display.

Implementing Change Management of Stored MEDIDs

The IDC/MEDID relation change history tables enable the creation of reports or programmatic maintenance tools to assist healthcare professionals in maintaining links to stored medication concepts.

The following examples demonstrate the application:

- Example—Monitoring IDC/MEDID Changes Within a Dispensing Environment
- Example—Creating a Weekly MEDID Change History Report

 The examples in this application were created using sample data and may not exist within the current data.

1. Select the desired values from either the MED IDC/MEDID Relation History Table (RMEDIMH0_IDC_MEDID_HIST) or the MED IDC/Generic MEDID Relation History Table (RMEDIGH0_IDC_GEN_MEDID_HIST) where the Production Date (PRODUCTION_DATE) column equals the production date value containing the association changes you wish to review:

- FDB International Drug Code (IDC)
- Production Date (PRODUCTION_DATE)
- Previously Associated Medication ID (PREV_MEDID)
- Previously Associated Medication ID Name Source Code (PREV_MEDID_NAME_SOURCE_CD)
- Previously Associated Medication ID Old Status Code (PREV_MEDID_OLD_STATUS_CD)
- Previously Associated Medication ID New Status Code (PREV_MEDID_NEW_STATUS_CD)
- Previously Associated Medication ID Description (PREV_MEDID_DESC)
- Currently Associated Medication ID (CURR_MEDID)
- Currently Associated Medication ID Name Source Code (CURR_MEDID_NAME_SOURCE_CD)
- Currently Associated Medication ID Old Status Code (CURR_MEDID_OLD_STATUS_CD)
- Currently Associated Medication ID New Status Code (CURR_MEDID_NEW_STATUS_CD)
- Currently Associated Medication ID Description (CURR_MEDID_DESC)

2. Select the Canadian Drug Identification Number (DIN) from the IDDF Canada Drug Product Table (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the IDC values from step 1.

 Use the IDDF Obsolete Date (IOBSDTE) to filter the DINs returned.

3. Select the Move Reason Code (MOVE_REASON_CD) from one of the following tables where the IDC column equals the IDC value and the PRODUCTION_DATE column equals the PRODUCTION_DATE value from step 1.
 - MED IDC/MEDID Move History Reason Table (RMEDIMR0_IDC_MEDID_REASON)

- MED IDC/Generic MEDID Move History Reason Table (RMEDIGR0_IDC_GEN_MEDID_REASON)
4. Select the Move Reason Code Description (MOVE_REASON_CD_DESC) from the MED Move Reason Description Table (RMEDMRD0_MOVE_REASON_DESC) where the MOVE_REASON_CD column equals the MOVE_REASON_CD values from the previous step.
 5. Use the retrieved values according to your business needs. This could include adding the values to reports or using them programmatically to replace or add values within patient profiles as shown in the examples.

Example - Monitoring IDC-MEDID Changes Within a Dispensing Environment

A hospital system has decided to implement a safety measure to ensure that patients are only dispensed drugs that appear on their profile (expressed as MEDID values). The validation process utilizes the relationship between an IDC and its associated MEDID in the [MED IDC to Medication ID Cross-Reference Table \(RMEDIDC0_IDC_MEDID_LINK\)](#) and the [MED IDC to Generic Medication ID Cross-Reference Table \(RMEDIGM0_IDC_GEN_MEDID\)](#) to stop the dispensing process when an IDC does not map to a MEDID stored on a patient profile.

In addition, the validation process creates a report to note changes made to the IDC/MEDID relationships since the system's last update. This process assists healthcare professionals in maintaining MEDIDs that appear on patient profiles but have been modified, for example, an IDC/MEDID relationship changes or the MEDID becomes replaced, retired, unassociated, etc.

In this example, IDC 03000047842 (AMIKACIN SULF 500 MG/2 ML VIAL) relationship to MEDID 501235 (amikacin 250 mg/mL Injection) is changed to MEDID 558069 (amikacin (PF) 500 mg/2 mL Injection) in the May 14, 2009 data update to indicate that the drug strength changed and that this product is preservative-free (pf). Upon receipt of this update, a report is generated, which lists the IDC/MEDID relationship changes. The system's last data update was made on May 7, 2009.

1. Select the following columns from the [MED IDC/MEDID Relation History Table \(RMEDIMH0_IDC_MEDID_HIST\)](#) where the Production Date ([PRODUCTION_DATE](#)) column is greater than the date of the system database's last update.
 - Previously Associated Medication ID ([PREV_MEDID](#))
 - Previously Associated Medication ID Description ([PREV_MEDID_DESC](#))
 - Currently Associated Medication ID ([CURR_MEDID](#))
 - Currently Associated Medication ID Description ([CURR_MEDID_DESC](#))

This step retrieves any relationship changes that have occurred since the last update. In this example, the system database was last updated on November 11, 2010 and one relationship change was retrieved.

IDC	PRODUCTION_DATE	PREV_MEDID	PREV_MEDID_DESC	CURR_MEDID	CURR_MEDID_DESC
03000047842	20090514	501235	amikacin 250 mg/mL Injection	558069	amikacin (PF) 500 mg/2 mL Injection

2. Select the Canadian Drug Identification Number ([DIN](#)) from the [IDDF Canada Drug Product Table \(RICAIDC1_DRUG_PRODUCT\)](#) where the IDC column equals the IDC values from step 1.

IDC	DIN	IOBSDTE
03000047842	2242971	0

3. Select the Move Reason Code ([MOVE_REASON_CD](#)) from the [MED IDC/MEDID Move History Reason Table \(RMEDIMR0_IDC_MEDID_REASON\)](#) where the IDC column equals the IDC value and the

PRODUCTION_DATE column equals the PRODUCTION_DATE value from step 1.

IDC	PRODUCTION_DATE	MOVE_REASON_CD
03000047842	20090514	1
03000047842	20090514	3
03000047842	20090514	7

4. Select the Move Reason Code Description (**MOVE_REASON_CD_DESC**) from the **MED Move Reason Description Table** (RMEDMRD0_MOVE_REASON_DESC) where the MOVE_REASON_CD column equals the MOVE_REASON_CD values from the previous step.

MOVE_REASON_CD	MOVE_REASON_CD_DESC
1	Ingredient List change - Product associated with a new or existing MediID
3	Strength value change - Product associated with a new or existing MediID
7	Product associated with a new or existing Preservative Free MediID

5. The validation system adds the DIN, PREV_MEDID, PREV_MEDID_DESC, CURR_MEDID, CURR_MEDID_DESC, and MOVE_REASON_CD_DESC values retrieved from the previous steps to a report, which is presented to an end-user who determines if further action is required. A sample report is shown below.

DIN	PREV_MEDID	PREV_MEDID_DESC	CURR_MEDID	CURR_MEDID_DESC
2242971	501235	amikacin 250 mg/mL Injection	558069	amikacin (PF) 500 mg/2 mL Injection

1 Ingredient List change - Product associated with a new or existing MediID
3 Strength value change - Product associated with a new or existing MediID
7 Product associated with a new or existing Preservative Free MediID

Example - Creating a Weekly MEDID Change History Report

To ensure a stored MEDID always links to IDCs for dispensing, a healthcare professional requests a weekly report so they can select replacement MED Medication IDs (**MEDID**) for those that no longer link to IDCs. A weekly report is generated illustrating the previous and current MEDID values and their attributes.

1. Select the Previously Associated Medication ID (**PREV_MEDID**) and the Currently Associated Medication ID (**CURR_MEDID**) values from the **MED IDC/MEDID Relation History Table** (**RMEDIMH0_IDC_MEDID_HIST**)

where the:

- Production Date (**PRODUCTION_DATE**) equals the date of the most recent FDB build.
- Previously Associated Medication ID New Status Code (**PREV_MEDID_CD**) equals 1 (*Replaced*), 2 (*Retired*), or 9 (*Unassociated*).

The table below contains a sample of returned values:

PRODUCTION_DATE	PREV_MEDID_CD	PREV_MEDID	PREV_MEDID_DESC	CURR_MEDID	CURR_MEDID_DESC
20080209	1	00509911	Brevicon 1 mg-35 mcg Tab	00509907	Brevicon 1/35 (21) 1 mg-35 mcg Tab
20080209	1	00509911	Brevicon 1 mg-35 mcg Tab	00509909	Brevicon 1/35 (28) 1 mg-35 mcg Tab
20080209	1	00509910	Brevicon 0.5 mg-35 mcg Tab	00556084	Brevicon 0.5/35 (28) 0.5 mg-35 mcg Tab
20080209	1	00509910	Brevicon 0.5 mg-35 mcg Tab	00556085	Brevicon 0.5/35 (21) 0.5 mg-35 mcg Tab
20080209	1	00505376	Pantoprazole 40 mg IV Solution	00550537	Pantoprazole sodium 40 mg IV Solution
20080209	1	00505376	Clindamycin 900 mg/6 mL IV	00502451	Clindamycin phosphate 150 mg/mL Injection

2. Filter the records retrieved in step 1 to remove any duplicates, if needed.
3. The retrieved CURR_MEDID values represent candidates for replacement of the PREV_MEDID.
4. Build a report using the information retrieved from the previous step.



Your users might find it useful to include the IDCs

present in the change records to support their decision-making process.

MED ERD and Technical Specifications

This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

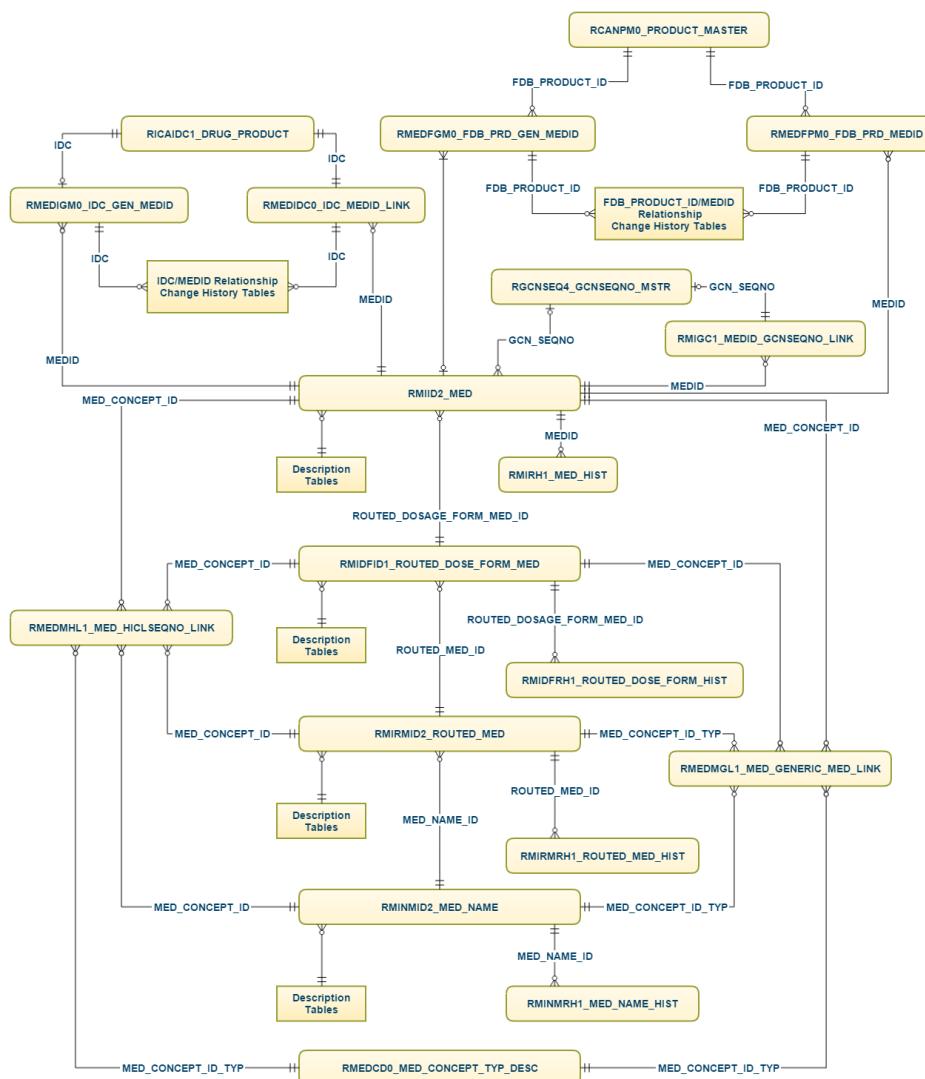
- Medication Name Concepts Tables
- Medication Name Concepts ERD
- MED IDC/MEDID Relationship Change History Table ERD
- FDB Product to MEDID Relationship Change History Table ERD
- Medication Name Concepts Descriptive Tables ERD

Medication Name Concepts Tables

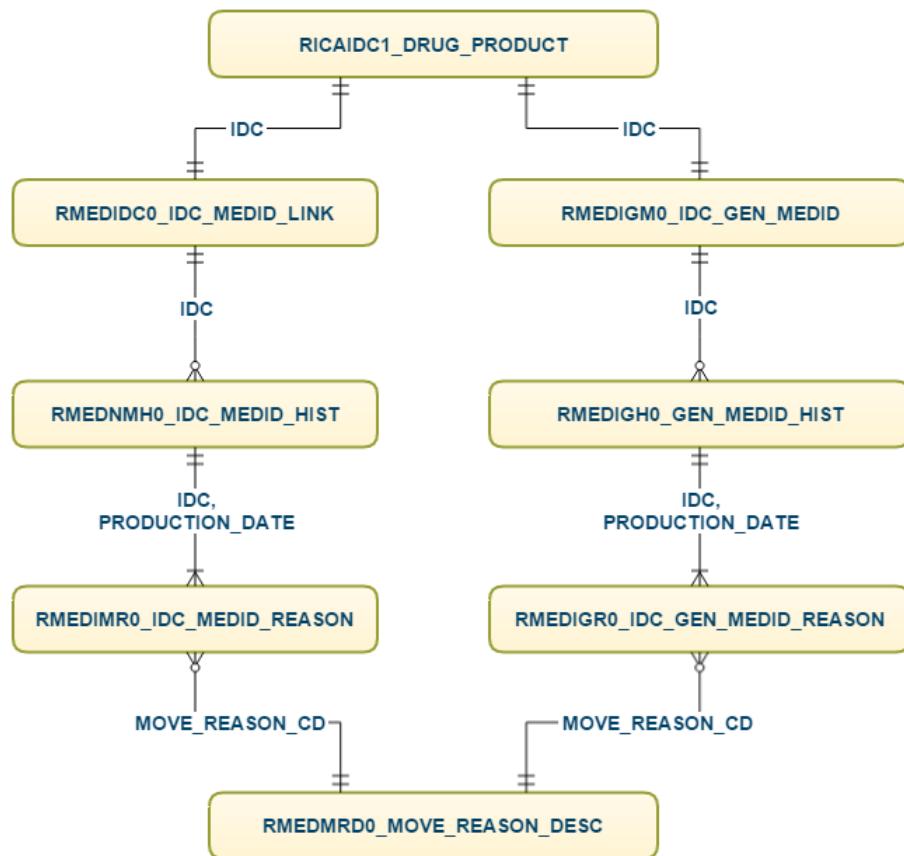
- FDB Product ID to Generic MEDID Move History Reason Table
- MED Dosage Forms Table
- MED GCN_SEQNO Assignment Code Description Table
- MED GCN_SEQNO to Medication ID Cross-Reference Table
- MED IDC/Generic MEDID Move History Reason Table
- MED IDC/Generic MEDID Relation History Table
- MED IDC/MEDID Move History Reason Table
- MED IDC/MEDID Relation History Table
- MED IDC to Generic Medication ID Cross-Reference Table
- MED IDC to Medication ID Cross-Reference Table
- MED MED Concept/Generic MED Relation Table
- MED MED Concept/HICL_SEQNO Relation Table
- MED MED Concept ID Type Description Table
- MED Medication Name Replacement History Table
- MED Medication Name Source Code Description Table
- MED Medication Name Table
- MED Medication Name Type Code Description Table
- MED Medication Replacement History Table
- MED Medication Table
- MED Move Reason Description Table
- MED Product to Generic Medication ID Cross-Reference Table
- MED Product to Generic MEDID Relation History Table
- MED Product to Medication ID Cross-Reference Table
- MED Product to MEDID Relation History Table
- MED Reference DESI2 Indicator Description Table

- MED Reference DESI Indicator Description Table
- MED Reference Federal DEA Class Code Description Table
- MED Reference Federal Legend Indicator Description Table
- MED Reference Generic Comparative Price Code Description Table
- MED Reference Generic Medication Name Code Description Table
- MED Reference Generic Price Spread Code Description Table
- MED Reference Generic Therapeutic Equivalence Code Description Table
- MED Reference Innovator Indicator Description Table
- MED Reference Multi-Source Code Description Table
- MED Routed Dosage Form Medication Replacement History Table
- MED Routed Dosage Form Medication Table
- MED Routed Medication Replacement History Table
- MED Routed Medication Table
- MED Route Table
- MED Status Code Description Table
- MED Product/MEDID Move History Reason Table
- MED Product to Generic MEDID Move History Reason Table

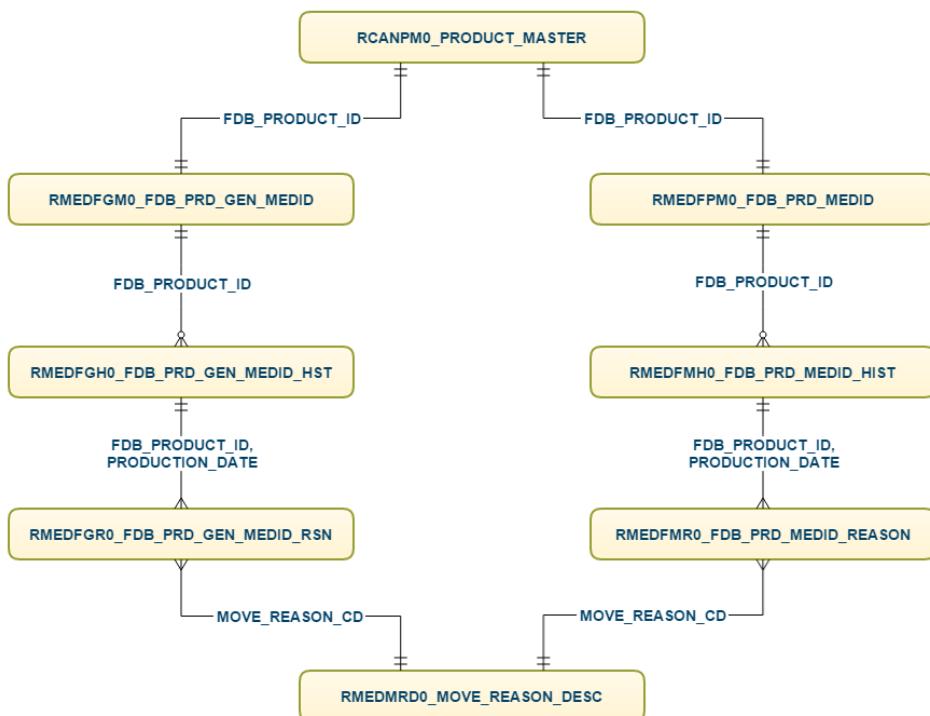
Medication Name Concepts ERD



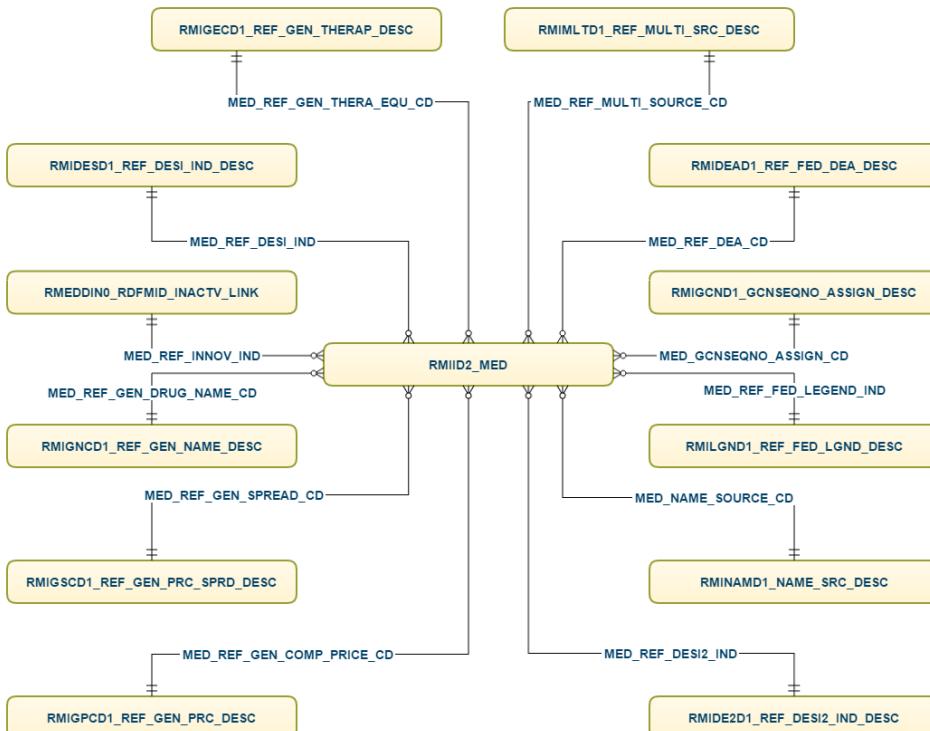
MED IDC/MEDID Relationship Change History Table ERD



FDB Product to MEDID Relationship Change History Table ERD



Medication Name Concepts Descriptive Tables ERD



FDB Product ID to Generic MEDID Move History Reason Table

Table Name	RMEDFGR0_FDB_PRD_GEN_MEDID_RSN
Revision Activity	add.03-19-2015
Purpose	Provides the reason for why association changes have occurred within the MED Product to Generic Medication ID Cross-Reference Table (RMEDFGM0_FDB_PRD_GEN_MEDID) table.

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
P	PRODUCTION_DATE	Production Date	N	8	9(8)
PF	MOVE_REASON_CD	Move Reason Code	N	4	9(4)

MED Dosage Forms Table

Table Name	RMIDFD1_DOSE_FORM				
Revision Activity	rev.04-25-2002				
Purpose	Relates the Medication Dosage Form ID to its text description and abbreviation.				

Key	Column Name	Column Description	Format	Length	Picture
P	MED_DOSAGE_FORM_ID	MED Dosage Form ID	N	5	9(5)
	MED_DOSAGE_FORM_ABBR	MED Dosage Form Abbreviation	AN	4	X(4)
	MED_DOSAGE_FORM_DESC	MED Dosage Form Description	AN	30	X(30)

MED GCN_SEQNO Assignment Code Description Table

Table Name	RMIGCND1_GCNSEQNO_ASSGN_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the GCN_SEQNO Assignment Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_GCNSEQN_O_ASSIGN_CD	MED GCN_SEQNO Assignment Code	AN	1	X(1)
	MED_GCNSEQN_O_ASSIGN_CD_DESC	MED GCN_SEQNO Assignment Code Description	AN	60	X(60)

MED GCN_SEQNO to Medication ID Cross-Reference Table

Table Name	RMIGC1_MEDID_GCNSEQNO_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links a Clinical Formulation ID (GCN_SEQNO) to a Medication ID.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
F	MEDID	MED Medication ID (Stable ID)	N	8	9(8)

MED IDC/Generic MEDID Move History Reason Table

Table Name	RMEDIGR0_IDC_GEN_MEDID_REASON
Revision Activity	add.02-10-2011
Purpose	Provides the reason for why association changes have occurred within the MED IDC to Generic Medication ID Cross-Reference Table (RMEDIGM0_IDC_GEN_MEDID).

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	AN	11	X(11)
P	PRODUCTION_DATE	Production Date	N	8	9(8)
PF	MOVE_REASON_CD	Move Reason Code	N	4	9(4)

MED IDC Generic MEDID Relation History Table

Table Name	RMEDIGH0_IDC_GEN_MEDID_HIST
Revision Activity	add.02-10-2011
Purpose	Provides the IDC/Generic MEDID association changes that occur within the MED IDC to Generic Medication ID Cross-Reference Table (RMEDIGM0_IDC_GEN_MEDID).

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	AN	11	X(11)
P	PRODUCTION_DATE	Production Date	N	8	9(8)
F	PREV_MEDID	Previously Associated Medication ID	N	8	9(8)
F	PREV_MEDID_NAME_SOURCE_CD	Previously Associated Medication ID Name Source Code	AN	1	X(1)
F	PREV_MEDID_OLD_STATUS_CD	Previously Associated Medication ID Old Status Code	AN	1	X(1)
F	PREV_MEDID_NEW_STATUS_CD	Previously Associated Medication ID New Status Code	AN	1	X(1)
	PREV_MEDID_DESC	Previously Associated Medication ID Description	AN	70	X(70)
F	CURR_MEDID	Currently Associated Medication ID	N	8	9(8)
F	CURR_MEDID_NAME_SOURCE_CD	Currently Associated Medication ID Name Source Code	AN	1	X(1)

F	CURR_MEDID_OLD_STATUS_CD	Currently Associated Medication ID Old Status Code	AN	1	X(1)
F	CURR_MEDID_NEW_STATUS_CD	Currently Associated Medication ID New Status Code	AN	1	X(1)
	CURR_MEDID_DESC	Currently Associated Medication ID Description	AN	70	X(70)

MED IDC MEDID Move History Reason Table

Table Name	RMEDIMR0_IDC_MEDID_REASON
Revision Activity	add.02-10-2011
Purpose	Provides the reason for why association changes have occurred within the MED IDC to Medication ID Cross-Reference Table (RMEDIDC0_IDC_MEDID_LINK).

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	AN	11	X(11)
F	PRODUCTION_DATE	Production Date	N	8	9(8)
PF	MOVE_REASON_CD	Move Reason Code	N	4	9(4)

MED IDC MEDID Relation History Table

Table Name	RMEDIMH0_IDC_MEDID_HIST				
Revision Activity	add.02-10-2011				
Purpose	Provides the IDC/MEDID association changes that occur within the MED IDC to Medication ID Cross-Reference Table (RMEDIDC0_IDC_MEDID_LINK).				

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	AN	11	X(11)
P	PRODUCTION_DATE	Production Date	N	8	9(8)
F	PREV_MEDID	Previously Associated Medication ID	N	8	9(8)
F	PREV_MEDID_NAME_SOURCE_CD	Previously Associated Medication ID Name Source Code	AN	1	X(1)
F	PREV_MEDID_OLD_STATUS_CD	Previously Associated Medication ID Old Status Code	AN	1	X(1)
F	PREV_MEDID_NEW_STATUS_CD	Previously Associated Medication ID New Status Code	AN	1	X(1)
	PREV_MEDID_DESC	Previously Associated Medication ID Description	AN	70	X(70)
F	CURR_MEDID	Currently Associated Medication ID	N	8	9(8)
F	CURR_MEDID_NAME_SOURCE_CD	Currently Associated Medication ID Name Source Code	AN	1	X(1)

F	CURR_MEDID_OLD_STATUS_CD	Currently Associated Medication ID Old Status Code	AN	1	X(1)
F	CURR_MEDID_NEW_STATUS_CD	Currently Associated Medication ID New Status Code	AN	1	X(1)
	CURR_MEDID_DESC	Currently Associated Medication ID Description	AN	70	X(70)

MED IDC to Generic Medication ID Cross-Reference Table

Table Name	RMEDIGM0_IDC_GEN_MEDID				
Revision Activity	add.02-10-2011				
Purpose	Links an international drug code product to its distinct pharmaceutically named Medication ID.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	AN	11	X(11)
F	MEDID	MED Medication ID (Stable ID)	N	8	9(8)

MED IDC to Medication ID Cross-Reference Table

Table Name	RMEDIDC0_IDC_MEDID_LINK				
Revision Activity	add.05-03-2007				
Purpose	Links an international drug code product to its Medication ID.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IDC	FDB International Drug Code	AN	11	X(11)
F	MEDID	MED Medication ID (Stable ID)	N	8	9(8)

MED MED Concept Generic MED Relation Table

Table Name	RMEDMGL1_MED_GENERIC_MED_LINK				
Revision Activity	rev.03-19-2015				
Purpose	Links a MED Concept to its generically named companion.				

Key	Column Name	Column Description	Format	Length	Picture
P	MED_CONCEPT_ID	MED Concept ID	N	8	9(8)
PF	MED_CONCEPT_ID_TYP	MED Concept ID Type	N	1	9(1)
P	GENERIC_MED_CONCEPT_ID	Generically Named MED Concept	N	8	9(8)
	MED_CONCEPT_OBSDATEC	MED Concept Obsolete Date	N	8	9(8)

MED MED Concept HICL_SEQNO Relation Table

Table Name	RMEDMHL1_MED_HICLSEQNO_LINK
Revision Activity	Add.07-29-2004
Purpose	<p>Links a medication concept identifier (Medication ID, Routed Dosage Form Medication ID, Routed Medication ID, and Medication Name ID) to its list of ingredients. The medication concepts contained within the table have a status of Active, Inactive, Replaced, or Unassociated. The only type of medication concept that does not appear within this table are those marked with a status of Retired.</p> <p>Note: A small number of Replaced concepts do not appear in the MED Concept/HICL_SEQNO Relation Table as they have been determined to be too broad to be useful in allergy checking (for example, Bulk Chemicals Liquid), or they are medical supplies that would not normally participate in allergy checking.</p>

Key	Column Name	Column Description	Format	Length	Picture
P	MED_CONCEPT_ID	MED Concept ID	N	8	9(8)
PF	MED_CONCEPT_ID_TYP	MED Concept ID Type	N	1	9(1)
PF	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
P	MED_CONCEPT_HICL_SRC_CD	MED Concept HICL_SEQNO Source Code	N	1	9(1)
	MED_CONCEPT_OBSDATEC	MED Concept Obsolete Date	N	8	9(8)

MED MED Concept ID Type Description Table

Table Name	RMEDCD0_MED_CONCEPT_TYP_DESC				
Revision Activity	add.07-29-2004				
Purpose	Provides the description of the MED Concept ID.				

Key	Column Name	Column Description	Format	Length	Picture
P	MED_CONCEPT_ID_TYP	MED Concept ID Type	N	1	9(1)
	MED_CONCEPT_ID_TYP_DESC	MED Concept ID Type Description	AN	50	X(50)

MED Medication Name Replacement History Table

Table Name	RMINMRH1_MED_NAME_HIST				
Revision Activity	rev.04-25-2002				
Purpose	Tracks the replacement history of the medication name.				

Key	Column Name	Column Description	Format	Length	Picture
PF	MED_REPLACE_NAME_ID	MED Replacement Medication Name ID	N	8	9(8)
PF	MED_PREVIOUS_NAME_ID	MED Previous Medication Name ID	N	8	9(8)
	MED_NAME_ID_REPLACE_EFFECTIVE_DATE	MED Medication Name Replacement Effective Date	N	8	9(8)

MED Medication Name Source Code Description Table

Table Name	RMINAMD1_NAME_SRC_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Medication Name Source Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_NAME_SOURCE_CD	MED Medication Name Source Code	AN	1	X(1)
	MED_NAME_SOURCE_CD_DESC	MED Medication Name Source Code Description	AN	90	X(90)

MED Medication Name Table

Table Name	RMINMID2_MED_NAME
Revision Activity	rev.03-19-2015
Purpose	Provides attributes of the medication name.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_NAME_ID	MED Medication Name ID (Stable ID)	N	8	9(8)
	MED_NAME	MED Medication Name	AN	30	X(30)
F	MED_NAME_TYPE_CD	MED Medication Name Type Code	AN	1	X(1)
F	MED_STATUS_CD	MED Medication Status Code	AN	1	X(1)

MED Medication Name Type Code Description Table

Table Name	RMINMD1_MED_NAME_TYPE_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Medication Name Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_NAME_TYPE_CD	MED Medication Name Type Code	AN	1	X(1)
	MED_NAME_TYPE_CD_DESC	MED Medication Name Type Code Description	AN	30	X(30)

MED Medication Replacement History Table

Table Name	RMIRH1_MED_HIST				
Revision Activity	rev.04-25-2002				
Purpose	Tracks the replacement history of the medication.				

Key	Column Name	Column Description	Format	Length	Picture
PF	MED_REPLACE_MED_ID	MED Replacement Medication ID	N	8	9(8)
PF	MED_PREV_MED_ID	MED Previous Medication ID	N	8	9(8)
	MED_MEDID_REPLACE_EFFECTIVE_DATE	MED Replacement Effective Date	N	8	9(8)

MED Medication Table

Table Name	RMIID2_MED
Revision Activity	rev.03-19-2015
Purpose	Provides the attributes of a medication.

Key	Column Name	Column Description	Format	Length	Picture
P	MEDID	MED Medication ID (Stable ID)	N	8	9(8)
F	ROUTED_DOSAGE_FORM_MED_ID	MED Routed Dosage Form Medication ID (Stable ID)	N	8	9(8)
	MED_STRENGTH	MED Strength	AN	15	X(15)
	MED_STRENGTH_UOM	MED Strength Unit of Measure	AN	15	X(15)
	MED_MEDID_DESC	MED Medication Description	AN	70	X(70)
F	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
F	MED_GCNSEQNO_ASSIGN_CD	MED GCN_SEQNO Assignment Code	AN	1	X(1)
F	MED_NAME_SOURCE_CD	MED Medication Name Source Code	AN	1	X(1)
F	(U.S. Only) MED_REF_FED_LEGEND_IND	MED Reference Federal Legend Indicator. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_DEA_CD	MED Reference Federal DEA Class Code. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)

F	(U.S. Only) MED_REF_MULTI_SOURCE_CD	MED Reference Multi-Source Code. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_GEN_DRUG_NAME_CD	MED Reference Generic Medication Name Code. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_GEN_COMP_PRICE_CD	MED Reference Generic Comparative Price Code. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_GEN_SPREAD_CD	MED Reference Generic Comparative Price Code. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_INNOV_IND	MED Reference Innovator Indicator. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_GEN_THERA_EQU_CD	MED Reference Generic Therapeutic Equivalence Code. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)

F	(U.S. Only) MED_REF_DESI_IND	MED Reference DESI Indicator. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	(U.S. Only) MED_REF_DESI2_IND	MED Reference DESI2 Indicator. Data is only available for the U.S. market and is not relevant to the Canadian market.	AN	1	X(1)
F	MED_STATUS_CD	MED Medication Status Code	AN	1	X(1)
	GENERIC_MEDID	MED Generic Medication Identifier	N	8	9(8)

MED Move Reason Description Table

Table Name	RMEDMRD0_MOVE_REASON_DESC				
Revision Activity	add.02-10-2011				
Purpose	Relates the Move Reason Code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	MOVE_REASON_CD	Move Reason Code	N	4	9(4)
	MOVE_REASON_CD_DESC	Move Reason Code Description	AN	100	X(100)

MED Product to Generic Medication ID Cross-Reference Table

Table Name	RMEDFGM0_FDB_PRD_GEN_MEDID
Revision Activity	add.03-19-2015
Purpose	Links a Canadian Natural Health Product to its distinct pharmaceutically named Medication ID.

Key	Column Name	Column Description	Format	Length	Picture
F	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
F	MEDID	Med Medication ID	N	8	9(8)

MED Product to Generic MEDID Relation History Table

Table Name	RMEDFGH0_FDB_PRD_GEN_MEDID_HST				
Revision Activity	add.03-19-2015				
Purpose	Provides the Product/Generic MEDID association changes that occur within the MED Product to Generic Medication ID Cross-Reference Table .				

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
P	PRODUCTION_DATE	Production Date	N	8	9(8)
F	PREV_MEDID	Previously Associated Medication ID	N	8	9(8)
F	PREV_MEDID_NAME_SOURCE_CD	Previously Associated Medication ID Name Source Code	AN	1	X(1)
F	PREV_MEDID_OLD_STATUS_CD	Previously Associated Medication ID Old Status Code	AN	1	X(1)
F	PREV_MEDID_NEW_STATUS_CD	Previously Associated Medication ID New Status Code	AN	1	X(1)
	PREV_MEDID_DESC	Previously Associated Medication ID Description	AN	70	X(70)
F	CURR_MEDID	Currently Associated Medication ID	N	8	9(8)
F	CURR_MEDID_NAME_SOURCE_CD	Currently Associated Medication ID Name Source Code	AN	1	X(1)

F	CURR_MEDID_OLD_STATUS_CD	Currently Associated Medication ID Old Status Code	AN	1	X(1)
F	CURR_MEDID_NEW_STATUS_CD	Currently Associated Medication ID New Status Code	AN	1	X(1)
	CURR_MEDID_DESC	Currently Associated Medication ID Description	AN	70	X(70)

MED Product to Medication ID Cross-Reference Table

Table Name	RMEDFPM0_FDB_PRD_MEDID				
Revision Activity	add.03-19-2015				
Purpose	Links a Canadian Natural Health Product to its Medication ID.				

Key	Column Name	Column Description	Format	Length	Picture
F	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
F	MEDID	MED Medication ID	N	8	9(8)

MED Product to MEDID Relation History Table

Table Name	RMEDFMH0_FDB_PRD_MEDID_HIST				
Revision Activity	add.03-19-2015				
Purpose	Provides the Product/MEDID association changes that occur within the MED Product to Medication ID Cross-Reference Table.				

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product ID	N	8	9(8)
P	PRODUCTION_DATE	Production Date	N	8	9(8)
	PREV_MEDID	Previously Associated Medication ID	N	8	9(8)
	PREV_MEDID_NAME_SOURCE_CD	Previously Associated Medication ID Name Source Code	AN	1	X(1)
	PREV_MEDID_OLD_STATUS_CD	Previously Associated Medication ID Old Status Code	AN	1	X(1)
	PREV_MEDID_NEW_STATUS_CD	Previously Associated Medication ID New Status Code	AN	1	X(1)
	PREV_MEDID_DESC	Previously Associated Medication ID Description	AN	70	X(70)
	CURR_MEDID	Currently Associated Medication ID	N	8	9(8)
	CURR_MEDID_NAME_SOURCE_CD	Currently Associated Medication ID Name Source Code	AN	1	X(1)

	CURR_MEDID_O LD_STATUS_CD	Currently Associated Medication ID Old Status Code	AN	1	X(1)
	CURR_MEDID_N EW_STATUS_CD	Currently Associated Medication ID New Status Code	AN	1	X(1)
	CURR_MEDID_D ESC	Currently Associated Medication ID Description	AN	70	X(70)

MED Reference DESI2 Indicator Description Table

Table Name	RMIDE2D1_REF_DESI2_IND_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference DESI2 Indicator to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_DESI2_IND	MED Reference DESI2 Indicator	AN	1	X(1)
	MED_REF_DESI2_IND_DESC	MED Reference DESI2 Indicator Description	AN	60	X(60)

MED Reference DESI Indicator Description Table

Table Name	RMIDESD1_REF_DESI_IND_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference DESI Indicator to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_DESI_IND	MED Reference DESI Indicator	AN	1	X(1)
	MED_REF_DESI_IND_DESC	MED Reference DESI Indicator Description	AN	60	X(60)

MED Reference Federal DEA Class Code Description Table

Table Name	RMIDEAD1_REF_FED_DEA_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Federal DEA Class Code to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_DEA_CD	MED Reference Federal DEA Class Code	AN	1	X(1)
	MED_REF_DEA_CD_DESC	MED Reference Federal DEA Class Code Description	AN	60	X(60)

MED Reference Federal Legend Indicator Description Table

Table Name	RMilGND1_REF_FED_LGND_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Federal Legend Indicator to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_FED_LEGEND_IND	MED Reference Federal Legend Indicator	AN	1	X(1)
	MED_REF_FED_LEGEND_IND_DESC	MED Reference Federal Legend Indicator Description	AN	60	X(60)

MED Reference Generic Comparative Price Code Description Table

Table Name	RMIGPCD1_REF_GEN_PRC_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Generic Comparative Price Code to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_GEN_COMP_PRICE_CD	MED Reference Generic Comparative Price Code	AN	1	X(1)
	MED_REF_GEN_COMP_PRICE_CD_DESC	MED Reference Generic Comparative Price Code Description	AN	90	X(90)

MED Reference Generic Medication Name Code Description Table

Table Name	RMIGNCD1_REF_GEN_NAME_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Generic Medication Name Code to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_GEN_DRUG_NAME_CD	MED Reference Generic Medication Name Code	AN	1	X(1)
	MED_REF_GEN_DRUG_NAME_CD_DESC	MED Reference Generic Medication Name Code Description	AN	90	X(90)

MED Reference Generic Price Spread Code Description Table

Table Name	RMIGSCD1_REF_GEN_PRC_SPRD_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Generic Price Spread Code to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_GEN_SPREAD_CD	MED Reference Generic Price Spread Code	AN	1	X(1)
	MED_REF_GEN_SPREAD_CD_DESC	MED Reference Generic Price Spread Code Description	AN	90	X(90)

MED Reference Generic Therapeutic Equivalence Code Description Table

Table Name	RMIGECD1_REF_GEN_THERAP_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Generic Therapeutic Equivalence Code to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_GEN_THERA_EQU_CD	MED Reference Generic Therapeutic Equivalence Code	AN	1	X(1)
	MED_REF_GEN_THERA_EQU_CD_DESC	MED Reference Generic Therapeutic Equivalence Code Description	AN	90	X(90)

MED Reference Innovator Indicator Description Table

Table Name	RMIINND1_REF_INNOV_IND_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Innovator Indicator to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_INNOV_IND	MED Reference Innovator Indicator	AN	1	X(1)
	MED_REF_INNOV_IND_DESC	MED Reference Innovator Indicator Description	AN	90	X(90)

MED Reference Multi-Source Code Description Table

Table Name	RMIMLTD1_REF_MULTI_SRC_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Reference Multi-Source Code to its text description. Data is only available for the U.S. market and is not relevant to the Canadian market.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_REF_MULTI_SOURCE_CD	MED Reference Multi-Source Code	AN	1	X(1)
	MED_REF_MULTI_SOURCE_CD_DESC	MED Reference Multi-Source Code Description	AN	90	X(90)

MED Routed Dosage Form Medication Replacement History Table

Table Name	RMIDFRH1_ROUTED_DOSE_FORM_HIST				
Revision Activity	rev.04-25-2002				
Purpose	Tracks the replacement history of the routed dosage form medication.				
Key	Column Name	Column Description	Format	Length	Picture
PF	MED_REPL_ROUTED_DF_MED_ID	MED Replacement Routed Dosage Form Medication ID	N	8	9(8)
PF	MED_PREV_ROUTED_DF_MED_ID	MED Previous Routed Dosage Form Medication ID	N	8	9(8)
	MED_ROUTED_DF_MED_ID_REPLACE_EF_DT	MED Routed Dosage Form Medication ID Replacement Effective Date	N	8	9(8)

MED Routed Dosage Form Medication Table

Table Name	RMIDFID2_ROUTED_DOSE_FORM_MED				
Revision Activity	rev.03-15-2015				
Purpose	Provides the attributes of the routed dosage form medication.				

Key	Column Name	Column Description	Format	Length	Picture
P	ROUTED_DOSAGE_FORM_MED_ID	MED Routed Dosage Form Medication ID (Stable ID)	N	8	9(8)
F	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
F	MED_DOSAGE_FORM_ID	MED Dosage Form ID	N	5	9(5)
	MED_ROUTED_DF_MED_ID_DESC	MED Routed Dosage Form Medication Description	AN	60	X(60)
F	MED_STATUS_CD	MED Medication Status Code	AN	1	X(1)

MED Routed Medication Replacement History Table

Table Name	RMIRMRH1_ROUTEDED_MED_HIST				
Revision Activity	rev.04-25-2002				
Purpose	Tracks the replacement history of the routed medication.				

Key	Column Name	Column Description	Format	Length	Picture
PF	MED_REPLACE_ROUTED_MED_ID	MED Replacement Routed Medication ID	N	8	9(8)
PF	MED_PREVIOUS_ROUTED_MED_ID	MED Previous Routed Medication ID	N	8	9(8)
	MED_ROUTEDED_MED_ID_REPLACE_EFFECTIVE_DATE	MED Routed Medication ID Replacement Effective Date	N	8	9(8)

MED Routed Medication Table

Table Name	RMIRMID2_ROUTED_MED				
Revision Activity	rev.03-19-2015				
Purpose	Provides attributes of the routed medication.				

Key	Column Name	Column Description	Format	Length	Picture
P	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
F	MED_NAME_ID	MED Medication Name ID (Stable ID)	N	8	9(8)
F	MED_ROUTE_ID	MED Route ID	N	5	9(5)
	MED_ROUTED_MED_ID_DESC	MED Routed Medication Description	AN	60	X(60)
F	MED_STATUS_CD	MED Medication Status Code	AN	1	X(1)

MED Route Table

Table Name	RMIRTD1_ROUTE				
Revision Activity	rev.04-25-2002				
Purpose	Provides attributes of a medication route.				

Key	Column Name	Column Description	Format	Length	Picture
P	MED_ROUTE_ID	MED Route ID	N	5	9(5)
	MED_ROUTE_AB BR	MED Route Abbreviation	AN	4	X(4)
	MED_ROUTE_DE SC	MED Route Description	AN	30	X(30)

MED Status Code Description Table

Table Name	RMISCD1_STATUS_DESC
Revision Activity	rev.04-25-2002
Purpose	Relates the Medication Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MED_STATUS_CD	MED Medication Status Code	AN	1	X(1)
	MED_STATUS_CD_DESC	MED Medication Status Code Description	AN	30	X(30)

MED Product MEDID Move History Reason Table

Table Name	RMEDFMR0_FDB_PRD_MEDID_REASON
Revision Activity	add.03-19-2015
Purpose	Provides the FDB Product/MEDID association changes that occur within the MED Product to MEDID Relation History Table (RMEDFMH0_PRD_MEDID_HIST).

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
PF	PRODUCTION_DATE	Production Date	N	8	9(8)
PF	MOVE_REASON_CD	Move Reason Code	N	4	9(4)

MED Product to Generic MEDID Move History Reason Table

Table Name	RMEDFGR0_FDB_PRD_GEN_MEDID_RSN
Revision Activity	add.03-19-2015
Purpose	Provides the reason for why association changes have occurred within the MED Product to Generic Medication ID Cross-Reference Table.

Key	Column Name	Column Description	Format	Length	Picture
PF	FDB_PRODUCT_ID	FDB Product Identifier	N	8	9(8)
PF	PRODUCTION_DATE	Production Date	N	8	9(8)
PF	MOVE_REASON_CD	Move Reason Code	N	4	9(4)

FDB Medical Lexicon (FML) 2.0

- General Information
- FDB Medical Lexicon Editorial Policies
- Applications
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- Overview
- Definitions
- Concepts

Overview

The FDB Medical Lexicon (FML) is a collection of medical vocabulary concepts, called Disease Identifiers (DXIDs), created by First Databank (FDB) for use with the Disease Decision Support and Dosing modules.

The technical design of FML provides a concept-based DXID “semantic neighborhood”—DXIDs linked to other related DXIDs within the context of each Disease Decision Support or Dosing module. This is achieved using the FML Disease Identifier (DXID) Search Table. When queried with an FML Clinical Module Code (FML_CLIN_CODE), this table returns DXIDs specific to drug indications (INDM), contraindications (DDCM), side effects (SIDE), or dosing information (NEOM and DRCM).

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the FDB knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

 In this module, U.S. data and external identifiers are used in the examples.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also defined.

ICD-9-CM

ICD-9-CM codes are an administrative HIPAA-compliant scheme representing patient problems and health events. FML utilizes the codes and descriptions provided in the United States Department of Health and Human Services' International Classification of Diseases, Clinical Modification, 9th Revision (ICD-9-CM). Updates of this file are done annually. All new ICD code and ICD code description updates are included at the time of updating.

DXIDs may be associated to none or to many ICD Codes. This allows the Disease Decision Support Modules to generate the most comprehensive and relevant set of alerts, and is useful when ICD Codes are known for a given patient. Most, but not all, DXIDs/FDBDXs will be associated to at least one ICD Code in the FML ICD Search Table. Many ICD Codes do not map to DXIDs/FDBDXs. The example below illustrates the relationship of DXID 599—Diabetic Nephropathy to its associated ICD Code. Please note that not all ICD Codes will have links to DXIDs.

Example—ICD Code to DXID relationships

ICD_CD	FML ICD Code Description	FML Navigation Code Description(Relation ship)	DXID	FML 56-character Description
250	DIABETES MELLITUS	Broader	599	Diabetic Nephropathy
250.4	DIAB W RENAL MANIFEST	Equal	599	Diabetic Nephropathy
250.40	DIAB RENAL MANIF TYPE II OR UNSPECIFIED	Equal	599	Diabetic Nephropathy
250.41	DIAB RENAL MANIF TYPE I	Narrower	599	Diabetic Nephropathy
250.42	DM RENAL MANIF TYPE II OR UNSPECIFIED UNCONTROLLED	Narrower	599	Diabetic Nephropathy
250.43	DM RENAL MANF TYP I UNCONTROLLED	Narrower	599	Diabetic Nephropathy
250.8	DIABETES W MANIFEST NEC	Broader	599	Diabetic Nephropathy
250.80	DIAB W MANIF NEC TYPE II	Broader	599	Diabetic Nephropathy
250.9	DIABETES W COMPLIC NOS	Broader	599	Diabetic Nephropathy
250.90	DIAB W COMPL NOS TYPE II	Broader	599	Diabetic Nephropathy
583.8	NEPHRITIS NOS W OTH LESIONS	Broader	599	Diabetic Nephropathy
583.81	NEPHRITIS NOS IN OTH DIS W OTH LESION	Broader	599	Diabetic Nephropathy
583.89	NEPHRITIS NEC W OTH LESIONS	Broader	599	Diabetic Nephropathy
583.9	NEPHRITIS W UNSPEC LESIONS	Broader	599	Diabetic Nephropathy

ICD-10-CM

The International Classification of Diseases, 10th revision, Clinical Modification as written by the World Health Organization (WHO) and the National Center for Healthcare Statistics (NCHS). CMS indicates the ICD-10 code field is not case sensitive.

ICD-10-PCS

The International Classification of Diseases, 10th revision, Procedure Classification System as written by the World Health Organization (WHO) and the National Center for Healthcare Statistics (NCHS). CMS indicates the ICD-10 code field is not case sensitive.

FML Disease Identifier (DXID) Search Table

The [FML Disease Identifier \(DXID\) Search Table](#) (RFMLDSR0_DXID_SEARCH) allows users to retrieve the specific DXIDs utilized within a given Disease Decision Support or Dosing module, via the FML Clinical Module Code ([FML_CLIN_CODE](#)). For example, if Indications Module information is queried, only DXIDs relevant to that module are retrieved. Each DXID is linked many-to-many to other DXIDs used within the same module, creating a module-specific “semantic neighborhood.” The example below illustrates that Vascular Disease, Hypertension, and Uncontrolled Severe Hypertension DXIDs are related to themselves and each other within the Indications Module. Descriptions for the various identifiers and codes are also shown in this example.

Example—DXID relationships in Indications Module

Search DXID Description	Navigation Code Description (Relationship)	Related DXID Description	Clinical Module Code Description
Vascular Disease	Equal	Vascular Disease	Indications
Vascular Disease	Broader	Hypertension	Indications
Vascular Disease	Broader	Hypertension, Uncontrolled, Severe	Indications
Hypertension	Equal	Hypertension	Indications
Hypertension	Narrower	Vascular Disease	Indications
Hypertension	Broader	Hypertension, Uncontrolled, Severe	Indications
Hypertension, Uncontrolled, Severe	Equal	Hypertension, Uncontrolled, Severe	Indications
Hypertension, Uncontrolled, Severe	Narrower	Hypertension	Indications
Hypertension, Uncontrolled, Severe	Narrower	Vascular Disease	Indications

ICD Description Tables

FDB provides both "long" and "short" ICD-10 descriptions from the National Center for Health Statistic (NCHS).

The [FML ICD Code Description Table](#) (RFMLINM1_ICD_DESC) uses the "long" description. If you prefer to display the short description, navigate to the [FML ICD All Descriptions Table](#) (RFMLIAD0_ICD_ALL_DESC) and select the record where the ICD Description Source Code ([ICD_DESC_SOURCE_CD](#)) equals 04.

FML ICD Search Exclusion Table

The [FML ICD Search Exclusion Table](#) (RFMLISX0_ICD_SEARCH_EXCLUSION) provides exclusion mappings to

support more refined drug indications, drug-disease contraindications, and side effects screening. For example, this reduces conflicting information in that a drug's indication cannot trigger a drug-disease contraindication alert.

Concepts

This section describes concepts and database elements that are important for understanding the module.

Billable ICD Codes

The **FML ICD Billable History Table** (RFMLIBH0_ICD_BILLABLE_HIST) provides information regarding the billable dates and billable history of an ICD Code, allowing for both current and retrospective billing analysis of an ICD code or group of ICD codes.

CLIN_DRUG_GROUP

The Clinical Module Drug Group field contains values from disease-based clinical modules and is used as a search filter in the **FML ICD Search Exclusion Table** (RFMLISX0_ICD_SEARCH_EXCLUSION).

DXID

The FML Disease Identifier (**DXID**) is a permanent numeric identifier that represents medical diagnoses, disease states, and health-related conditions or procedures. Each DXID is linked to several text descriptions (names), including the preferred primary professional name and professional synonyms, layman names and synonyms, and abbreviations. The DXID description (**DXID_DESC100**) may consist of pre-coordinated terms, such as "Hypercalcemia with Metastatic Breast Carcinoma" or "Klebsiella Nosocomial Pneumonia."

Link Relationships

Each FML Disease Identifier (**DXID**) is linked to an FML Disease Duration Code (**DXID_DISEASE_DURATION_CD**) that represents a potential duration of the diagnosis represented by the values Acute, Chronic, or both.

DXIDs are linked many-to-many to other DXIDs for navigation purposes and to generate appropriate module alerts, creating the DXID "semantic network" in the **FML Disease Identifier (DXID) Search Table** (RFMLDSR0_DXID_SEARCH).

DXIDs may also be associated to none or to many ICD-9 and ICD-10 codes to generate appropriate module alerts using the **FML ICD Search Table** (RFMLISR1_ICD_SEARCH).

Each DXID is linked one-to-one to a First Databank Disease Code (**FDBDX**).

Navigation to and storage of DXID values for use in FDB applications is supported with the caveat that not all conditions and procedures are represented. If using DXID values, it is necessary to implement the Retire/Replacement History feature. DXID values are not a HIPAA-compliant code set for any part of a patient record.

FML Navigation Codes (**FML_NAV_CODE**) are linked to each DXID association to represent Broader, Narrower, Equal, or **Related** relationships solely for the purpose of supporting alert message construction, particularly for the Drug-Disease Contraindications Module™ (DDCM™). The primary table used in the query is the **FML ICD Search Table** (RFMLISR1_ICD_SEARCH), and this table contains the Search ICD Code (**SEARCH_ICD_CD**),

the Related DXID ([RELATED_RXID](#)), and the FML Navigation Code ([FML_NAV_CODE](#)). There are several DDCM applications that detail how to construct the messages using this information:

- Comparing Patient ICD Codes to Prospective Drug Therapy—Using the Exclusion Table to Reduct Alerts
- Comparing Patient DxIDs to Prospective Drug Therapy
- Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy

Default Screening Record

The FML Disease Identifier ([DXID](#)) value 4892 can be used as the default screening record in the DRCM. The default screening record should be used when the patient condition is not available or if a reason for use record (FDBDX or DXID) for a given age range is not available. When screening a drug order with DRCM and there are no patient conditions available, you can use the default screening records exclusively for a given age range. The default screening record is the most common in DRCM due to the fact that most drugs do not have condition-specific dosing ranges. In cases when a drug does have condition-specific dosing, a specific DXID, not default, is used.

Gender-Specific Record

Due to an FDA alert about gender-specific dosing levels for zolpidem, a widely prescribed drug indicated to treat insomnia, FDB added new DXID values for female and male to use in the DRCM. The DXID values are as follows:

DXID	DXID_DESC100
14160	Female
14161	Male

If the gender is known, use the DXID values when performing dosage range checking for a medication that contains zolpidem. The gender-specific record should be used instead of the default screening record for zolpidem.

Currently, there are no indication-specific records linked to zolpidem.

If you do not have gender information, use the default screening record (4892).

The associated usage-specific records encompass single dose and maintenance dose types for adults aged 6570-23724 days. The High Daily Dose ([DR2_HIDOSD](#)) and Maximum Daily Dose ([DR2_MXDOSD](#)) values for women correspond to the FDA recommended dosing levels for zolpidem. The gender-specific records are in place of the default record, so any other indication-specific record would take preference over the gender-specific records.

FML_NAV_CODE

The FML Navigation Code ([FML_NAV_CODE](#)) identifies whether an ICD Code or DXID is a narrower concept, a broader concept, an equal concept, or a related concept, relative to another DXID.

For example, Pneumococcal Pneumonia is a “narrower” concept than Pneumonia, while Respiratory Disease is a

“broader” concept than Pneumonia.

-  ICD_CD_TYPE value 04 is only available for ICD-10-CM/PCS codes and not for ICD-9-CM codes.

FML_CLIN_CODE

The FML Clinical Module Code ([FML_CLIN_CODE](#)) identifies the Disease Decision Support or Dosing module that is being referenced.

FML Applications

This section provides information about the practical application of data contained in this module.

Finding DXID Descriptions and Synonyms

Finding DXIDs Based on an Input Search String

Finding DXIDs Based on a Patient's Gender

Building a Disease Navigation Report

Finding a Replacement DxID

ICD Code Applications

- Retrieving an ICD Code's Alternate Description
- Retrieving an ICD Code's Associated DxIDs
- Retrieving the Billable Dates for a Given ICD Code

Using FML with Other Modules

Finding DXID Descriptions and Synonyms

This application illustrates how to retrieve the various text descriptions associated to a given Disease Identifier (**DXID**) or set of input DXIDs (for example, a result set retrieved by another application). Each DXID may have the following text descriptions:

- **Primary Professional Name:** one and only one
- **Professional Synonym:** zero, one, or many
- **Primary Layman Name:** zero, one, or many
- **Layman Synonym:** zero, one, or many
- **Abbreviation:** zero, one, or many

Remember that an FML description's designation as a *preferred term* versus a *synonym* is subjective. If your application allows end-users to choose one of these descriptions from a list, you should present them with every available text description so they can select the term they prefer.

- i** Each description type has a 56-character version and a 100-character version. The descriptions are equivalent; one is simply constrained to 56-characters to accommodate systems that must use short strings.

This application retrieves all descriptions associated to **DXID 00000595**.

1. For DxID 00000595's *Primary Professional Name*, find its associated FML 56-character Description column (**DXID_DESC56**) and FML 100-character Description column (**DXID_DESC100**) in the **FML Disease Identifier (DxID) Table** (RFMLDX0_DXID).

DXID	DXID_DESC56	DXID_DESC100
00000595	Type 1 Diabetes Mellitus	Type 1 Diabetes Mellitus

2. For DxID 00000595's *Professional Synonyms*, find its associated FML 56-character Synonym Description (**DXID_SYN_DESC56**) and FML 100-character Synonym Description (**DXID_SYN_DESC100**) in the **FML Disease Identifier (DxID) Synonym Table** (RFMLSYN0_DXID_SYN). Specify a value of **01** for the FML Name Type Code (**DXID_SYN_NMTYP**) to signify that you wish to retrieve this DxID's Professional Synonyms.

DXID	DXID_NMTYP	DXID_SYN_DESC56	DXID_SYN_DESC100
00000595	01	Juvenile Onset DM	Juvenile Onset DM
00000595	01	Insulin-Dependent DM	Insulin-Dependent DM
00000595	01	Insulin-Dependent Diabetes Mellitus	Insulin-Dependent Diabetes Mellitus
00000595	01	Ketosis-Prone Diabetes Mellitus	Ketosis-Prone Diabetes Mellitus
00000595	01	Ketosis-Prone Diabetes	Ketosis-Prone Diabetes

00000595	01	Juvenile Diabetes	Juvenile Diabetes
00000595	01	Juvenile-Onset Diabetes Mellitus	Juvenile-Onset Diabetes Mellitus
00000595	01	Immune Mediated Diabetes Mellitus	Immune Mediated Diabetes Mellitus
00000595	01	Type I Diabetes Mellitus	Type I Diabetes Mellitus
00000595	01	Diabetes Mellitus Type 1	Diabetes Mellitus Type 1
00000595	01	Ketosis-Prone DM	Ketosis-Prone DM
00000595	01	Insulin Dependent Diabetes Mellitus	Insulin Dependent Diabetes Mellitus
00000595	01	Juvenile-Onset Diabetes	Juvenile-Onset Diabetes

i Because DxIDs can have multiple synonyms of a given type, the synonyms have been assigned a unique FML Synonym Identifier (Stable ID) (**DXID_SYNID**), also present in the RFMLSYN0_DXID_SYN table. You can use this value at your discretion to help keep track of the different synonyms

3. For DxID 00000595's *Primary Layman Names*, perform the same query as step 2, but use a value of **02** for the DXID_SYN_NMTYP code to signify that you wish to retrieve this DxID's Primary Layman Names.

DXID	DXID_SYN_NMTYP	DXID_SYN_DESC56	DXID_SYN_DESC100
00000595	02	Type 1 Diabetes Mellitus	Type 1 Diabetes Mellitus

4. For DxID 00000595's *Layman Synonyms*, perform the same query as step 2, but use a value of **03** for the DXID_SYN_NMTYP code to signify that you wish to retrieve this DxID's Layman Synonyms.

DXID	DXID_SYN_NMTYP	DXID_SYN_DESC56	DXID_SYN_DESC100
00000595	03	Insulin-Dependent Diabetes	Insulin-Dependent Diabetes
00000595	03	Type I Diabetes	Type I Diabetes

5. For DxID 00000595's *Abbreviations*, perform the same query as step 2, but use a value of **04** for the DXID_SYN_NMTYP code to signify that you wish to retrieve this DxID's Abbreviations.

DXID	DXID_SYN_NMTYP	DXID_SYN_DESC56	DXID_SYN_DESC100
00000595	04	IDDM	IDDM

Finding DXIDs Based on an Input Search String

This application illustrates how to retrieve Disease Identifiers (**DXID**) whose descriptions partially match an input text string. Each DXID has multiple descriptions that must be searched for all matching instances of the input string.

This application finds all DXIDs whose descriptions contain the term **hypertension**.

1. Search the FML 56-character Description column (**DXID_DESC56**) and the FML 100-character Description column (**DXID_DESC100**) in the **FML Disease Identifier (DxID) Table** (RFMLDX0_DXID) for all instances of the phrase “hypertension”. Retrieve the associated DXID value for each description that returns a match.
2. Search the FML 56-character Synonym Description (**DXID_SYN_DESC56**) and the FML 100-character Synonym Description (**DXID_SYN_DESC100**) in the **FML Disease Identifier (DxID) Synonym Table** (RFMLSYN0_DXID_SYN) for all instances of the phrase “hypertension”. Retrieve the associated DXID value for each description that returns a match.
3. Consolidate the two lists of DXIDs found in steps 1 and 2 by removing redundant DXID values. The resulting 23 DXIDs appear below with descriptions for context. Note that the **Primary Professional Name** for DXID 00001444, *Hypertensive Cardio-Renal Disease*, does not contain the phrase “hypertension.” However, one of its synonym descriptions does.

DXID	DXID_DESC100
00000507	Hypertension Secondary to Pheochromocytoma
00000508	Prevention of Hypertension in Pheochromocytoma
00001121	Benign Intracranial Hypertension
00001204	Ocular Hypertension
00001431	Malignant Essential Hypertension
00001432	Hypertension
00001433	Hypertension due to Scleroderma
00001434	Paroxysmal Hypertension
00001435	Severe Uncontrolled Hypertension
00001436	Mild Hypertension
00001440	Supine Hypertension
00001441	Hypertension due to Aortic Coarctation
00001442	Hypertension due to Arteriovenous Shunt
00001444	Hypertensive Cardio-Renal Disease
00001445	Perioperative Hypertension

00001446	Intraoperative Hypertension
00001478	Pulmonary Hypertension
00001581	Chronic Heart Failure Not due to Hypertension
00002540	Pregnancy-Induced Hypertension
00004207	Intracranial Hypertension
00004739	Moderate Hypertension
00010527	Portal Hypertension
00010918	Hypertension with Left Ventricular Hypertrophy

 Sorting based on DXID value is arbitrary. For example, you could sort the results to list those that start with the user's search string first.

Finding DXIDs Based on a Patients Gender

This application illustrates how to retrieve Disease Identifiers (**DXID**) specific to a patient's gender (i.e., female or male). Users would search for a gender-specific DXID code when performing dosage range checking for zolpidem, a widely prescribed drug indicated to treat insomnia, which has different dose ranges for female and male patients.

This application uses the example of finding the DXID code for a female patient.

1. Search the FML 56-character Description column (**DXID_DESC56**) and the FML 100-character Description column (**DXID_DESC100**) in the **FML Disease Identifier (DxID) Table** (RFMLDX0_DXID) for all instances of the phrase "female."
2. Retrieve the associated DXID value, and present the results to the user.

DXID	DXID_DESC100
00014160	Female

Building a Disease Navigation Report

This application builds a disease navigation report by retrieving all DxIDs related—either in a broader sense or in a narrower sense—to an input DxID. If you wish to use this process for a user-input search term, you must first follow the process described in the application titled [Finding DXIDs Based on an Input Search String](#). Please note that this process is best carried out for a single DxID, as each DxID involved will generate its own navigation report. If you must create disease navigation reports for more than one DxID, follow the steps below from start to finish for each individual DxID.

- (i) This process only works for current DxIDs. Current DxIDs have an FML Disease Identifier Status Code ([DXID_STATUS](#)) of 0.

This application builds a disease navigation report for DxID 00000598, **Diabetic Coma**.

Part 1: Retrieve all DxIDs that are broader than the input DxID

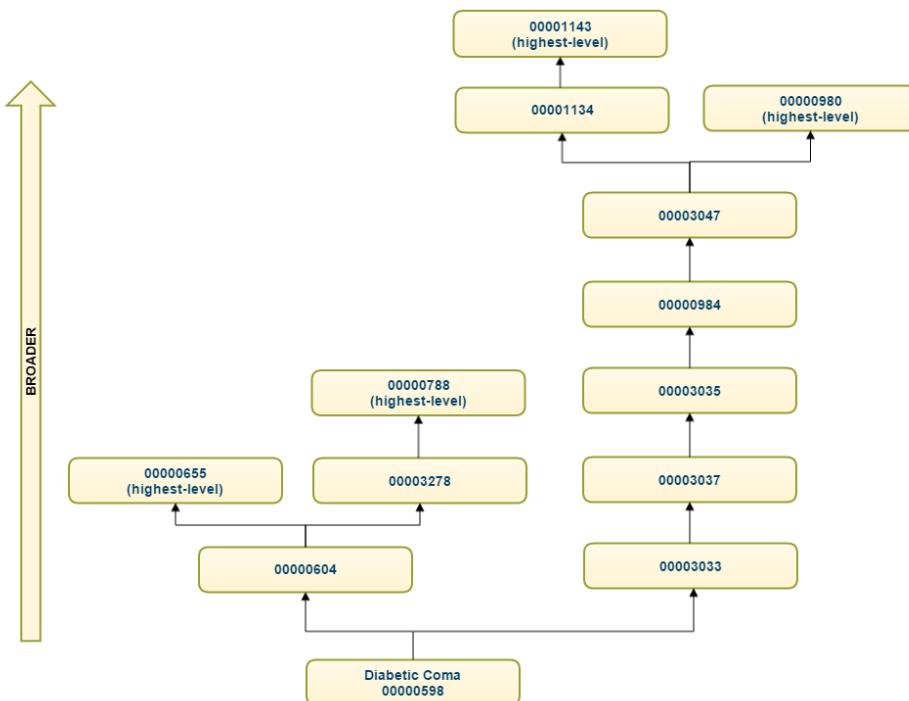
1. Retrieve each FML Broader DxID ([BROADER_DXID](#)) associated to DxID 00000598 using the [FML Disease Identifier \(DxID\) Navigation Table](#) (RFMLNAV0_DXID_NAVIGATION).

DXID	BROADER_DXID
00000598	00000604
00000598	00003033

2. For each BROADER_DXID value retrieved in the previous step, retrieve all associated BROADER_DXID values using the RMFLNAV0_DXID_NAVIGATION table again.

DXID	BROADER_DXID
00000604	00000655
00000604	00003278
00003033	00003037

3. Repeat step 2 for each set of newly-retrieved DxID values until no BROADER_DXID values remain (the BROADER_DXID is zero-filled). The last FML Broader DxIDs retrieved represent the highest-level DxIDs.



Part 2: Retrieve all DxIDs that are narrower than the input DxID

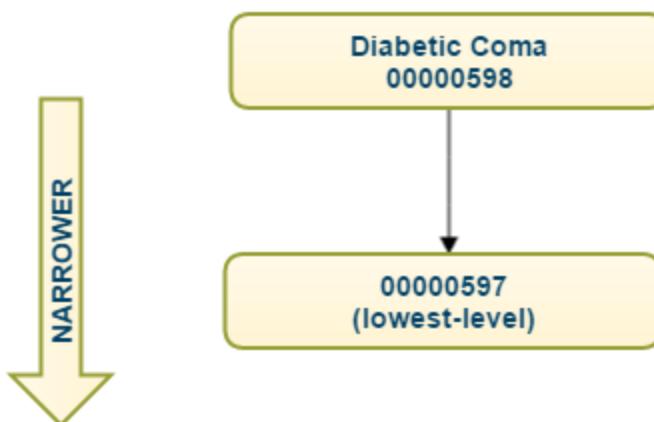
1. Retrieve DxIDs that are *narrower* than the input DxID by using the *input DxID* as the BROADER_DXID in the RMFLNAV0_RXID_NAVIGATION table (effectively reversing the navigation used in part 1 above).

DXID	BROADER_RXID
000000597	00000598

2. Use each DXID retrieved in the previous step as the BROADER_RXID, and retrieve all associated RXID values from the RMFLNAV0_RXID_NAVIGATION table.

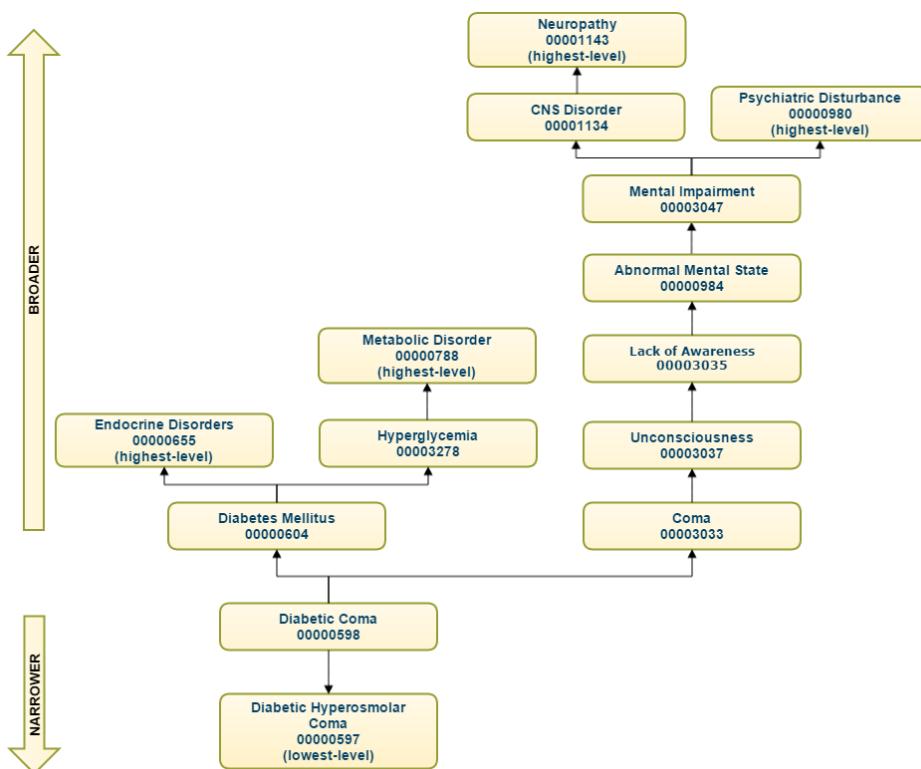
DXID	BROADER_RXID
NO VALUES RETURNED	00000597

3. Repeat step 2 for each set of newly-retrieved RxID values until no narrower RxID values remain. The last RxIDs retrieved represent the lowest-level RxIDs.



4. Retrieve the descriptions for the DxIDs that appear in the navigation report using the method described in [Finding DXID Descriptions and Synonyms](#). The following example report uses each DxID's *Primary Professional Name*.

Example—Disease navigation report for Diabetic Coma, DxID 00000598



Finding a Replacement DxID

This application illustrates how to find a DxID's replacement and the date the replacement took place. DxIDs that have been replaced with a more current DxID value have an FML DxID Status Code (**DXID_STATUS**) value of 1 in the [FML Disease Identifier \(DxID\) Table](#) (RFMLDX0_DXID). Follow these steps to retrieve a superseded DxID's replacement DxID value.

This application finds the replacement and replacement date for **DxID 00001725**.

1. Look up the replaced DxID using the FML Previous DxID ([FMLPRVDXID](#)) in the [FML Disease Identifier \(DxID\) Replacement History Table](#) (RFMLDRH0_DXID_HIST), and retrieve the associated FML Replacement DxID ([FMLREPDXID](#)).

FMLPRVDXID	DXID_DESC56	FMLREPDXID	DXID_DESC56
00001725	Circulatory System Disorders (DO NOT USE)	00001594	Disease of Cardiovascular System

 The phrase "(DO NOT USE)" in the replaced DxID description is meant for legacy customers who do not have retirement/replacement indicators.

2. Retrieve the FML DxID Replacement Date ([FMLDXREPDT](#)) which specifies when the FMLREPDXID replaced the FMLPRVDXID.

FMLPRVDXID	FMLREPDXID	FMLDXREPDT	DXID_DESC56
00001725	00001594	20040112	Disease of Cardiovascular System

ICD Code Applications

The FDB Medical Lexicon provides the ability to retrieve the names and DxIDs associated to ICD codes.

- i** The FML ICD Search Table was not intended to be used for billing purposes. The FML Navigation Code in the FML ICD Search Table is designed to point end-users to concepts that are equal to, broader than, or narrower than the ICD code entered, enabling the end-user to find relevant decision support in the related clinical modules.

Not all ICD codes are included in the FML ICD Search Table. The table only includes ICD-codes that are associated to one or more DxID(s).

This section contains the following applications:

- [Retrieving an ICD Code's Alternate Description](#)
- [Retrieving an ICD Code's Associated DxIDs](#)
- [Retrieving the Billable Dates for a Given ICD Code](#)

Retrieving an ICD Codes Alternate Description

The [FML ICD Code Description Table](#) (RFMLINM1_ICD_DESC) defaults to the First Databank description for ICD-9-CM codes and to the National Center for Health Statistics (NCHS) Long description for ICD-10-CM/PCS codes. This application illustrates how to retrieve an alternate description for an ICD code from the [FML ICD All Descriptions Table](#) (RFMLIAD0_ICD_ALL_DESC).

1. Retrieve the ICD Code Description ([ICD_DESC](#)) and ICD Description Source Code ([ICD_DESC_SOURCE_CD](#)) from the [FML ICD All Descriptions Table](#) (RFMLIAD0_ICD_ALL_DESC) where the ICD Code ([ICD_CD](#)) value equals the ICD Code in focus and the FML ICD Code Type ([ICD_CD_TYPE](#)) represents the type of ICD Code in focus.

In this example, **ICD-10-CM code I87.321** ([ICD_CD_TYPE](#) = 05) is in focus.

ICD_CD	ICD_CD_TYPE	ICD_DESC	ICD_DESC_SOURCE_CD
I87.321	05	Chronic venous hypertension (idiopathic) with inflammation of right lower extremity	03
I87.321	05	Chronic venous hypertension w inflammation of r lo	04

2. Use the FML ICD Source Code Description ([ICD_DESC_SOURCE_DESC](#)) to filter for the preferred description. In this example, the NCHS Short description ([ICD_DESC_SOURCE_CD](#) = 04) is used.

ICD_CD	ICD_CD_TYPE	ICD_DESC	ICD_DESC_SOURCE_CD
I87.321 05	05	Chronic venous hypertension w inflammation of r lo	04

The FML ICD Source Code Description ([ICD_DESC_SOURCE_DESC](#)) is found in the [FML ICD Description Source Description Table](#) (RFMLISD1_ICD_DESC_SOURCE_DESC).

Retrieving an ICD Codes Associated DxIDs

This application illustrates how to retrieve an input ICD Code's associated DxIDs as a method of entry into any of the FDB disease decision support or dosing modules.

This application retrieves the DxIDs associated to **ICD-9-CM code 401.9** for use in the Drug-Disease Contraindications Module (DDCM). For illustrative purposes, it also displays descriptive information about the DxID's relationship to the ICD Code (either broader, narrower, or equal).

- Using the given ICD Code as the Search ICD Code ([SEARCH_ICD_CD](#)) and the ICD Code Type ([ICD_CD_TYPE](#)), retrieve the following columns from the [FML ICD Search Table](#) ([RFMLISR1_ICD_SEARCH](#)):
 - FML Related DxID column ([RELATED_RXID](#))
 - FML Clinical Module Code column ([FML_CLIN_CODE](#)) - (used in step 2)
 - FML Navigation Code column ([FML_NAV_CODE](#)) - (used in step 3)

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
...
401.9	01	00001431	01	02
401.9	01	00001431	02	02
401.9	01	00001431	03	02
401.9	01	00001431	04	02
...

The results shown in this step represent a small sample of the ICD Code's full result set.

- Filter the results of step 1 on the [FML_CLIN_CODE](#) column, which identifies the [RELATED_RXID](#)'s disease decision support or dosing module. After filtering for [FML_CLIN_CODE](#) value of 03 (DDCM module), the resulting [RELATED_RXID](#) values are appropriate for use in DDCM. See the [FML_CLIN_CODE_DESC](#) column's data dictionary description for information about the different [FML_CLIN_CODE](#) values.

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
401.9	01	00000505	03	02
401.9	01	00001432	03	01
401.9	01	00001435	03	02
401.9	01	00001436	03	02
401.9	01	00001441	03	02
401.9	01	00001442	03	02

401.9	01	00001444	03	02
401.9	01	00001594	03	03
401.9	01	00002540	03	02
401.9	01	00002541	03	02
401.9	01	00002542	03	02
401.9	01	00002543	03	02
401.9	01	00004739	03	02
401.9	01	00013484	03	03

3. Retrieve the FML_NAV_CODE's FML Navigation Code Description ([FML_NAV_CODE_DESC](#)) using the [FML Navigation Description Table](#) (RFMLNVD0_NAVIGATION_DESC). The FML_NAV_CODE field can be used to assist in constructing Disease Contraindication Alert messages (recall that this example's results have been filtered for the DDCM module). The following table shows this example's result set of DxIDs and their descriptive text.

Example—DxID values associated to ICD-9-CM 401.9 for use in the DDCM module

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXI	DXID_DESC56	FML_NAV_CODE	FML_NAV_CO DE_DESC
401.9	01	00001432	Hypertension	01	Equal
401.9	01	00000505	Pheochromocytoma	02	Broader
401.9	01	00001435	Severe Uncontrolled Hypertension	02	Broader
401.9	01	00001436	Mild Hypertension	02	Broader
401.9	01	00001441	Hypertension due to Aortic Coarctation	02	Broader
401.9	01	00001442	Hypertension due to Arteriovenous Shunt	02	Broader
401.9	01	00001444	Hypertensive Cardio-Renal Disease	02	Broader
401.9	01	00002540	Pregnancy-Induced Hypertension	02	Broader

401.9	01	00002541	Mild Pre-Eclampsia	02	Broader
401.9	01	00002542	Severe Pre-Eclampsia	02	Broader
401.9	01	00002543	Eclampsia of Pregnancy	02	Broader
401.9	01	00004739	Moderate Hypertension	02	Broader
401.9	01	00001594	Disease of Cardiovascular System	03	Narrower
401.9	01	00013484	Increased Cardiovascular Event Risk	03	Narrower

 The FML_NAV_CODE is not meant to filter results, but for use in constructing alert messages. For an illustrated example of how the FML_NAV_CODE should be used, see the DDCM module's application [Comparing Patient ICD Codes to Prospective Drug Therapy—Using the Exclusion Table to Reduce Alerts](#).

Retrieving the Billable Dates for a Given ICD Code

FML 2.0 provides billable dates for ICD codes that are currently billable, were previously billable, or will be billable in accordance with the billable dates published annually by the Centers for Medicare and Medicaid Services (CMS). This application illustrates how to retrieve the billable dates for an ICD Code, allowing for both current and retrospective billing analysis of an ICD code or group of ICD codes.

To view the billable dates for a given ICD code:

1. Select the ICD First Billable Date and the ICD Last Billable Date from the FML ICD Billable History Table for the given ICD code and ICD code type.
2. Filter and sort the resulting records. Perform analysis according to your business needs.
 - If you wish to determine whether the ICD Code is billable for a specified date of service, check whether the billable date range of the ICD code encompasses the specified date.
 - If you are performing other historical billing analysis, filter and sort the resulting records and perform analysis according to your business needs.

Example—Determining Whether an ICD Code is Billable

For purposes of demonstrating this application, the following scenario is used: A hospital billing clerk is following up on an unpaid medical claim from date of service November 21, 2014 for a patient who was diagnosed with Salmonella infection, unspecified (ICD_CD = A02.9). The clerk wants to check whether the ICD-10-CM on the claim is billable for the given date of service.

1. Select the following from the **FML ICD Billable History Table** (RFMLIBH0_ICD_BILLABLE_HIST):
 - ICD First Billable Date (**ICD_FIRST_BILLABLE_DT**)
 - ICD Last Billable Date (**ICD_LAST_BILLABLE_DT**)
where:
 - ICD Code (**ICD_CD**) value equals A02.9
 - ICD Code Type (**ICD_CD_TYPE**) equals 05 (ICD10CM)

ICD_CD	ICD_CD_TYPE	ICD_FIRST_BILLABLE_DT	ICD_LAST_BILLABLE_DT
A02.9	05	20141001	

ICD Codes that have an ICD_FIRST_BILLABLE_DT value may not have a ICD_LAST_BILLABLE_DT value. This indicates that the code is still billable.

2. The date of service for the ICD-10-CM code occurs after the ICD_FIRST_BILLABLE_DT, and there is no ICD_LAST_BILLABLE_DT listed. In this example, the ICD-10-CM code is billable.

Example—Viewing the Billable History of an ICD-10-CM Code

For purposes of demonstrating this application, the following scenario is used: A hospital is performing retrospective billing analysis regarding their diabetes patients. The hospital billing staff pulls all patient records

from the past five years that include any ICD-10-CM codes related to diabetes. They would like to check whether those codes were billable in each year.

1. Query the **FML ICD Code Description Table** (RFMLINM1_ICD_DESC) for all ICD codes that are related to diabetes and where the ICD Code Type (**ICD_CD_TYPE**) column equals the value of 05 (indicating ICD-10-CM).

ICD_CD	ICD_CD_TYPE	ICD_DESC
E08.01	05	Diabetes mellitus due to underlying condition with hyperosmolarity with coma
E09.36	05	Drug or chemical induced diabetes mellitus with diabetic cataract
E10.649	05	Type 1 diabetes mellitus with hypoglycemia without coma
E11.36	05	Type 2 diabetes mellitus with diabetic cataract
E11.621	05	Type 2 diabetes mellitus with foot ulcer
E13.00	05	Other specified diabetes mellitus
E23.2	05	Diabetes insipidus
O24.419	05	Gestational diabetes mellitus in pregnancy, unspecified control
P70.2	05	Neonatal diabetes mellitus
Z13.1	05	Encounter for screening for diabetes mellitus
Z83.3	05	Family history of diabetes mellitus

The data above reflects a summary of this step's results.

2. Using the records found in the previous step, select the ICD First Billable Date (**ICD_FIRST_BILLABLE_DT**) and the ICD Last Billable Date (**ICD_LAST_BILLABLE_DT**) from the **FML ICD Billable History Table** (RFMLIBH0_ICD_BILLABLE_HIST).

ICD_CD	ICD_CD_TYPE	ICD_FIRST_BILLABLE_DT	ICD_LAST_BILLABLE_DT
E08.01	05	20130101	
E09.36	05	20061231	
E10.649	05	20091231	
E11.36	05	20061231	

E11.621	05	20130101	
E13.00	05	20130101	
E23.2	05	20130101	
O24.419	05	20061231	
P70.2	05	20130101	
Z13.1	05	20130101	
Z83.3	05	20130101	

The data above reflect a summary of this step's results. Additionally, the example dates provided in this application are for the purposes of demonstrating how to filter for historical analysis.

ICD Codes that have an ICD_FIRST_BILLABLE_DT value may not have a ICD_LAST_BILLABLE_DT value. This indicates that the code is still billable.

3. Filter the resulting records for those ICD-10 codes that were billable within the past five years and perform analysis according to your business needs.

ICD_CD	ICD_CD_TYPE	ICD_FIRST_BILLABLE_DT	ICD_LAST_BILLABLE_DT
E08.311		20061231	
E09.36		20061231	
E10.649		20091231	
E11.36		20061231	
E11.649		20091231	
O24.419		20061231	
O24.429		20061231	
O24.439		20061231	

The data above reflect a summary of this step's results. Additionally, the example dates provided in this application are for the purposes of demonstrating how to filter for historical analysis.

Using FML with Other Modules

The following FDB Disease Decision Support and Dosing modules utilize the FML Disease Identifier (DxID) Search Table and other data from the FDB Medical Lexicon:

- Dosage Range Check Module™ (DRCM™)
- Neonatal and Infant Dosage Range Check Module™ (NEOM™)
- Indications Module™ (INDM)
- Drug-Disease Contraindications Module™ (DDCM™)
- Side Effects Module™ (SIDE)
- Prescriber Order Entry Module™ (POEM™)

These related modules are listed below with hyperlinks to the respective applications.

Using FML in the Dosage Range Check Module (DRCM)

DRCM uses the FDB Medical Lexicon in the following application: [Performing Dosage Range Checking Using a DxID or ICD Code](#)

Using FML in the Neonatal and Infant Dosage Range Check Module (NEOM)

NEOM uses the FDB Medical Lexicon in the following applications:

[Performing Dosage Range Checking](#)

Using FML in the Prescriber Order Entry Module (POEM)

POEM uses the FDB Medical Lexicon in the following applications:

[Retrieving Dosage Orders for Related Disease States](#)

Using FML in the Side Effects Module (SIDE)

SIDE uses the FDB Medical Lexicon in the following applications:

[Detecting Additive Side Effects](#)

[Comparing Side Effects to Current Patient Conditions](#)

Using FML in the Drug-Disease Contraindications Module (DDCM)

DDCM uses the FDB Medical Lexicon in the following applications:

[Comparing Patient ICD Codes to Prospective Drug Therapy—Using the Exclusion Table to Reduce Alerts](#)

[Comparing Patient DxIDs to Prospective Drug Therapy](#)

[Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy](#)

Using FML in the Indications Module (INDM)

INDM uses the FDB Medical Lexicon in the following applications:

[Retrieving a Drug's List of Indications](#)

Retrieving Drugs Indicated for a Selected Condition—Using the Exclusion Table to Refine the Treatment Options

Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy

Detecting Possible Drug-Related Iatrogenic Diseases

FML ERD and Technical Specifications

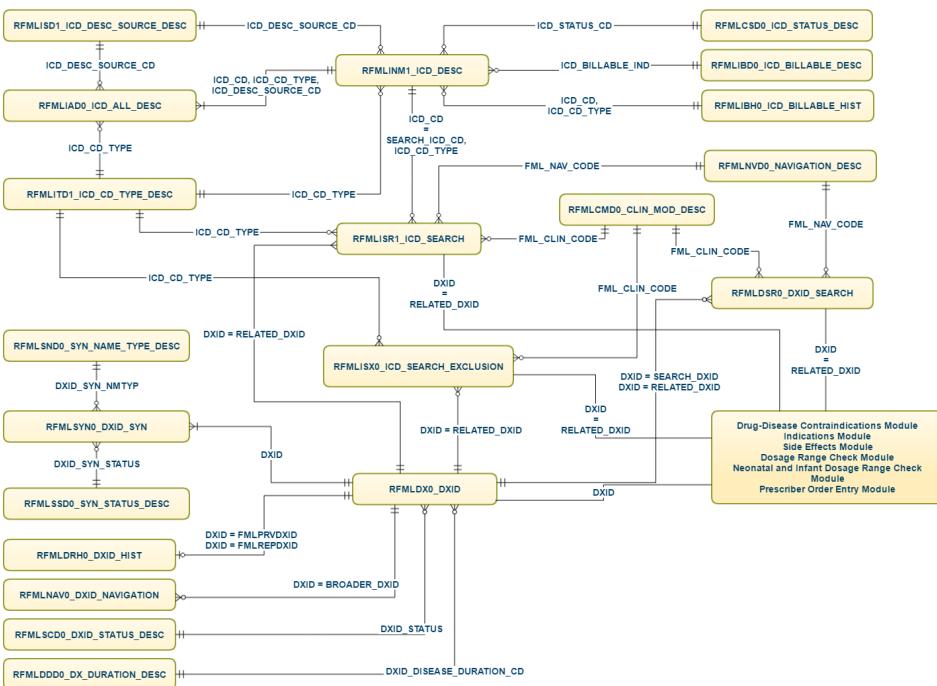
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- FDB Medical Lexicon Tables
- FDB Medical Lexicon ERD

FDB Medical Lexicon Tables

- FML Clinical Module Description Table
- FML Disease Duration Description Table
- FML Disease Identifier (DxID) Navigation Table
- FML Disease Identifier (DxID) Replacement History Table
- FML Disease Identifier (DxID) Search Table
- FML Disease Identifier (DxID) Status Code Description Table
- FML Disease Identifier (DxID) Synonym Table
- FML Disease Identifier (DxID) Table
- FML ICD All Descriptions Table
- FML ICD Billable Description Table
- FML ICD Billable History Table
- FML ICD Code Description Table
- FML ICD Code Type Description Table
- FML ICD Description Source Description Table
- FML ICD Search Exclusion Table
- FML ICD Search Table
- FML ICD Status Description Table
- FML Navigation Description Table
- FML Synonym Name Type Description Table
- FML Synonym Status Description Table

FDB Medical Lexicon ERD



FML Clinical Module Description Table

Table Name	RFMLCMD0_CLIN_MOD_DESC				
Revision Activity	add.03-14-2002				
Purpose	Relates the Clinical Module Code to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
P	FML_CLIN_CODE	FML Clinical Module Code	AN	2	X(2)
	FML_CLIN_CODE_DESC	FML Clinical Module Code Description	AN	50	X(50)

FML Disease Duration Description Table

Table Name	RFMLDD0_DX_DURATION_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the DxID Disease Duration Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DXID_DISEASE_DURATION_CD	FML Disease Duration Code	AN	1	X(1)
	DXID_DISEASE_DURATION_CD_DESC	FML Disease Duration Code Description	AN	50	X(50)

FML Disease Identifier (DxID) Navigation Table

Table Name	RFMLNAV0_DXID_NAVIGATION				
Revision Activity	add.03-14-2002				
Purpose	Links a disease state to a broader disease state.				
Key	Column Name	Column Description	Format	Length	Picture
PF	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)
P	BROADER_DXID	FML Broader DxID	N	8	9(8)

FML Disease Identifier (DxID) Replacement History Table

Table Name	RFMLDRH0_DXID_HIST				
Revision Activity	add.03-14-2002				
Purpose	Tracks the replacement history for a disease state.				

Key	Column Name	Column Description	Format	Length	Picture
PF	FMLPRVDXID	FML Previous DxID	N	8	9(8)
P	FMLREPDXID	FML Replacement DxID	N	8	9(8)
	FMLDXREPDT	FML DxID Replacement Date	N	8	9(8)

FML Disease Identifier (DxID) Search Table

Table Name	RFMLDSR0_DXID_SEARCH				
Revision Activity	add.03-14-2002				
Purpose	Links disease states within a given Disease Decision Support or Dosing module.				

Key	Column Name	Column Description	Format	Length	Picture
PF	SEARCH_DXID	FML Search DxID	N	8	9(8)
PF	RELATED_DXID	FML Related DxID	N	8	9(8)
PF	FML_CLIN_CODE	FML Clinical Module Code	AN	2	X(2)
F	FML_NAV_CODE	FML Navigation Code	AN	2	X(2)

FML Disease Identifier (DxID) Status Code Description Table

Table Name	RFMLSCD0_DXID_STATUS_DESC				
Revision Activity	add.03-14-2002				
Purpose	Relates the DxID Status Code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	DXID_STATUS	FML DxID Status Code	AN	1	X(1)
	DXID_STATUS_DESC	FML DxID Status Code Description	AN	50	X(50)

FML Disease Identifier (DxID) Synonym Table

Table Name	RFMLSYN0_DXID_SYN
Revision Activity	add.03-14-2002
Purpose	Associates professional synonyms, primary layman names, layman synonyms, and abbreviations to a disease state.

Key	Column Name	Column Description	Format	Length	Picture
P	DXID_SYNID	FML Synonym Identifier (Stable ID)	N	8	9(8)
F	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)
F	DXID_SYN_NMTYP	FML Name Type Code	AN	2	X(2)
	DXID_SYN_DESC56	FML 56-character Synonym Description	AN	56	X(56)
	DXID_SYN_DESC100	FML 100-character Synonym Description	AN	100	X(100)
F	DXID_SYN_STATUS	FML Synonym Identifier Status Code	AN	1	X(1)

FML Disease Identifier (DxID) Table

Table Name	RFMLDX0_DXID				
Revision Activity	add.03-14-2002				
Purpose	Associates a primary professional name(s) to a disease state.				

Key	Column Name	Column Description	Format	Length	Picture
P	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)
	DXID_DESC56	FML 56-character Description	AN	56	X(56)
	DXID_DESC100	FML 100-character Description	AN	100	X(100)
F	DXID_STATUS	FML DxID Status Code	AN	1	X(1)
F	FDBDX	First Databank Disease Code	AN	9	X(9)
F	DXID_DISEASE_DURATION_CD	FML Disease Duration Code	AN	1	X(1)

FML ICD All Descriptions Table

Table Name	RFMLIAD0_ICD_ALL_DESC
Revision Activity	add.11-01-2012
Purpose	Provides all of the descriptions for a given ICD code.

Key	Column Name	Column Description	Format	Length	Picture
PF	ICD_CD	International Classification of Diseases Code	AN	10	X(10)
PF	ICD_CD_TYPE	ICD Code Type	AN	2	X(2)
PF	ICD_DESC_SOURCE_CD	ICD Description Source Code	AN	2	X(2)
	ICD_DESC	International Classification of Diseases Code Description	AN	500	X(500)

FML ICD Billable Description Table

Table Name	RFMLIBD0_ICD_BILLABLE_DESC
Revision Activity	add.11-01-2012
Purpose	Relates the ICD Billable Indicator to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	ICD_BILLABLE_IND	ICD Billable Indicator	N	1	9(1)
	ICD_BILLABLE_IND_DESC	ICD Billable Indicator Description	AN	50	X(50)

FML ICD Billable History Table

Table Name	RFMLIBH0_ICD_BILLABLE_HIST				
Revision Activity	add.11-01-2012				
Purpose	Provides the history of the billable status of the ICD Code.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ICD_CD	International Classification of Diseases Code	AN	10	X(10)
PF	ICD_CD_TYPE	ICD Code Type	AN	2	X(2)
P	ICD_FIRST_BILLABLE_DT	ICD First Billable Date	N	8	9(8)
	ICD_LAST_BILLABLE_DT	ICD Last Billable Date	N	8	9(8)

FML ICD Code Description Table

Table Name	RFMLINM1_ICD_DESC
Revision Activity	rev.11-01-2012
Purpose	<p>Relates an ICD code to its text description and other attributes.</p> <p>First Databank (FDB) provides both “long” and “short” ICD-10 descriptions from the National Center for Health Statistic (NCHS), however this table uses the “long” description. If you prefer to display the short description, navigate to the FML ICD All Descriptions Table (RFMLIAD0_ICD_ALL_DESC) and select the record where the ICD Description Source Code (ICD_DESC_SOURCE_CD) equals 04.</p>

Key	Column Name	Column Description	Format	Length	Picture
P	ICD_CD	International Classification of Diseases Code	AN	10	X(10)
PF	ICD_CD_TYPE	ICD Code Type	AN	2	X(2)
	ICD_DESC	International Classification of Diseases Code Description	AN	500	X(500)
F	ICD_DESC_SOURCE_CD	ICD Description Source Code	AN	2	X(2)
F	ICD_STATUS_CD	ICD Status Code	AN	1	X(1)
	ICD_FIRST_DT	ICD First Date	N	8	9(8)
	ICD_LAST_DT	ICD Last Date	N	8	9(8)
F	ICD_BILLABLE_IND	ICD Billable Indicator	N	1	9(1)

FML ICD Code Type Description Table

Table Name	RFMLITD1_ICD_CD_TYPE_DESC				
Revision Activity	rev.11-01-2012				
Purpose	Relates the ICD Code Type to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
P	ICD_CD_TYPE	ICD Code Type	AN	2	X(2)
	ICD_CD_TYPE_DESC	ICD Code Type Description	AN	50	X(50)

FML ICD Description Source Description Table

Table Name	RFMLISD1_ICD_DESC_SOURCE_DESC				
Revision Activity	rev.11-01-2012				
Purpose	Relates the ICD Source Code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	ICD_DESC_SOURE_CD	ICD Description Source Code	AN	2	X(2)
	ICD_DESC_SOURE_DESC	ICD Source Code Description	AN	50	X(50)

FML ICD Search Exclusion Table

Table Name	RFMLISX0_ICD_SEARCH_EXCLUSION				
Revision Activity	add.11-01-2012				
Purpose	Provides filtering for ICD Code search results to support more refined clinical screening results.				

Key	Column Name	Column Description	Format	Length	Picture
PF	SEARCH_ICD_CD	Search ICD Code	AN	10	X(10)
PF	ICD_CD_TYPE	ICD Code Type	AN	2	X(2)
PF	RELATED_DXID	Related DxID	N	8	9(8)
PF	FML_CLIN_CODE	FML Clinical Module Code	AN	2	X(2)
P	CLIN_DRUG_GROUP	Clinical Drug Group	N	5	9(5)

FML ICD Search Table

Table Name	RFMLISR1_ICD_SEARCH				
Revision Activity	rev.11-01-2012				
Purpose	Links a disease state to a health-related condition.				

Key	Column Name	Column Description	Format	Length	Picture
PF	SEARCH_ICD_CD	Search ICD Code	AN	10	X(10)
PF	ICD_CD_TYPE	FML ICD Code Type	AN	2	X(2)
PF	RELATED_DXID	Related DxID	N	8	9(8)
PF	FML_CLIN_CODE	FML Clinical Module Code	AN	2	X(2)
F	FML_NAV_CODE	FML Navigation Code	AN	2	X(2)

FML ICD Status Description Table

Table Name	RFMLCSD0_ICD_STATUS_DESC
Revision Activity	add.11-01-2012
Purpose	Relates the ICD Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	ICD_STATUS_CD	ICD Status Code	AN	1	X(1)
	ICD_STATUS_DESC	ICD Status Code Description	AN	50	X(50)

FML Navigation Description Table

Table Name	RFMLNVD0_NAVIGATION_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Navigation Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	FML_NAV_CODE	FML Navigation Code	AN	2	X(2)
	FML_NAV_CODE_DESC	ML Navigation Code Description	AN	50	X(50)

FML Synonym Name Type Description Table

Table Name	RFMLSND0_SYN_NAME_TYPE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the DxID Synonym Name Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DXID_SYN_NMT YP	FML Name Type Code	AN	2	X(2)
	DXID_SYN_NMT YP_DESC	FML Name Type Code Description	AN	50	X(50)

FML Synonym Status Description Table

Table Name	RFMLSSD0_SYN_STATUS_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Synonym Identifier Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DXID_SYN_STATUS	FML Synonym Identifier Status Code	AN	1	X(1)
	DXID_SYN_STATUS_DESC	FML Synonym Identifier Status Code Description	AN	50	X(50)

First Databank Medical Test Lexicon (MTL) 1.0

- General Information
- First Databank Medical Test Lexicon Editorial Policies
- Applications
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- Overview
- Definitions
 - Analyte
 - Clinical Laboratory Test
 - Drug-Lab Interference
 - LOINC
 - Method
 - Panel
 - Reagent
 - Specimen
- Concepts
 - LAB_ID
 - MTL_ANALYTE_ID
 - MTL_EXTRN_VOCAB_TYP_CODE
 - MTL_LAB_ID_SYNID
 - MTL_METHOD_ID
 - MTL_PANEL_ID
 - MTL_SPECIMEN_ID
 - MTL_SPEC_LAB_ID

Overview

First Databank Medical Test Lexicon (MTL) provides a laboratory test vocabulary for laboratory test names, specimen types, and laboratory test method descriptions.

MTL uses [Good Vocabulary Practice](#) because it is a concept-based vocabulary with a synonym file. MTL concepts have hierarchical relationships and are associated to dumb numbers that serve as stable identifiers. These stable identifiers have a retirement and replacement history mechanism that will always link them to MTL data.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Definitions

This section describes concepts and database elements that are important for understanding the module.

Analyte

An analyte is any substance that is measured via a laboratory test.

For example, fasting glucose is the analyte in a blood glucose laboratory test. [MTL_ANALYTE_ID](#) represents an analyte.

Clinical Laboratory Test

A clinical laboratory test is used to analyze or measure a chemical or biological substance from the body.

For example, a blood glucose test measures the amount of glucose (sugar) in the blood so that blood glucose levels can be monitored for a diabetic patient.

Drug-Lab Interference

The term drug-lab interference in the context of FDB knowledge bases strictly refers to an analytic interference causing erroneous or false clinical laboratory test results.

See [Drug-Lab Interference Module™ \(DLIM™ \) 2.0](#) for additional information.

LOINC

LOINC (Logical Observation Identifiers Names and Codes) is an external laboratory vocabulary that provides a standard set of universal names and codes for identifying individual laboratory and clinical results.

MTL concepts are mapped to a subset of LOINC identifiers. The purpose of this mapping is to ensure that the relevant subset of LOINC codes used in patient medical records can trigger FDB's Laboratory Decision Support for DLIM.

Method

Method describes the reagent, equipment, or process used to measure or assess the presence of the analyte in a laboratory test.

For example, a blood glucose laboratory test could use several different methods, such as the glucose oxidase method or glucose dehydrogenase method. [MTL_METHOD_ID](#) represents a method.

Panel

A panel is a group of laboratory tests ordered together under a single description.

A Chem 7 Panel includes a random glucose test as well as blood urea nitrogen, chloride, creatinine, potassium, and sodium tests. [MTL_PANEL_ID](#) represents a panel.

Reagent

A reagent is a substance used during a laboratory test procedure to produce a chemical reaction in order to detect or measure other substances (analytes). Reagents sometimes help define specific lab test methods.

For example, the hexokinase enzyme used in a random glucose test is a reagent.

Specimen

A specimen is the bodily substance or fluid that contains the analyte that will be measured or assessed via a

laboratory test. The specimen is obtained from a given patient and sent to the clinical laboratory for testing. For example, in the blood glucose test example, blood is the specimen that contains the analyte, fasting glucose. **MTL_SPECIMEN_ID** represents a specimen.

Concepts

This section describes concepts and database elements that are important for understanding the module.

LAB_ID

The Laboratory Test Identifier (**LAB_ID**) identifies the lab test abstraction that includes the analyte and specimen. For example, LAB_ID 10 identifies a serum potassium laboratory test; serum is the specimen and potassium is the analyte.

The Laboratory Test Identifier Description (**MTL_LAB_ID_DESC**) is structured in natural language word order for ease of readability when displayed to the user. For example, “Serum Potassium” instead of “Potassium, Serum” is displayed to the user.

The primary professional name is provided by default; however, professional synonyms, primary layman names, layman synonyms, and abbreviations may be retrieved from the **MTL Laboratory Test Identifier (LAB_ID) Synonym Identifier Table (RMTLSYN0_LAB_ID_SYN)**.

LAB_IDs are created for and assigned to laboratory tests associated with **MTL_SPEC_LAB_ID** that are necessary to support DLIM.

A LAB_ID is a stable identifier. It can be retired or replaced, but never deleted. The **MTL Laboratory Test Identifier (LAB_ID) Replacement History Table (RMTLLRH0_LAB_ID_HIST)** provides the change history for a LAB_ID, including the Previous Laboratory Test Identifier (**MTL_PREV_LAB_ID**) and the Replacement Laboratory Test Identifier (**MTL_REPL_LAB_ID**).

MTL_ANALYTE_ID

The Analyte Identifier (**MTL_ANALYTE_ID**) identifies the substance measured via the laboratory test. For example, MTL_ANALYTE_ID 228 identifies potassium, which is the analyte in a serum potassium test. A single professional description is provided for each analyte.

MTL_EXTRN_VOCAB_TYP_CODE

The External Vocabulary Type Code (**MTL_EXTRN_VOCAB_TYP_CODE**) identifies the external laboratory vocabulary that MTL links to. Specifically, MTL concepts (LAB_ID, MTL_PANEL_ID, or **MTL_SPEC_LAB_ID**) are mapped to a subset of LOINC identifiers. The purpose of this mapping is to ensure that the relevant subset of LOINC codes used in patient medical records can trigger FDB's Laboratory Decision Support for DLIM.

LOINC is characterized by the following:

- LOINC is an external laboratory vocabulary that provides a standard set of universal names and codes for identifying individual laboratory and clinical results.
- LOINC can be used to document electronic medical records and to transfer results electronically.

MTL_LAB_ID_SYNID

The Laboratory Test Identifier Synonym Identifier ([MTL_LAB_ID_SYNID](#)) identifies a synonym name for a LAB_ID. Professional synonyms, primary layman names, layman synonyms, and abbreviations may be provided.

For example, Serum K+ is the professional synonym for a serum potassium test.

[MTL_METHOD_ID](#)

The Methodology Identifier ([MTL_METHOD_ID](#)) identifies the reagent, equipment, or process used to measure or provide an assessment of the analyte. For example, MTL_METHOD_ID 22 identifies ion specific electrode, which is a method that can be used in a serum potassium test.

A single professional description is provided for each method.

MTL data includes those specific methods that are known to be involved in drug-lab interferences, as well as alternative methods useful today in clinical practice.

[MTL_PANEL_ID](#)

The Panel Identifier ([MTL_PANEL_ID](#)) associates a set of labs usually ordered together under a single name for the convenience of the prescribers and to optimize the cost-effectiveness and completeness of testing. Ordering or screening for a panel may be faster than ordering or screening each laboratory test in a panel. For example, a Renal Function Profile (PANEL_ID 6) includes a serum potassium test (LAB_ID 10), serum chloride (LAB_ID 17), serum creatinine (LAB_ID 32), and several others.

A PANEL_ID is a stable identifier. When a laboratory test (LAB_ID) is removed from a panel, the MTL_PANEL_ID must be retired or replaced, but not deleted. The [MTL Panel Identifier Replacement History Table \(RMTLPRH0_PANEL_ID_HIST\)](#) provides the change history for a PANEL_ID, including the Replacement Panel Identifier ([MTL REPL_PANEL_ID](#)) and the Previous Panel Identifier ([MTL_PREV_PANEL_ID](#)).

Other than universal CMS-approved panels, panels are not standardized from institution to institution, so a panel at one institution won't necessarily identify the same set of labs in a panel at another institution.

If a clinical laboratory uses a panel that does not correspond to a PANEL_ID in MTL data, the individual laboratory tests that make up the panel can be cross-referenced to the appropriate MTL data.

PANEL_IDs can be cross-referenced to the appropriate LOINC code for interoperability purposes.

[MTL_SPECIMEN_ID](#)

The Specimen Identifier ([MTL_SPECIMEN_ID](#)) identifies the bodily source of the analyte measured via the laboratory test. For example, MTL_SPECIMEN_ID 3 identifies serum, which is the specimen in a serum potassium test. Potassium is the analyte.

A single professional description is provided for each specimen.

[MTL_SPEC_LAB_ID](#)

The Specific Laboratory Identifier ([MTL_SPEC_LAB_ID](#)) identifies the laboratory test that includes the analyte, the specimen, and the methodology used to measure the related laboratory test. The MTL_SPEC_LAB_ID represents the analyte, specimen, and method. For example, MTL_SPEC_LAB_ID 350 identifies a serum potassium test that uses an ion specific electrode as the method.

An MTL_SPEC_LAB_ID is a stable identifier. It can be retired or replaced, but not deleted. The [MTL Specific Laboratory Test ID Replacement History Table](#) (RMTLSRH0_SPECIFIC_LAB_ID_HIST) provides the change history for a MTL_SPEC_LAB_ID, including the Previous Specific Laboratory Test Identifier ([MTL_PREV_SPEC_LAB_ID](#)) and the Replacement Specific Laboratory Test Identifier ([MTL_REPL_SPEC_LAB_ID](#)).

MTL Applications

This section provides information about the practical application of data contained in this module.

[How to Use the FDB Cross-Reference to LOINC](#)

[Finding Replacement Identifiers](#)

[Finding a Synonym Name for a LAB_ID](#)

[Identifying Laboratory Tests in a Panel](#)

[Using MTL with the Drug-Lab Interference Module](#)

How to Use the FDB Cross-Reference to LOINC

MTL concepts are mapped to a subset of LOINC identifiers. The purpose of this mapping is to ensure that lab tests used in patient medical records can trigger FDB's Laboratory Decision Support for DLIM. This application assists in integrating DLIM decision support into a health care lab system by illustrating how to map lab system test codes (for example LOINC codes) to an associated Laboratory Test Identifier ([LAB_ID](#)).

Lab system integration with MTL requires the creation of a mapping between MTL identifiers' data and the lab system's data dictionary. FDB's Cross-Reference to LOINC can be used to integrate the proprietary lab test codes that may also be linked to LOINC.

- i There are benefits for mapping proprietary codes of multiple levels of abstraction (for example method information) to the various MTL identifiers. Unnecessary alerts are avoided, and the mapping allows applications to deliver institution-specific available alternate lab test methods as part of alert messages.

For purposes of demonstrating this application, the following scenario is used: A clinical laboratory performs a fasting blood sugar test. The results of the test come back outside of the reference range so the lab sends the results to the DLIM knowledge base for assessment (see [Screening a Laboratory Test for Possible Drug Interferences](#) in DLIM). The test result can trigger DLIM decision support if the lab system's proprietary code for fasting blood glucose is mapped to MTL identifiers. The FDB Cross-Reference to LOINC can be used as an integration tool to facilitate the mapping.

1. Given a proprietary code for fasting blood glucose, find the associated LOINC code(s) in the lab system's data dictionary. Use this LOINC code or codes to query the [MTL External Vocabulary Link Table](#) (RMTLEVL0_EXT_VOCAB_LINK), using the External Vocabulary Code ([MTL_EXTRN_VOCAB_CODE](#)) field, to retrieve the following: the associated First Databank Identifier ([MTL_FDB_ID](#)) with an External Vocabulary Type Code ([MTL_EXTRN_VOCAB_TYP_CODE](#)) of **01** (LOINC) and a First Databank Identifier Type Code ([MTL_FDB_ID_TYP_CODE](#)) of **01** (LAB_ID). In this example there are 11 LOINC codes that map to a single Fasting Blood Glucose LAB_ID code of 1:

MTL_EXTRN_VOCAB_CODE	MTL_EXTRN_VOCAB_TYP_CODE	MTL_FDB_ID_TYP_CODE	MTL_FDB_ID
14743-9	01	01	1
15074-8	01	01	1
2339-0	01	01	1
2340-8	01	01	1
2341-6	01	01	1
2345-7	01	01	1
32016-8	01	01	1
32318-8	01	01	1
5914-7	01	01	1

6777-7	01	01	1
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2. Retrieve the description of the newly found MTL_FDB_ID. In the example the MTL_FDB_ID is a LAB_ID because its type code is 01, so use the **MTL Laboratory Test Identifier (LAB_ID) Table (RMTLLAB0_LAB_ID)** to find the MTL Laboratory Test Identifier Description (**MTL_LAB_ID_DESC**) value for the LAB_ID of 1:

LAB_ID	MTL_LAB_ID_DESC
1	Fasting Blood Glucose

3. Finally, use the **MTL Specific Laboratory Test Identifier Table (RMTLSLT0_SPECIFIC_LAB_ID)** to retrieve all MTL Specific Laboratory Test Identifiers (**MTL_SPEC_LAB_ID**) associated with the LAB_ID found earlier in step 1:

LAB_ID	MTL_SPEC_LAB_ID
1	1
1	317
1	318
1	319
1	320

Once the MTL_SPEC_LAB_IDs are retrieved, these IDs can be manually associated with their appropriate proprietary codes that include method information (i.e. manual mapping step necessary for this level of abstraction of MTL identifiers).

i LOINC codes infrequently include method information. When available, these more specific LOINC codes map to the MTL Specific Laboratory Test Identifier (**MTL_SPEC_LAB_ID**). Use the LOINC code as the **MTL_EXTRN_VOCAB_CODE** in the External Vocabulary Link Table (see Step 1 above). The **MTL_EXTRN_VOCAB_TYP_CODE** should be **01** (LOINC) and **MTL_FDB_ID_TYP_CODE** should be **02** (**MTL_SPEC_LAB_ID**) instead of **01** as shown in the example. Retrieve the associated MTL_FDB_ID.

i LOINC does include panel information and when appropriate may link to the MTL Panel Identifier (**MTL_PANEL_ID**), which has a **MTL_FDB_ID_TYP_CODE** of 03 (**MTL_PANEL_ID**).

Finding Replacement Identifiers

MTL provides replacement identifiers for LAB_IDs, Panel Identifiers (MTL_PANEL_IDS), and Specific Laboratory Test Identifiers (MTL_SPEC_LAB_IDS). This application demonstrates how to find the replacement identifier for a LAB_ID using the following application, but the same procedure applies to MTL_PANEL_IDS and MTL_SPEC_LAB_IDS.

For purposes of demonstrating this application, the following scenario is used: A laboratory technician needs to find the replacement identifier for a laboratory test and the date it was replaced.

1. For a given laboratory test, retrieve the associated LAB_ID from the [MTL Laboratory Test Identifier \(LAB_ID\) Table](#) (RMTLLAB0_LAB_ID).
2. If the Laboratory Test Identifier Status Code ([MTL_LAB_ID_STATUS](#)) is 1 (Replaced), use the initially selected LAB_ID as the Previous Laboratory Test Identifier ([MTL_PREV_LAB_ID](#)) and retrieve the associated Replacement Laboratory Test Identifier ([MTL_REPL_LAB_ID](#)) from the [MTL Laboratory Test Identifier \(LAB_ID\) Replacement History Table](#) (RMTLLRH0_LAB_ID_HIST).
3. Display the MTL_REPL_LAB_ID and the Laboratory Test Identifier Replacement Effective Date ([MTL_LAB_ID REPL_EFF_DT](#)).

Finding a Synonym Name for a LAB_ID

A synonym for a LAB_ID may be specified as a professional synonym, primary layman name, layman synonym, or abbreviation(s). This application retrieves laboratory test synonym names upon input of a laboratory description search term or a LAB_ID, using the following application.

For purposes of demonstrating this application, the following scenario is used: Search for synonyms for a blood glucose laboratory test.

1. For a given laboratory test, query the Laboratory Test Identifier Table, using the Laboratory Test Identifier Description ([MTL_LAB_ID_DESC](#)), and retrieve the associated LAB_ID with the MTL_LAB_ID_STATUS of 0 (Live), as shown in the following example:

MTL_LAB_ID_DESC	LAB_ID	MTL_LAB_ID_STATUS
Fasting Blood Glucose	1	0



The MTL_LAB_ID_DESC provides the Primary Professional Name.

2. Use the retrieved LAB_ID to find associated names and synonyms:

- For Professional Synonym(s), use the [MTL Laboratory Test Identifier \(LAB_ID\) Synonym Identifier Table](#) (RMTLSYN0_LAB_ID_SYN). Specify 01 for the Laboratory Test Identifier Synonym Name Type Code ([MTL_LAB_ID_SYN_NMTYP_CODE](#)) and retrieve the Laboratory Test Identifier Synonym Description ([MTL_LAB_ID_SYN_CODE_DESC](#)), as shown in the following example:

LAB_ID	MTL_LAB_ID_SYN_NMTYP_CODE	MTL_LAB_ID_SYN_CODE_DESC
1	01	Fasting Blood Glucose

- For Primary Layman Name, use the Laboratory Test Identifier Synonym Identifier Table. Specify 02 for MTL_LAB_ID_SYN_NMTYP_CODE and retrieve the MTL_LAB_ID_SYN_CODE_DESC, as shown in the following example:

LAB_ID	MTL_LAB_ID_SYN_NMTYP_CODE	MTL_LAB_ID_SYN_CODE_DESC
1	02	Fasting Glucose

- For Layman Synonym(s), use the Laboratory Test Identifier Synonym Identifier Table. Specify 03 for MTL_LAB_ID_SYN_NMTYP_CODE and retrieve the MTL_LAB_ID_SYN_CODE_DESC, as shown in the following example:

LAB_ID	MTL_LAB_ID_SYN_NMTYP_CODE	MTL_LAB_ID_SYN_CODE_DESC
1	03	Fasting Blood Sugar

- For Abbreviations, use the Laboratory Test Identifier Synonym Identifier Table. Specify 04 for the

MTL_LAB_ID_SYN_NMTYP_CODE and retrieve the MTL_LAB_ID_SYN_CODE_DESC, as shown in the following example:

LAB_ID	MTL_LAB_ID_SYN_NMTYP_CODE	MTL_LAB_ID_SYN_CODE_DESC
1	04	FBG

Identifying Laboratory Tests in a Panel

This application retrieves a list of the individual laboratory tests in a panel, using the following application.

For purposes of demonstrating this application, the following scenario is used: A laboratory technician searches for the components of a Renal Function Panel.

1. For a given panel, query the **MTL Panel Identifier Table** (RMTLPID0_PANEL_ID) using the Panel Identifier Description (**MTL_PANEL_ID_DESC**), in this case Renal Function Profile, to retrieve the **MTL_PANEL_ID** with a Panel Identifier Status Code (**MTL_PANEL_ID_STATUS**) of **0** (Live), as shown in the following example:

MTL_PANEL_ID_DESC	MTL_PANEL_ID	MTL_PANEL_ID_STATUS
Renal Function Profile	6	0

2. Use the **MTL_PANEL_ID** to query the **MTL Panel to LAB_ID Association Table** (RMTLPLB0_PANEL_LABID_LINK) and retrieve all associated **LAB_IDS**, as shown in the following example:

MTL_PANEL_ID_DESC	MTL_PANEL_ID	LAB_ID
Renal Function Profile	6	6
Renal Function Profile	6	10
Renal Function Profile	6	17
Renal Function Profile	6	20
Renal Function Profile	6	32
Renal Function Profile	6	56
Renal Function Profile	6	238

3. Use the **LAB_IDS** to query the **MTL Laboratory Test Identifier (LAB_ID) Table** (RMTLLAB0_LAB_ID) and retrieve the **MTL_LAB_ID_DESC**, as shown in the following example:

LAB_ID	MTL_LAB_ID_DESC
6	Serum Sodium
10	Serum Potassium
17	Serum Chloride
20	Serum Blood Urea Nitrogen
32	Serum Creatinine
56	Serum Uric Acid
238	Random Serum Glucose

Using MTL with the Drug-Lab Interference Module

The First Databank Medical Test Lexicon provides a controlled concept-based vocabulary for the Drug-Lab Interference Module (DLIM). It has the following uses in DLIM:

- Provides a LOINC mapping that can be used as an integration tool for lab systems that have LOINC codes cross referenced to their proprietary lab test codes.
- Provides permanent laboratory test identifiers that can be retired or replaced but not deleted.
- Provides different name types for laboratory tests.
- Provides identifiers and names for methods associated to specific laboratory tests.
- Provides identifiers and names for bodily sources of substances measured via laboratory tests.
- Provides identifiers and names representative of a set of laboratory tests (panels).

MTL ERD and Technical Specifications

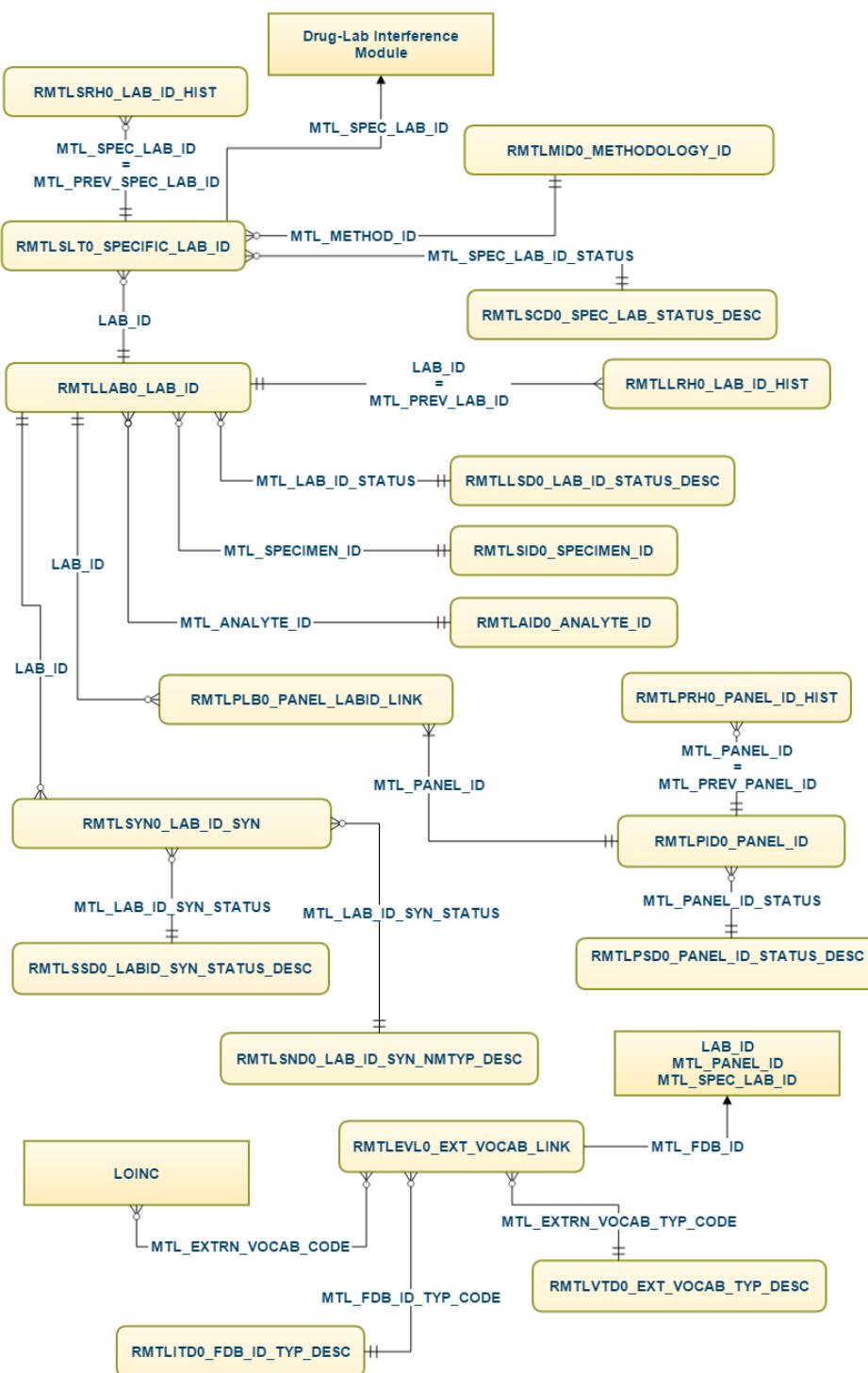
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- MTL Tables
- First Databank Medical Test Lexicon ERD

MTL Tables

- MTL Analyte Identifier Table
- MTL External Vocabulary Link Table
- MTL External Vocabulary Type Description Table
- MTL First Databank Identifier Type Description Table
- MTL Laboratory Test Identifier (LAB_ID) Replacement History Table
- MTL Laboratory Test Identifier (LAB_ID) Status Code Description Table
- MTL Laboratory Test Identifier (LAB_ID) Synonym Identifier Table
- MTL Laboratory Test Identifier (LAB_ID) Synonym Name Type Description Table
- MTL Laboratory Test Identifier (LAB_ID) Synonym Status Description Table
- MTL Laboratory Test Identifier (LAB_ID) Table
- MTL Methodology Identifier Table
- MTL Panel Identifier Replacement History Table
- MTL Panel Identifier Table
- MTL Panel ID Status Code Description Table
- MTL Panel to LAB_ID Association Table
- MTL Specific Laboratory Test Identifier Table
- MTL Specific Laboratory Test ID Replacement History Table
- MTL Specific Laboratory Test ID Status Code Description Table
- MTL Specimen Identifier Table

First Databank Medical Test Lexicon ERD



MTL Analyte Identifier Table

Table Name	RMTLAID0_ANALYTE_ID
Revision Activity	add.07-01-2003
Purpose	Relates an Analyte Identifier to its primary professional text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_ANALYTE_ID	MTL Analyte Identifier	N	8	9(8)
	MTL_ANALYTE_ID_DESC	MTL Analyte Identifier Description	AN	50	X(50)

MTL External Vocabulary Link Table

Table Name	RMTLEVL0_EXT_VOCAB_LINK				
Revision Activity	add.07-01-2003				
Purpose	Presents mapping or cross-reference information from FDB laboratory concepts to external vocabularies.				

Key	Column Name	Column Description	Format	Length	Picture
PF	MTL_EXTRN_VOCAB_TYP_CODE	MTL External Vocabulary Type Code	AN	2	X(2)
PF	MTL_EXTRN_VOCAB_CODE	MTL External Vocabulary Code	AN	20	X(20)
PF	MTL_FDB_ID_TYP_CODE	MTL First Databank Identifier Type Code	AN	2	X(2)
P	MTL_FDB_ID	MTL First Databank Identifier	N	8	9(8)

MTL External Vocabulary Type Description Table

Table Name	RMTLVTD0_EXT_VOCAB_TYP_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the External Vocabulary Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_EXTRN_VOCAB_TYP_CODE	MTL External Vocabulary Type Code	AN	2	X(2)
	MTL_EXTRN_VOCAB_TYP_CODE_DESC	MTL External Vocabulary Type Code Description	AN	50	X(50)

MTL First Databank Identifier Type Description Table

Table Name	RMTLITD0_FDB_ID_TYP_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the First Databank Identifier Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_FDB_ID_TYP_CODE	MTL First Databank Identifier Type Code	AN	2	X(2)
	MTL_FDB_ID_TYP_CODE_DESC	MTL First Databank Identifier Type Code Description	AN	50	X(50)

MTL Laboratory Test Identifier (LAB_ID) Replacement History Table

Table Name	RMTLLRH0_LAB_ID_HIST
Revision Activity	add.07-01-2003
Purpose	Tracks the replacement history for a laboratory or assessment concept.

Key	Column Name	Column Description	Format	Length	Picture
PF	MTL_PREV_LAB_ID	MTL Previous Laboratory Test Identifier	N	8	9(8)
PF	MTL REPL_LAB_ID	MTL Replacement Laboratory Test Identifier	N	8	9(8)
	MTL_LAB_ID_REPLACE_EFF_DT	MTL Laboratory Test Identifier Replacement Effective Date	N	8	9(8)

MTL Laboratory Test Identifier (LAB_ID) Status Code Description Table

Table Name	RMTLLSD0_LAB_ID_STATUS_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the Laboratory Test Identifier Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_LAB_ID_STATUS	MTL Laboratory Test Identifier Status Code	AN	1	X(1)
	MTL_LAB_ID_STATUS_DESC	MTL Laboratory Test Identifier Status Code Description	AN	50	X(50)

MTL Laboratory Test Identifier (LAB_ID) Synonym Identifier Table

Table Name	RMTLSYNO_LAB_ID_SYN
Revision Activity	add.07-01-2003
Purpose	Associates professional synonyms, primary layman names, layman synonyms, and abbreviations to a laboratory or assessment concept.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_LAB_ID_SYN_NID	MTL Laboratory Test Identifier Synonym Identifier (Stable ID)	N	8	9(8)
F	LAB_ID	MTL Laboratory Test Identifier (Stable ID)	N	8	9(8)
F	MTL_LAB_ID_SYN_N_NMTP_CODE	MTL Laboratory Test Identifier Synonym Name Type Code	AN	2	X(2)
	MTL_LAB_ID_SYN_CODE_DESC	MTL Laboratory Test Identifier Synonym Description	AN	100	X(100)
F	MTL_LAB_ID_SYN_STATUS	MTL Laboratory Test Identifier Synonym Status Code	AN	1	X(1)

MTL Laboratory Test Identifier (LAB_ID) Synonym Name Type Description Table

Table Name	RMTLSND0_LAB_ID_SYN_NMTYP_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the Laboratory Test Identifier Synonym Name Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_LAB_ID_SYN_NMTYP_CODE	MTL Laboratory Test Identifier Synonym Name Type Code	AN	2	X(2)
	MTL_LAB_ID_SYN_NMTYP_CODE_DESC	MTL Laboratory Test Identifier Synonym Name Type Code Description	AN	50	X(50)

MTL Laboratory Test Identifier (LAB_ID) Synonym Status Description Table

Table Name	RMTLSSD0_LABID_SYN_STATUS_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the Laboratory Test Identifier Synonym Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_LAB_ID_SYN_STATUS	MTL Laboratory Test Identifier Synonym Status Code	AN	1	X(1)
	MTL_LAB_ID_SYN_STATUS_DESC	MTL Laboratory Test Identifier Synonym Status Code Description	AN	50	X(50)

MTL Laboratory Test Identifier (LAB_ID) Table

Table Name		RMTLLAB0_LAB_ID			
Revision Activity		add.07-01-2003			
Purpose		Provides attributes of a specific laboratory or assessment concept.			
Key	Column Name	Column Description	Format	Length	Picture
P	LAB_ID	MTL Laboratory Test Identifier (Stable ID)	N	8	9(8)
	MTL_LAB_ID_DESCRIPTION	MTL Laboratory Test Identifier Description	AN	100	X(100)
F	MTL_ANALYTE_ID	MTL Analyte Identifier	N	8	9(8)
F	MTL_SPECIMEN_ID	MTL Specimen Identifier	N	5	9(5)
F	MTL_LAB_ID_STATUS	MTL Laboratory Test Identifier Status Code	AN	1	X(1)

MTL Methodology Identifier Table

Table Name	RMTLMID0_METHODOLOGY_ID
Revision Activity	add.07-01-2003
Purpose	Relates the Methodology Identifier to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_METHOD_ID	MTL Methodology Identifier	N	5	9(5)
	MTL_METHOD_ID_DESC	MTL Methodology Identifier Description	AN	50	X(50)

MTL Panel Identifier Replacement History Table

Table Name	RMTLPRH0_PANEL_ID_HIST
Revision Activity	add.07-01-2003
Purpose	Tracks replacement history for a specific group of laboratory tests (panel).

Key	Column Name	Column Description	Format	Length	Picture
PF	MTL_PREV_PANEL_ID	MTL Previous Panel Identifier	N	5	9(5)
PF	MTL REPL_PANEL_ID	MTL Replacement Panel Identifier	N	5	9(5)
	MTL_PANEL_ID_REPLACE_EFFECTIVE_DATE	MTL Panel Identifier Replacement Effective Date	N	8	9(8)

MTL Panel Identifier Table

Table Name	RMTLPID0_PANEL_ID
Revision Activity	add.07-01-2003
Purpose	Relates the Panel Identifier to its text description and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_PANEL_ID	MTL Panel Identifier (Stable ID)	N	5	9(5)
	MTL_PANEL_ID_DESC	MTL Panel Identifier Description	AN	50	X(50)
F	MTL_PANEL_ID_STATUS	MTL Panel Identifier Status Code	AN	1	X(1)

MTL Panel ID Status Code Description Table

Table Name	RMTLPSD0_PANEL_ID_STATUS_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the Panel Identifier Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_PANEL_ID_STATUS	MTL Panel Identifier Status Code	AN	1	X(1)
	MTL_PANEL_ID_STATUS_DESC	MTL Panel Identifier Status Code Description	AN	50	X(50)

MTL Panel to LAB_ID Association Table

Table Name	RMTLPLB0_PANEL_LABID_LINK				
Revision Activity	add.07-01-2003				
Purpose	Links a laboratory or assessment concept to a group of laboratory tests (panel).				

Key	Column Name	Column Description	Format	Length	Picture
PF	MTL_PANEL_ID	MTL Panel Identifier (Stable ID)	N	5	9(5)
PF	LAB_ID	MTL Laboratory Test Identifier (Stable ID)	N	8	9(8)

MTL Specific Laboratory Test Identifier Table

Table Name	RMTLSLT0_SPECIFIC_LAB_ID
Revision Activity	add.07-01-2003
Purpose	Relates the Specific Laboratory Test Identifier to its text description and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_SPEC_LAB_ID	MTL Specific Laboratory Test Identifier (Stable ID)	N	8	9(8)
F	LAB_ID	MTL Laboratory Test Identifier (Stable ID)	N	8	9(8)
F	MTL_METHOD_ID	MTL Methodology Identifier	N	5	9(5)
	MTL_SPEC_LAB_ID_DESC	MTL Specific Laboratory Test Identifier Description	AN	100	X(100)
F	MTL_SPEC_LAB_ID_STATUS	MTL Specific Laboratory Test Identifier Status Code	AN	1	X(1)

MTL Specific Laboratory Test ID Replacement History Table

Table Name	RMTLSRH0_SPECIFIC_LAB_ID_HIST
Revision Activity	add.07-01-2003
Purpose	Tracks replacement history for a specific laboratory test and methodology.

Key	Column Name	Column Description	Format	Length	Picture
PF	MTL_PREV_SPEC_LAB_ID	MTL Previous Specific Laboratory Test Identifier	N	8	9(8)
PF	MTL REPL_SPEC_LAB_ID	MTL Replacement Specific Laboratory Test Identifier	N	8	9(8)
	MTL_SPEC_LAB_ID_REPL_EFFECT_DT	MTL Specific Laboratory Test Identifier Replacement Date	N	8	9(8)

MTL Specific Laboratory Test ID Status Code Description Table

Table Name	RMTLSCD0_SPEC_LAB_STATUS_DESC
Revision Activity	add.07-01-2003
Purpose	Relates the Specific Laboratory Test Identifier Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_SPEC_LAB_ID_STATUS	MTL Specific Laboratory Test Identifier Status Code	AN	1	X(1)
	MTL_SPEC_LAB_ID_STATUS_DESC	MTL Specific Laboratory Test Identifier Status Code Description	AN	50	X(50)

MTL Specimen Identifier Table

Table Name	RMTLSID0_SPECIMEN_ID
Revision Activity	add.07-01-2003
Purpose	Relates the Specimen Identifier to its professional text description.

Key	Column Name	Column Description	Format	Length	Picture
P	MTL_SPECIMEN_ID	MTL Specimen Identifier	N	5	9(5)
	MTL_SPECIMEN_ID_DESC	MTL Specimen Identifier Description	AN	50	X(50)

First Databank Cross-Reference Module (XRF) 1.0

- First Databank Cross-Reference Module General Information and Concepts
- ERD and Technical Specifications

 In this module, U.S. data and external identifiers are used in the examples.

First Databank Cross-Reference Module General Information and Concepts

The General Information section contains high-level information about the module.

- Overview
- Concepts
 - Allergy-to-Ingredient Cross-Reference
 - Allergy-to-Allergy Cross-Reference

Overview

The purpose of the First Databank Cross-Reference Module (XRF) is to provide navigation between similar drug concepts from a subset of First Databank (FDB) concepts. Please refer to the FDB Interoperability Module for guidance on navigation from a more extensive range of FDB concepts and external interoperable vocabularies.

Cross-References are currently provided between Allergy Codes (DAM_AGCSP) and Ingredient Codes (HIC_SEQN) from MedKnowledge. Additionally, cross-references are provided between allergy code types (DACN and DAM_AGCSP).

 The module is intended to be used only in conjunction with regularly licensed FDB products.

The First Databank Cross-Reference Module contains the following:

- *Allergy-to-Ingredient Cross-References*: the Cross-Reference DAM_AGCSP to HIC_SEQN Cross Table. This table provides navigation from the allergy code to the ingredient code for the FDB allergy products.
- *Allergy-to-Allergy Cross-Reference*: the Cross-Reference DACN to DAM_AGCSP Table. This table provides navigation between allergy codes.

 The DAM_AGCSP is synonymous with the newer column that serves the same purpose, the **DAM_ALRGN_GRP**.

Concepts

This section describes concepts and database elements that are important for understanding the module.

Allergy-to-Ingredient Cross-Reference

Inclusion Criteria

In order to cross-reference allergy codes between products, it is necessary to navigate through ingredients. The allergy-to-ingredient cross-reference files begin the navigation by cross-referencing allergy codes to their respective ingredient codes, as shown in the following illustration.



Allergy-to-ingredient cross-reference files include, but are not limited to, United States and Canadian ingredients referenced in an allergy context. All allergy codes for each of the FDB allergy products will be included in the respective allergy-to-ingredient cross-reference.

In the one-to-one relationship, one allergy code is linked to one ingredient code.

In the many-to-many relationship, many allergy codes are linked to many ingredient codes. The following table illustrates many DAM_AGCSPs linked to many HIC_SEQNs.

Example—Many-to-Many Relationship

DAM_AGCSP	HIC_SEQN
177 Insulins	881 Insulin Isophane NPH, BF-PK
177 Insulins	882 Insulin Isophane, Beef
177 Insulins	883 Insulin Isophane, Beef Pure
900067 Protamine	881 Insulin Isophane NPH, BF-PK
900067 Protamine	882 Insulin Isophane, Beef
900067 Protamine	883 Insulin Isophane, Beef Pure
900124 Beef Containing Products	881 Insulin Isophane NPH, BF-PK
900124 Beef Containing Products	882 Insulin Isophane, Beef
900124 Beef Containing Products	883 Insulin Isophane, Beef Pure

Deletions

When an ingredient is deleted in the allergy-to-ingredient cross-reference files, all cross-reference records containing that ingredient are also deleted.

Allergy-to-Allergy Cross-Reference

Inclusion Criteria

The allergy-to-allergy cross-reference file (Cross-Reference DACN to DAM_AGCSP Table) can be used to convert Drug Allergy Code New (DACN) codes to DAM Allergy Group Code Specific (DAM_AGCSP) codes, bypassing the need to convert to common ingredient codes.



Since Drug Allergy Codes (DAC) are a subset of the Drug Allergy Codes New (DACN), DAC will be found in the DACN tables.



In the one-to-one relationship, an allergy code in one product line is linked to exactly one allergy code in another product. The following table illustrates that one DACN is linked to one DAM_AGCSP code.

Example—One-to-One Relationship

DACN	DAM_AGCSP
80 Streptokinases	000335 DAM_AGCSP Thrombolytic Enzymes

In the one-to-many relationship, an allergy code in one product is linked to many allergy codes in another product. The following table illustrates that one DACN is linked to many DAM_AGCSPs.

Example—One-to-Many Relationship

DACN	DAM_AGCSP
01 Penicillins; Cephalosporins; Carbapenem	000476 Penicillins
01 Penicillins; Cephalosporins; Carbapenem	000476 Penicillins
01 Penicillins; Cephalosporins; Carbapenem	000477 Cephalosporins
01 Penicillins; Cephalosporins; Carbapenem	000488 Betalactams
01 Penicillins; Cephalosporins; Carbapenem	000490 Carbapenem

Limitations

The allergy-to-allergy cross-reference file will be supported only in combination with approved FDB products.

Cross-Reference Module ERD and Technical Specifications

This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

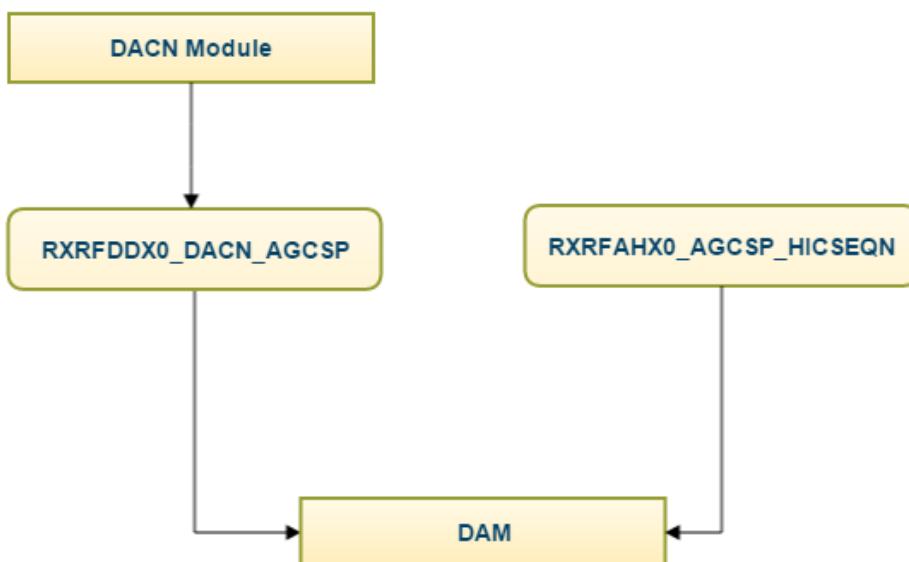
- XRF Tables
- XRF ERDs

XRF Tables

- Cross-Reference DACN to DAM_AGCSP Table
- Cross-Reference DAM_AGCSP to HIC_SEQN Table

XRF ERDs

Allergy and Ingredient Cross-Reference ERD



Cross-Reference DACN to DAM_AGCSP Table

Table Name	RXRFDDX0_DACN_AGCSP
Revision Activity	add.03-11-2003
Purpose	Enables the conversion of DACN codes to DAM_AGCSP codes.

Key	Column Name	Column Description	Format	Length	Picture
PF	DACN	Drug Allergy Code New	AN	2	X(2)
PF	DAM_AGCSP	DAM Specific Allergen Group Code	N	6	9(6)

Cross-Reference DAM_AGCSP to HIC_SEQN Table

Table Name	RXRFAHX0_AGCSP_HICSEQN				
Revision Activity	add.08-01-2001				
Purpose	Enables the conversion of an allergy to an ingredient.				

Key	Column Name	Column Description	Format	Length	Picture
PF	DAM_AGCSP	DAM Specific Allergen Group Code	N	6	9(6)
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number (Stable ID)	N	6	9(6)
F	HIC	Hierarchical Ingredient Code	AN	6	X(6)

AHFS DI® Monographs (AHFS DI)

- General Information
- AHFS DI® Monographs Editorial Policies
- ERD and Technical Specifications

AHFS DI Monographs General Information

The General Information section contains high-level information about the module.

- Overview
- American Society of Health-System Pharmacists (ASHP) Disclaimer

Overview

AHFS DI® Monographs are professional-level full-text monographs that can be integrated into healthcare information systems to provide a drug information resource at the point of care.

AHFS DI contains in-depth clinical drug descriptions for thousands of drug products. The American Society of Health-System Pharmacists (ASHP) supplies the drug information contained in the AHFS DI Monographs.

Multiple monographs might link to a single Clinical Formulation ID ([GCN_SEQNO](#)), and multiple Clinical Formulation IDs (GCN_SEQNOs) might link to a single monograph. Links between the Clinical Formulation ID (GCN_SEQNO) and the monographs include a priority indicator. Use the priority indicator to display the most important record first. Refer to the [AHFS DI Monographs Data File Relationships ERD](#) for a graphical representation of these relationships.

If a single Clinical Formulation ID (GCN_SEQNO) links to multiple monographs, each link includes a priority indicator determined by First Databank (FDB). The priority indicator contains a value 1 through 9, with 1 being the highest priority. For example, the Clinical Formulation ID (GCN_SEQNO) for Tylenol with Codeine #3 links to monographs for codeine and acetaminophen. The link to the monograph for codeine includes a lower number as the priority indicator than the link to the monograph for acetaminophen because the information in the codeine monograph is more important.

If a single monograph links to multiple Clinical Formulation IDs (GCN_SEQNOs), each link includes a priority indicator determined by FDB. The priority indicator contains a value 1 through 6, with 1 being the highest priority. For example, the AHFS DI monographs for Felodipine links to the following drugs:

- Felodipine Tab CR 2.5 mg (priority 1)
- Felodipine Tab CR 5 mg (priority 2)
- Felodipine Tab CR 10 mg (priority 3)
- Enalapril Maleate/Felodipine Tab CR 5/2.5 mg (priority 4)
- Enalapril Maleate/Felodipine Tab CR 5/5 mg (priority 5)

If a single monograph links to more than five Clinical Formulation IDs (GCN_SEQNOs), the five most important relationships receive a priority 1 through 5 and the remaining Clinical Formulation IDs (GCN_SEQNOs) receive a priority of 6.

This section also provides disclaimers for the AHFS DI product.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#), page 2302) levels in the FDB knowledge base. Under certain circumstances,

aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Please refer to [FDB Disclaimer](#) for details about FDB's disclaimer.

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AHFS DI Monographs ERD and Technical Specifications

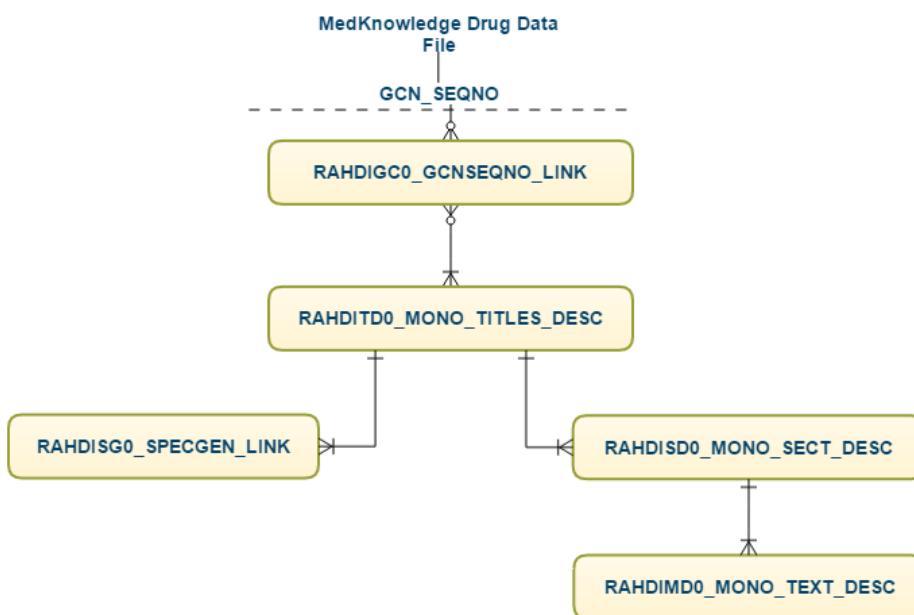
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- AHFS DI Tables
- AHFS DI ERD

AHFS DI Tables

- AHFS DI Specific to General Monograph Table
- Prioritized AHFS DI Monograph GCN_SEQNO Table
- AHFS Full-Text Monograph Section Table
- AHFS Full-Text Monograph Text Table
- AHFS Full-Text Monograph Titles Table

AHFS DI ERD



AHFS DI Specific to General Monograph Table

Table Name	RAHDISG0_SPECGEN_LINK
Revision Activity	add.12-02-2002
Purpose	Associates a general statement to one or more specific monographs.

Key	Column Name	Column Description	Format	Length	Picture
PF	AHFS_SPECM	AHFS Full-Text Specific Monograph Number	N	6	9(6)
PF	AHFS_GENM	AHFS Full-Text General Monograph Number	N	6	9(6)

AHFS Full-Text Monograph Section Table

Table Name	RAHDISD0_MONO_SECT_DESC
Revision Activity	add.12-02-2002
Purpose	Associates a specific monograph section with a specific monograph.

Key	Column Name	Column Description	Format	Length	Picture
PF	AHFS_MONO	AHFS Full-Text Monograph Number	N	6	9(6)
P	AHFS_SECT	AHFS Full-Text Monograph Section ID	N	4	9(4)
PF	AHFS_SECTL	AHFS Full-Text Monograph Section Level	N	1	9(1)
	AHFS_SECTT	AHFS Full-Text Monograph Section Title	AN	70	X(70)

AHFS Full-Text Monograph Text Table

Table Name	RAHDIMD0_MONO_TEXT_DESC
Revision Activity	add.12-02-2002
Purpose	Associates specific text with a specific section of a monograph.

Key	Column Name	Column Description	Format	Length	Picture
PF	AHFS_MONO	AHFS Full-Text Monograph Number	N	9	9(6)
P	AHFS_SECT	AHFS Full-Text Monograph Section ID	N	4	9(4)
P	AHFS_TEXTS	AHFS Full-Text Monograph Text Sequence Number	N	4	9(4)
	AHFS_TEXT	AHFS Full-Text Monograph Text	AN	75	X(75)

AHFS Full-Text Monograph Titles Table

Table Name	RAHDITD0_MONO_TITLES_DESC
Revision Activity	add.12-02-2002
Purpose	Associates a specific title with a specific monograph.

Key	Column Name	Column Description	Format	Length	Picture
P	AHFS_MONO	AHFS Full-Text Monograph Number	N	6	9(6)
	AHFS_MONOT	AHFS Full-Text Monograph Title	AN	70	X(70)

Prioritized AHFS DI Monograph GCN_SEQNO Table

Table Name	RAHDIGC0_GCNSEQNO_LINK
Revision Activity	add.12-02-2002
Purpose	Links First Databank's (FDB's) Clinical Formulation ID (GCN_SEQNO) to ASHP's Drug Information Monograph Numbers.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
	AHFS_PNA	Priority Indicator from Clinical Formulation ID (GCN_SEQNO) to AHFS	AN	1	X(1)
	AHFS_PAN	Priority Indicator from AHFS to Clinical Formulation ID (GCN_SEQNO)	AN	1	X(1)
PF	AHFS_MONO	AHFS Full-Text Monograph Number	N	6	9(6)

DRCM Applications

This section provides information about the practical application of data contained in the Dosage Range Check Module (DRCM).

FDB offers a variety of drug concepts and their identifiers to support a range of drug information applications using clinical data. These identifiers represent drug products, ingredients, and formulations and are referred to as Multiple Access Points (MAPs). From a development point of view, familiarity with the [Multiple Access Points \(MAPs\)](#) section is needed before attempting the applications contained in this section.

Dosage Range Checking

- Example—Dose Range Checking for an Adult Patient
- Example—Dose Range Checking for a Neonatal Patient
- Example—Dose Range Checking of Non-patient Parameters
- Example—Dose Range Checking of a Continuous Infusion
- Example—Dose Range Checking of an Intermittent Infusion

Converting Units During Dosage Range Checking

Performing Dosage Range Checking Using a DxID or ICD Code

Customer-Compiled Warning Messages

Utilizing FDB Preassembled Warning Messages

Generating DRCM Warning Messages

Considerations for Screening Drugs That Have a Frequency of Less Than Once Per Day/Greater Than Once Per Month

Dosage Range Checking

Dosage range checking uses patient and medication data from the database and checks the prescription for:

- frequency of administration
- duration of therapy
- dose per day
- maximum single dose
- maximum single dose not-to-exceed

DRCM can also display the elimination half-life and maximum lifetime dose for the prescribed drug.

i When performing dosage range checking it may be necessary to convert the DRCM units to the prescribed units. See the [Converting Units During Dosage Range Checking](#) application for more information on converting units.

When performing dosage range checking on extemporaneously compounded drugs, each active ingredient should be screened individually.

i The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is in the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

The information in the UNITS_DESC column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To retrieve the corresponding TJC-compliant unit descriptions for the given unit in the UNITS_DESC column, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) and use the description found in either the [UNIT_DESC_ABBREV](#) or [UNIT_DESC_EXPANDED](#) columns.

The following application assumes familiarity with the various drug concepts and their identifiers and how to access clinical information. This application begins at the Clinical Formulation level with the Clinical Formulation ID ([GCN_SEQNO](#)). See [Multiple Access Points \(MAPs\)](#) for more information.

The examples following the application demonstrate the following:

- Dose Range Checking for an Adult Patient
- Dose Range Checking for a Neonatal Patient
- Dose Range Checking of Non-patient Parameters
- Dose Range Checking of a Continuous Infusion
- Dose Range Checking of an Intermittent Infusion

Part 1: Collect Dose Range Checking Data

This part of the application collects the appropriate data for dosage range checking. In addition to the prescription information, the patient's renal impairment, creatinine clearance, weight, age in days, and lifetime administrations of the medication may be required.

Dosage range checking can be performed when some information is unknown but the information retrieved will be less specific. Default values may be used to return more specific screening information.

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).
2. Select the Dosing Age Source Identifier (**DOSING_AGE_SOURCE_ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine if the collected dosing record can be used in screening based on its source.
3. Check the NEOM Weight Required Indicator (**NEOM_WEIGHT_REQ_IND**) if screening for a neonatal patient:
 - a. If **NEOM_WEIGHT_REQ_IND** equals 0, the current weight is not required to select the screening record. *Skip to step 4.*
 - b. If **NEOM_WEIGHT_REQ_IND** equals 1, the current weight is required to select the screening record.
4. Filter the records returned in step 1 where:
 - a. NEOM Low Current Weight in Grams (**NEOM_LOW_CURRENT_WEIGHT_GRAMS**) is less than or equal to the patient's weight in grams, and
 - b. NEOM High Current Weight in Grams (**NEOM_HIGH_CURRENT_WEIGHT_GRAMS**) is greater than or equal to the patient's weight in grams.
5. Check the NEOM Gestational Birth Age Required Indicator (**NEOM_GEST_BIRTH_AGE_REQ_IND**) if screening for a neonatal patient:
 - a. If **NEOM_GEST_BIRTH_AGE_REQ_IND** equals 0, the gestational age at birth is not required to

select the screening record. *Skip to part 2.*

- b. If NEOM_GEST_BIRTH AGE_REQ_IND equals 1, the gestational age at birth is required to select the screening record.
6. Filter the records returned in step 1 where the:
- a. NEOM Low Gestational Age at Birth in Weeks (**NEOM_LOW_GEST_BIRTH_AGE_WEEKS**) column is less than or equal to the patient's gestational birth age in weeks, and
 - b. NEOM High Gestational Age at Birth in Weeks (**NEOM_HIGH_GEST_BIRTH_AGE_WEEKS**) column is greater than or equal to the patient's gestational birth age in weeks.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):
 - a. If the prescribed frequency is equal to either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is less than DR2_LOFREQ, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug ([sample message 8](#)).
 - c. If the prescribed frequency is greater than DR2_HIFREQ, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug ([sample message 9](#)).
2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert. *Skip to step 4.*
 - b. If the prescribed duration of therapy is less than DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)). *Skip to step 4.*
 - c. If the prescribed duration of therapy is greater than DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.
3. Compare the prescribed duration of therapy to DRCM Maximum Duration of Therapy ([DR2_MXDOTX](#)):
 - a. If DR2_MXDOTX equals 0, the maximum duration of therapy has no limit, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is equal to or less than DR2_MXDOTX, alert the user that the prescribed duration exceeds the recommended high duration for the drug but less is than the

- recommended maximum duration of therapy ([sample message 12](#)).
- c. If the prescribed duration of therapy is greater than DR2_MXDOTH, alert the user that the prescribed duration exceeds the recommended maximum duration for the drug ([sample message 13](#)).
4. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):
 - a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, within the value range, the order is acceptable and does not produce an alert. *Skip to step 6.*
 - b. If the prescribed daily dose is less than DR2_LODOSD, alert the user that the prescribed dose is less than the recommended low daily dose for the drug ([sample message 1](#)). *Skip to step 6.*
 - c. If the prescribed daily dose is greater than DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.
 5. Compare the prescribed daily dose (convert units if necessary) to DRCM Maximum Dose per Day ([DR2_MXDOSD](#)):
 - a. If the prescribed daily dose is equal to or less than DR2_MXDOSD, alert the user that the prescribed dose exceeds the recommended high daily dose for the drug but is less than the recommended maximum daily dose ([sample message 2](#)).
 - b. If the prescribed daily dose is greater than DR2_MXDOSD, alert the user that the prescribed dose exceeds the recommended maximum daily dose for the drug ([sample message 3](#)).
 6. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount per Single Dose ([DR2_MX1DOS](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):
 - a. If the prescribed single dose is equal to or less than DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed single dose is greater than either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).
 7. Display the DRCM Maximum Lifetime Dose ([DR2_MXLIFD](#)):
 - a. If DR2_MXLIFD equals 0, the maximum lifetime dose is unavailable.
 - b. If DR2_MXLIFD does not equal 0, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the DRCM Renal Impairment Assessment Indicator ([DR2_RENIMP](#)):
 - a. If DR2_RENIMP equals N, the order is acceptable and does not produce an alert. *Skip to step 3.*
 - b. If DR2_RENIMP equals Y, alert the user that the dose may need to be adjusted for renal impairment

(sample message 5) and begin creatinine clearance checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold ([DR2_CRCLTH](#)) if necessary:
 - a. If DR2_CRCLTH equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
 - b. If the patient's creatinine clearance is unavailable, alert the user that a drug dosage adjustment should be considered (sample message 6 appended to message 5).
 - c. If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug dosage adjustment should be considered (sample message 6 appended to message 5).
 - d. If the patient's creatinine clearance is greater than DR2_CRCLTH, continue screening the order without displaying any additional messages.
 3. Select the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)):
 - a. If the value equals N, the order is acceptable and does not produce an alert.
 - b. If the value equals Y, alert the user that the dose may need to be adjusted for hepatic impairment (sample message 7).
 4. Display the DRCM Low Elimination Half-Life ([DR2_THAFLO](#)) and DRCM High Elimination Half-Life ([DR2_THAFHI](#)) range (or value).
 - a. If DR2_THAFLO and DR2_THAFHI equals 0, the elimination half-life range (or value) is unavailable.
 - b. If DR2_THAFLO or DR2_THAFHI does not equal 0, display the elimination half-life range (or value) for the patient (sample message 14).
- Example—Dose Range Checking for an Adult Patient
 - Example—Dose Range Checking for a Neonatal Patient
 - Example—Dose Range Checking of Non-patient Parameters
 - Example—Dose Range Checking of a Continuous Infusion
 - Example—Dose Range Checking of an Intermittent Infusion

Example - Dose Range Checking for an Adult Patient

A patient has a prescription for a maintenance dose (DR2_DOSTPI 02) of amoxicillin (Clinical Formulation ID [GCN_SEQNO] 8995) 250 mg oral (DR2_RT 064) 3 times per day for 10 days. The amoxicillin is indicated for Lyme Disease (DXID 00000244). The patient is 18 years old (6,570 days) and weighs 120 pounds (54.5 kg).

See the [Generating DRCM Warning Messages](#) application for more information on the sample messages referred to in this example.

Part 1: Collect Dosage Range Check Data

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, the reason for use-specific record (DXID 244) is not available for an 18-year-old patient. Therefore, the default screening record (DXID 4892) is used.

GCN_SEQNO	8995
DR2_RT	064
DR2_DOSTPI	02
DR2_LOAGED	6570
DR2_HIAGED	40150
DXID	4892

2. Select the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that this supporting reference may not be specific to the given age group.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):
 - a. If the prescribed frequency is equal to either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* DR2_LOFREQ, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug ([sample message 8](#)).
 - c. If the prescribed frequency is *greater than* DR2_HIFREQ, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug ([sample message 9](#)).

DR2_LOFREQ	DR2_HIFREQ	Prescribed Frequency
2	4	3 per day

In this example, the prescribed frequency of 3 per day is *within* the DR2_LOFREQ and DR2_HIFREQ value range of 2 per day to 4 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
10	14	10 days

In this example, the prescribed frequency is *equal to* the DR2_LODOTX value of 10 days. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):

- a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.
- b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is less than the recommended low daily dose for the drug ([sample message 1](#)).
- c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	750
DR2_LODOSU	01
UNITS_DESC	MG/DAY
DR2_HIDOSD	2000
DR2_HIDOSU	01
UNITS_DESC	MG/DAY
Prescribed dose per day	750 mg/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/DAY	mg/day	milligram per day

In this example, 250 mg are prescribed 3 times per day. Therefore, the dose per day is $250 \times 3 = 750$ mg/day. The prescribed daily dose is *equal to* the DR2_LODOSD value of 750 mg/day. The system passes the order and continues screening.

4. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount per Single Dose ([DR2_MX1DOS](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):
 - a. If the prescribed single dose is *equal to* or *less than* DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed single dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
1500	28	1500	28	250 mg

To retrieve the corresponding TJC-compliant unit descriptions, query the **Units Description Table** (RUNITS0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG	mg	milligram

In this example, the prescribed dose of 250 mg is *less than* the DR2_MX1DOS and NTE_SINGLE_DOSE values of 1500 mg. The system passes the order and continues screening.

5. Display the DRCM Maximum Lifetime Dose (**DR2_MXLIFD**) value:

- a. If DR2_MXLIFD equals 0, the maximum lifetime dose is unavailable.
- b. If DR2_MXLIFD does not equal 0, display the maximum lifetime dose value for the prescribed medication (sample message 15).

In this example, the maximum lifetime dose equals 0 and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the DRCM Renal Impairment Assessment Indicator (**DR2_RENIMP**):

- a. If DR2_RENIMP equals N, the order is acceptable and does not produce an alert.
- b. If DR2_RENIMP equals Y, alert the user that the dose may need to be adjusted for renal impairment (sample message 5).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for renal impairment and begins creatinine clearance threshold checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold (**DR2_CRCLTH**) if necessary:

- a. If DR2_CRCLTH equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered (sample message 6 appended to message 5).
- c. If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug dosage adjustment should be considered (sample message 6 appended to message 5).
- d. If the patient's creatinine clearance is *greater than* DR2_CRCLTH, continue screening the order without displaying any additional messages.

DR2_CRCLTH	DR2_CRCLU	Description	Patient's Creatinine Clearance
50	01	ML/MIN	---

Concatenate the DR2_CRCLTH value of 50 with the DR2_CRCLU description of ML/MIN to display

the creatinine clearance threshold of 50 ML/MIN to the user.

In this example, the patient's creatinine clearance is *unavailable*. The system alerts the user that a drug dosage adjustment should be considered and checks the order to determine if an hepatic impairment adjustment is needed.

3. Select the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)) for the prescribed medication:
 - a. If the value equals *N*, the order is acceptable and does not produce an alert.
 - b. If the value equals *Y*, alert the user that the dose may need to be adjusted for hepatic impairment ([sample message 7](#)).

This example has a *negative* return. The system passes the order and checks the display availability of the elimination half-life values.

4. Display the DRCM Low Elimination Half-Life ([DR2_THAFLO](#)) and DRCM High Elimination Half-Life ([DR2_THAFHI](#)) range (or value):
 - a. If DR2_THAFLO and DR2_THAFHI *equals 0*, the elimination half-life range (or value) is unavailable.
 - b. If DR2_THAFLO or DR2_THAFHI *does not equal 0*, display the elimination half-life range (or value) for the patient ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description
0.7	2	02	Hours

In this example, the elimination half-life for the order *does not equal 0* and is available for display. The system displays the elimination half-life range as 0.7 hours - 2 hours.

Example - Dose Range Checking for a Neonatal Patient

A patient has a prescription for a loading dose (DR2_DOSTPI 01) of Digoxin 0.25 mg/mL (Clinical Formulation ID [GCN_SEQNO] 15) 30 mcg intravenous (DR2_RT 052) given in 3 divided doses to be given as follows: 15 mcg now followed by 7.5 mcg for 2 doses. The reason for use is not available. The patient is 10 days old and weighs 1,500 grams (1.5 kg). The gestational age at birth was 29 weeks.

See the [Generating DRCM Warning Messages](#) application for more information on the sample warning messages referred to in this example.

Part 1: Collect Dosage Range Check Data

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (DR2_RT) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (DR2_DOSTPI) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).

GCN_SEQNO	15	15
DR2_RT	052	052
DR2_DOSTPI	01	01
DR2_LOAGED	0	0
DR2_HIAGED	29	119
DXID	4892	4892

2. Select the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:

- a. Display the data source information to the end-user.
- b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING_AGE_SOURCE_ID equals 3, indicating that this supporting reference

may not be specific to the given age group.

3. Check the NEOM Weight Required Indicator ([NEOM_WEIGHT_REQ_IND](#)):

- If [NEOM_WEIGHT_REQ_IND equals 0](#), the current weight is not required to select the screening record.
- If [NEOM_WEIGHT_REQ_IND equals 1](#), the current weight is required to select the screening record.

In this example, [NEOM_WEIGHT_REQ_IND equals 0](#), indicating that the current weight is not required to select the screening record. The system checks the gestational age at birth required indicator.

4. Check the NEOM Gestational Birth Age Required Indicator ([NEOM_GEST_BIRTH_AGE_REQ_IND](#)):

- If [NEOM_GEST_BIRTH_AGE_REQ_IND equals 0](#), the gestational age at birth is not required to select the screening record.
- If [NEOM_GEST_BIRTH_AGE_REQ_IND equals 1](#), the gestational age at birth is required to select the screening record.

In this example, [NEOM_GEST_BIRTH_AGE_REQ_IND equals 1](#). The system prompts the user to enter the gestational age of the patient at birth in weeks.

5. Filter the records returned in step 1 where the:

- [NEOM Low Gestational Age at Birth in Weeks \(\[NEOM_LOW_GEST_BIRTH_AGE_WEEKS\]\(#\)\) column is less than or equal to the patient's gestational birth age in weeks, and](#)
- [NEOM High Gestational Age at Birth in Weeks \(\[NEOM_HIGH_GEST_BIRTH_AGE_WEEKS\]\(#\)\) column is greater than or equal to the patient's gestational birth age in weeks.](#)

GCN_SEQNO	15	15
DR2_RT	052	052
DR2_DOSTPI	01	01
DR2_LOAGED	0	0
DR2_HIAGED	29	119
DXID	4892	4892
NEOM_LOW_GEST_BIRTH_AGE_WEEKS	37	0
NEOM_HIGH_GEST_BIRTH_AGE_WEEKS	0	36

In this example, the weight range of 0 to 36 weeks is retrieved by the system after the user enters the patient's gestational age of the patient at birth of 29 weeks. Using the retrieved record, the

system begins dose range checking.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):
 - a. If the prescribed frequency is *equal to* either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* DR2_LOFREQ, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug ([sample message 8](#)).
 - c. If the prescribed frequency is *greater than* DR2_HIFREQ, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug ([sample message 9](#)).

DR2_LOFREQ	DR2_HIFREQ	Prescribed Frequency
1	3	3 per day

In this example, the prescribed frequency of 3 per day is *equal to* the DR2_HIFREQ value of 3 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
1	2	1 day

In this example, the prescribed duration is *equal to* the DR2_LODOTX value of 1 day. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):
 - a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.

- b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is less than the recommended low daily dose for the drug ([sample message 1](#)).
- c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	15
DR2_LODOSU	46
UNITS_DESC	MCG/KG/DAY
DR2_HIDOSD	35
DR2_HIDOSU	46
UNITS_DESC	MCG/KG/DAY
Prescribed dose per day	30 mcg/day

In this example, 15 mcg is prescribed once and 7.5 is prescribed twice over 1 day. Therefore, the dose per day is $15 + (7.5 \times 2) = 30$ mcg/day.

Since the retrieved units are given in mcg/kg/day and the prescription is written in mcg/day, it is necessary to convert the units of measure. See [Converting Units During Dosage Range Checking](#) for more information about converting units.

The following table shows the data after the conversion.

DR2_LODOSD	22.5
DR2_LODOSU	08
UNITS_DESC	MCG/DAY
DR2_HIDOSD	52.5
DR2_HIDOSU	08
UNITS_DESC	MCG/DAY
Prescribed dose per day	30 mcg/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MCG/DAY	mcg/day	microgram per day

In this example, the prescribed dose of 30 mcg/day is within the DR2_LODOSD and DR2_HIDOSD value range. The system passes the order and continues screening.

4. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount per Single Dose (**DR2_MX1DOS**) and the Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**):

- If the prescribed single dose is *equal to or less than* DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
- If the prescribed single dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).

The DRCM Dose Units Code Description (**UNITS_DESC**) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
20	19	0.6	28	15 mcg
20	19	0.6		7.5 mcg
20	19	0.6	28	7.5 mcg

Since the retrieved units are given in mcg/kg and mg and the prescription is written in mcg, it is necessary to convert the units of measure. See [Converting Units During Dosage Range Checking](#) for more information about converting units.

The following table shows the data after the conversion.

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	UNITS_DESC	Prescribed Single Dose
30	33	600	33	MCG	15 mcg
30	33	600	33	MCG	7.5 mcg
30	33	600	33	MCG	7.5 mcg

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MCG	mcg	microgram

The prescribed single doses of 15 mcg, 7.5 mcg, and 7.5 mcg are *less than* the DR2_MX1DOS and NTE_SINGLE DOSE values. The system passes the order and continues screening.

5. Display the DRCM Maximum Lifetime Dose (**DR2_MXLIFD**) value:

- a. If DR2_MXLIFD equals 0, the maximum lifetime dose is unavailable.
 - b. If DR2_MXLIFD does not equal 0, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).
- In this example, the maximum lifetime dose equals 0 and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's DRCM Renal Impairment Assessment Indicator ([DR2_RENIMP](#)):
 - a. If DR2_RENIMP equals N, the order is acceptable and does not produce an alert.
 - b. If DR2_RENIMP equals Y, alert the user that the dose may need to be adjusted for renal impairment ([sample message 5](#)).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for renal impairment and begins creatinine clearance checking.
2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold ([DR2_CRCLTH](#)) if necessary:
 - a. If DR2_CRCLTH equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
 - b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
 - c. If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
 - d. If the patient's creatinine clearance is *greater than* DR2_CRCLTH, continue screening the order without displaying any additional messages.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_CRCLTH	DR2_CRCLU	Description	Patient's Creatinine Clearance
50	01	ML/MIN	---

Concatenate the DR2_CRCLTH value of 50 with the DR2_CRCLU description of ML/MIN to display the creatinine clearance threshold of 50 ML/MIN to the user.

In this example, the patient's creatinine clearance is *unavailable*. The system alerts the user that a drug dosage adjustment should be considered and checks the order to determine if a hepatic impairment adjustment is needed.

3. Select the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)):
 - a. If DR2_HEPIMP equals N, the order is acceptable and does not produce an alert.
 - b. If DR2_HEPIMP equals Y, alert the user that the dose may need to be adjusted for hepatic

impairment ([sample message 7](#)).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for hepatic impairment and checks the display availability of the elimination half-life values.

4. Display the DRCM Low Elimination Half-Life ([DR2_THAFLO](#)) and DRCM High Elimination Half-Life ([DR2_THAFHI](#)) range (or value):

- a. If DR2_THAFLO and DR2_THAFHI *equal 0*, the elimination half-life range (or value) is unavailable.
- b. If DR2_THAFLO or DR2_THAFHI *does not equal 0*, display the elimination half-life range (or value) for the patient. ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description
18	170	02	HOURS

In this example, the elimination half-life for the order *does not equal 0*. The system displays the elimination half-life range as 18 hours - 170 hours.

Example - Dose Range Checking of Non-patient Parameters

A patient has a prescription for a single dose (DR2_DOSTPI 07) of palivizumab (Clinical Formulation ID [GCN_SEQNO] 59246) 100 mg/mL vial intramuscular (DR2_RT 040) 15 mg/kg once per day. No reason for use is supplied. The patient is 1 years old (365 days) and weighs 22 pounds (10 kg).

See the [Generating DRCM Warning Messages](#) application for more information on the sample messages referred to in this example.

Part 1: Collect Dosage Range Check Data

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

GCN_SEQNO	59246
DR2_RT	040
DR2_DOSTPI	02
DR2_LOAGED	0
DR2_HIAGED	1094
DXID	4892

2. Select the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.
In this example, DOSING_AGE_SOURCE_ID equals 3, indicating that this supporting reference may not be specific to the given age group.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):
 - a. If the prescribed frequency is equal to either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* DR2_LOFREQ, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug ([sample message 8](#)).
 - c. If the prescribed frequency is *greater than* DR2_HIFREQ, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug ([sample message 9](#)).

DR2_LOFREQ	DR2_HIFREQ	Prescribed Frequency
1	1	1 per day

In this example, the prescribed frequency of 1 per day *equals* the DR2_LOFREQ and DR2_HIFREQ values of 1. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
1	1	1 day

In this example, the prescribed frequency is *equal to* the DR2_LODOTX and DR2_HIDOTX values of 1 days. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):
 - a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is

less than the recommended low daily dose for the drug ([sample message 1](#)).

- c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	13.5
DR2_LODOSU	02
UNITS_DESC	MG/KG/DAY
DR2_HIDOSD	16.5
DR2_HIDOSU	02
UNITS_DESC	MG/KG/DAY
Prescribed dose per day	15 mg/kg

Since the retrieved and prescribed units are given in mg/kg/day, it is necessary to calculate the units of measure. See [Converting Units During Dosage Range Checking](#) for more information.

The following table shows the data after the conversion.

DR2_LODOSD	135
DR2_LODOSU	01
UNITS_DESC	MG/DAY
DR2_HIDOSD	135
DR2_HIDOSU	01
UNITS_DESC	MG/DAY
Prescribed dose per day	150 mg/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/DAY	mg/day	milligram per day

The prescribed daily dose is *less than* the DR2_LODOSD value of 135 mg/day. The system passes the order and continues screening.

- 4. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount per Single Dose ([DR2_MX1DOS](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):

- a. If the prescribed single dose is *equal to or less than* DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
- b. If the prescribed single dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
16.5	03	16.5	03	15 mg/kg

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG	mg	milligram

In this example, the prescribed dose of 15 mg/kg is *less than* the DR2_MX1DOS and NTE_SINGLE_DOSE values of 16.5 mg/kg. The system passes the order and continues screening.

5. Display the DRCM Maximum Lifetime Dose (DR2_MXLIFD) value:

- a. If DR2_MXLIFD *equals 0*, the maximum lifetime dose is unavailable.
 - b. If DR2_MXLIFD *does not equal 0*, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).
- In this example, the maximum lifetime dose *equals 0* and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the DRCM Renal Impairment Assessment Indicator (DR2_RENIMP):

- a. If DR2_RENIMP *equals N*, the order is acceptable and does not produce an alert.
- b. If DR2_RENIMP *equals Y*, alert the user that the dose may need to be adjusted for renal impairment ([sample message 5](#)).

This example has a negative return. The system passes the order and begins creatinine clearance checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold (DR2_CRCLTH) if necessary:

- a. If DR2_CRCLTH *equals 0*, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
- c. If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug

dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).

- d. If the patient's creatinine clearance is *greater than* DR2_CRCLTH, continue screening the order without displaying any additional messages.

In this example, the patient's creatinine clearance *equals* 0. The system alerts the user that creatinine clearance threshold checking is unavailable and checks the order to determine if a hepatic impairment adjustment is needed.

3. Select the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)) for the prescribed medication:

- a. If the value equals *N*, the order is acceptable and does not produce an alert.
- b. If the value equals *Y*, alert the user that the dose may need to be adjusted for hepatic impairment ([sample message 7](#)).

This example has a *negative* return. The system passes the order and checks the display availability of the elimination half-life values.

4. Display the DRCM Low Elimination Half-Life ([DR2_THAFLO](#)) and DRCM High Elimination Half-Life ([DR2_THAFHI](#)) range (or value):

- a. If DR2_THAFLO and DR2_THAFHI *equals* 0, the elimination half-life range (or value) is unavailable.
- b. If DR2_THAFLO or DR2_THAFHI *does not equal* 0, display the elimination half-life range (or value) for the patient ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description
18	20	03	Days

In this example, the elimination half-life for the order *does not equal* 0 and is available for display. The system displays the elimination half-life range as 18 days - 20 days.

Example - Dose Range Checking of a Continuous Infusion

A patient has a prescription for a maintenance dose (DR2_DOSTPI 02) of Ondansetron HCL 4 mg/2 ml Vial (Clinical Formulation ID [GCN_SEQNO] 61716) 10 mg/h continuous infusion (DR2_RT 006) for 36 hours every 21 days. The reason for use is not available (DXID 4892). The patient is 8 years old (2,920 days) and weighs 55 lbs (25 kg).

- i Please note that DRCM does not screen administration information or course of treatment information often included within infusion orders. For example, the “every 21 days” course of treatment requirement in the order above.

See the [Generating DRCM Warning Messages](#) application for more information on the sample warning messages referred to in this example.

Part 1: Collect Dosage Range Check Data

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).

GCN_SEQNO	61716
DR2_RT	006
DR2_DOSTPI	02
DR2_LOAGED	365
DR2_HIAGED	6569
DXID	4892

2. Select the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:

- a. Display the data source information to the end-user.
- b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that this supporting reference may not be specific to the given age group.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

Because DRCM duration of therapy is expressed in full days, this example rounds up the prescribed duration of 36 hours (1.5 days) and screens the duration at 2 days.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
1	0	2 days

In this example, the prescribed duration of therapy is *greater than* the DR2_HIDOTX value of 0 days. The system compares the recommended maximum duration to the prescribed duration.

2. Compare the prescribed duration of therapy to DRCM Maximum Duration of Therapy ([DR2_MXDOTH](#)):
 - a. If DR2_MXDOTH equals 0, the maximum duration of therapy has no limit, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *equal to* or *less than* DR2_MXDOTH, alert the user that the prescribed duration exceeds the recommended high duration for the drug but less than the recommended maximum duration ([sample message 12](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_MXDOTH, alert the user that the prescribed duration exceeds the recommended maximum duration for the drug ([sample message 13](#)).

DR2_MXDOTH	Prescribed duration
0	2 days

In this example, DR2_MXDOTH equals 0, indicating that the maximum duration of therapy has no limit. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):

- a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.
- b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is less than the recommended low daily dose for the drug ([sample message 1](#)).
- c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	1
DR2_LODOSU	17
UNITS_DESC	MG/H
DR2_HIDOSD	1
DR2_HIDOSU	17
UNITS_DESC	MG/H
Prescribed dose per day	10 mg/h

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSDO_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/H	mg/hour	milligram per hour

In this example, the prescribed dose of 10 mg/h is *greater than* the DR2_HIDOSD value of 1 mg/h. The system compares the prescribed daily dose to the recommended maximum daily dose.

4. Compare the prescribed daily dose (convert units if necessary) to DRCM Maximum Dose per Day ([DR2_MXDOSD](#)):

- a. If the prescribed daily dose is *equal to* or *less than* DR2_MXDOSD, alert the user that the prescribed dose exceeds the recommended high daily dose for the drug but less than the recommended maximum daily dose ([sample message 2](#)).
- b. If the prescribed daily dose is *greater than* DR2_MXDOSD, alert the user that the prescribed dose exceeds the recommended maximum daily dose for the drug ([sample message 3](#)).

The DRCM Dose Units Code Description (**UNITS_DESC**) column is from the **DRCM Unit Description Table** (RDRCUND0_UNITS_DESC).

DR2_MXDOSD	DR2_MXDOSU	UNITS_DESC	Prescribed Dose per Day
1.333	18	MG/KG/H	10 mg/h

Since the retrieved units are given in mg/kg/hour and the prescription is written in mg/hour, it is necessary to convert the units of measure. See [Converting Units During Dosage Range Checking](#) for more information about converting units.

DR2_MXDOSD	UNITS_DESC	Prescribed Dose per Day
33.325	MG/H	10 mg/h

In this example, the prescribed daily dose of 10 mg/h is *less than* the DR2_MXDOSD value of 33.325 mg/h. The system alerts the user that the prescribed daily dose exceeds the recommended high daily dose but is less than the recommended maximum daily dose for the drug and continues screening the order.

5. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount per Single Dose (**DR2_MX1DOS**) and the Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**):
 - a. If the prescribed single dose is *equal to* or *less than* DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed single dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).

The DRCM Dose Units Code Description (**UNITS_DESC**) column is from the **DRCM Unit Description Table** (RDRCUND0_UNITS_DESC).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
1.333	18	1.333	18	10 mg/h

Since the retrieved units are given in mg/kg/hour and the prescription is written in mg/h, it is necessary to convert the units of measure. See [Converting Units During Dosage Range Checking](#) for more information about converting units.

DR2_MXDOSD	NTE_SINGLE_DOSE	UNITS_DESC	Prescribed Dose per Day
33.325	33.325	MG/H	10 mg/h

In this example, the prescribed dose of 10 mg/h is *less than* the DR2_MX1DOS and NTE_SINGLE_DOSE value of 33.325 mg/hour. The system passes the order and continues

screening.

6. Display the DRCM Maximum Lifetime Dose ([DR2_MXLIFD](#)) value:

- If DR2_MXLIFD equals 0, the maximum lifetime dose is unavailable.
- If DR2_MXLIFD does not equal 0, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).

In this example, the maximum lifetime dose equals 0 and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's DRCM Renal Impairment Assessment Indicator ([DR2_RENIMP](#)):

- If DR2_RENIMP equals N, the order is acceptable and does not produce an alert.
- If DR2_RENIMP equals Y, alert the user that the dose may need to be adjusted for renal impairment ([sample message 5](#)).

This example has a *negative* return. The system passes the order and begins creatinine clearance screening.

2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold ([DR2_CRCLTH](#)) if necessary:

- If DR2_CRCLTH equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
- If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
- If the patient's creatinine clearance is *greater than* DR2_CRCLTH, continue screening the order without displaying any additional messages.

DR2_CRCLTH	DR2_CRCLU	Patient's Creatinine Clearance
0	---	---

In this example, DR2_CRCLTH equals 0. The system alerts the user that creatinine clearance threshold checking is unavailable and checks the order to determine if a hepatic impairment adjustment is needed.

3. Select the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)):

- If DR2_HEPIMP equals N, the order is acceptable and does not produce an alert.
- If DR2_HEPIMP equals Y, alert the user that the dose may need to be adjusted for hepatic impairment ([sample message 7](#)).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for hepatic impairment and checks the display availability of the elimination half-life values.

4. Display the DRCM Low Elimination Half-Life (**DR2_THAFLO**) and DRCM High Elimination Half-Life (**DR2_THAFHI**) range (or value):
 - a. If DR2_THAFLO and DR2_THAFHI *equal 0*, the elimination half-life range (or value) is unavailable.
 - b. If DR2_THAFLO or DR2_THAFHI *does not equal 0*, display the elimination half-life range (or value) for the patient. ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description
2.5	6.2	02	Hour

In this example, the elimination half-life for the order *does not equal 0*. The system displays the elimination half-life range as 2.5 hour - 6.2 hour and checks the display availability of the maximum lifetime dose value.

Example - Dose Range Checking of an Intermittent Infusion

A patient has a prescription for a maintenance dose (DR2_DOSTPI 02) of Cefazolin 1 GM Vial (Clinical Formulation ID [GCN_SEQNO] 9060) intravenous (DR2_RT 052) 1 G over 30 minutes every 8 hours times 3 doses. The reason for use is not available (DXID 4892 [default screening record]). The patient is 30 years old (10,950 days) and weighs 130 lbs (59 kg).

- i Please note that DRCM does not screen administration information or course of treatment information often included within infusion orders. For example, the “over 30 minutes” administration information requirement in the order above.

See the [Generating DRCM Warning Messages](#) application for more information on the sample warning messages referred to in this example.

Part 1: Collect Dosage Range Check Data

1. Select records from the DRCM Neonatal and Adult Master Table (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

GCN_SEQNO	9060
DR2_RT	052
DR2_DOSTPI	02
DR2_LOAGED	6570
DR2_HIAGED	23724
DXID	4892

2. Select the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:

- a. Display the data source information to the end-user.
- b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that this supporting reference may not be specific to the given age group.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):
 - a. If the prescribed frequency is equal to either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert
 - b. If the prescribed frequency is *less than* DR2_LOFREQ, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug ([sample message 8](#)).
 - c. If the prescribed frequency is *greater than* DR2_HIFREQ, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug ([sample message 9](#)).

DR2_LOFREQ	DR2_HIFREQ	Prescribed Frequency
2	4	2 per day

In this example, the prescribed frequency of 3 per day is *within* the DR2_LOFREQ and DR2_HIFREQ value range of 2 to 4 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
1	14	1 day (24 hours)

In this example, the prescribed duration of therapy is *equal to* the DR2_LODOTX value of 1 day. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day (**DR2_LODOSD**) and DRCM High Dose per Day (**DR2_HIDOSD**):
 - a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is less than the recommended low daily dose for the drug ([sample message 1](#)).
 - c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description (**UNITS_DESC**) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	750
DR2_LODOSU	01
UNITS_DESC	MG/DAY
DR2_HIDOSD	8000
DR2_HIDOSU	01
UNITS_DESC	MG/DAY
Prescribed dose per day	3 g/day

Since the retrieved units are given in mg/day and the prescription is written in g/day, it is necessary to convert the units of measure. See [Converting Units During Dosage Range Checking](#) for more information about converting units.

The following table shows the data after the conversion.

DR2_LODOSD	0.75
DR2_LODOSU	51
UNITS_DESC	G/DAY
DR2_HIDOSD	8
DR2_HIDOSU	51
UNITS_DESC	G/DAY
Prescribed dose per day	3 g/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
G/DAY	gram/day	gram per day

In this example, the prescribed daily dose of 3 g/day is *within* the DR2_LODOSD and DR2_HIDOSD value range of 0.75 g/day to 8 g/day. The system passes the order and continues screening.

4. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount per Single Dose ([DR2_MX1DOS](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):

- If the prescribed single dose is *equal to* or *less than* DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
- If the prescribed single dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
3	29	3	29	1 g

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
G	gram	gram

In this example, the prescribed dose of 1 g is *less than* the DR2_MX1DOS and NTE_SINGLE_DOSE value of 3 g. The system passes the order and continues screening.

5. Display the DRCM Maximum Lifetime Dose ([DR2_MXLIFD](#)) value:

- If DR2_MXLIFD *equals* 0, the maximum lifetime dose is unavailable.
- If DR2_MXLIFD *does not equal* 0, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).

In this example, the maximum lifetime dose *equals* 0 and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's DRCM Renal Impairment Assessment Indicator ([DR2_RENIMP](#)):
 - If DR2_RENIMP equals N, the order is acceptable and does not produce an alert.
 - If DR2_RENIMP equals Y, alert the user that the dose may need to be adjusted for renal impairment

(sample message 5).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for renal impairment and begins creatinine clearance threshold checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold ([DR2_CRCLTH](#)) if necessary:
 - a. If DR2_CRCLTH equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
 - b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
 - c. If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
 - d. If the patient's creatinine clearance is *greater than* DR2_CRCLTH, continue screening the order without displaying any additional messages.

DR2_CRCLTH	DR2_CRCLU	Description	Patient's Creatinine Clearance
90	01	ML/MIN	---

Concatenate the DR2_CRCLTH value of 90 with the DR2_CRCLU description ML/MIN to display the creatinine clearance threshold of 90 ML/MIN to the user.

In this example, the patient's creatinine clearance is *unavailable*. The system alerts the user that a drug dosage adjustment should be considered and checks the order to determine if a hepatic impairment adjustment is needed.

3. Select the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)):
 - a. If DR2_HEPIMP equals N, the order is acceptable and does not produce an alert.
 - b. If DR2_HEPIMP equals Y, alert the user that the dose may need to be adjusted for hepatic impairment ([sample message 7](#)).

This example has a *negative* return. The system passes the order and checks the display availability of the elimination half-life values.
4. Display the DRCM Low Elimination Half-Life ([DR2_THAFLO](#)) and DRCM High Elimination Half-Life ([DR2_THAFHI](#)) range (or value):
 - a. If DR2_THAFLO and DR2_THAFHI equal 0, the elimination half-life range (or value) is unavailable.
 - b. If DR2_THAFLO or DR2_THAFHI does not equal 0, display the elimination half-life range (or value) for the patient. ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description

1.2	2.5	02	Hours
-----	-----	----	-------

In this example, the elimination half-life for the order *does not equal 0*. The system displays the elimination half-life range of 1.2 hours to 2.5 hours.

Converting Units During Dosage Range Checking

This application converts one unit of measure to another. You should carry out the steps in this application if the prescribed unit of measure differs from the unit of measure in the [DRCM Neonatal and Adult Master Table](#) during the Dosage Range Checking application.

This application is broken into two parts. The decision process involved in the two parts:

- Part 1—converts weight-based or surface-area-based dosing information if necessary (for example, converts from MG/KG to MG).
- Part 2—compares dosing information to the prescribed units of measure then converts dosing information to the prescribed units of measure.

The [Converting Units During Dosage Range Checking](#) example following the application provides an illustration on how to convert units during Dosage Range Checking:

The following application assumes familiarity with the various drug concepts and their identifiers and how to access clinical information. This application begins at the Clinical Formulation level with the Clinical Formulation ID ([GCN_SEQNO](#)). See [Multiple Access Points \(MAPs\)](#) for more information.

Part 1: Convert weight-based or surface-area-based dosing information

1. Select the following columns from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR):

- a. Low Dose Per Day ([DR2_LODOSD](#))
- b. Low Dose Per Day Units Code ([DR2_LODOSU](#))
- c. High Dose Per Day ([DR2_HIDOSD](#))
- d. High Dose Per Day Units Code ([DR2_HIDOSU](#))
- e. Maximum Dose Per Day ([DR2_MXDOSD](#))
- f. Maximum Dose Per Day Units Code ([DR2_MXDOSU](#))
- g. Maximum Amount Per Single Dose ([DR2_MX1DOS](#))
- h. Maximum Amount Per Single Dose Units Code ([DR2_MX1DSU](#))
- i. Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#))
- j. Not-to-Exceed Amount Per Single Dose Units Code ([NTE_SINGLE_DOSE_UNIT_CODE](#))
- k. Maximum Lifetime Dose ([DR2_MXLIFD](#))
- l. Maximum Lifetime Dose Units Code ([DR2_MXLIFU](#))

where:

- a. the Clinical Formulation ID ([GCN_SEQNO](#)) column equals the GCN_SEQNO of the prescribed medication, and
- b. the DRCM Route of Administration Code ([DR2_UNITS](#)) column equals the route of administration

- for the prescribed product, and
- c. the DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - d. the DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - e. the FML Disease Indicator (**DXID**) column equals the DXID of the patient condition to be treated with this prescription, and
 - f. the DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type of the prescribed medication.
2. Select the DR2_UNITS column from the **DRCM Unit Description Table** (RDRCUND0_UNITS_DESC) using the various unit code column values from the previous step to retrieve each dose's Units Required Calculation Type Code (**UNITS_CTYP**).
 3. Depending on the value of the UNITS_CTYP for each dosing value, perform the appropriate action:
 - a. If the UNITS_CTYP column equals 0 — Neither weight-based nor surface-area-based conversion is necessary. Skip the remaining steps in Part 1 of this application, use the dosing values found in step 1, and proceed to Part 2.
 - b. If the UNITS_CTYP column equals 1 — Multiply the value found in the dose column by the patient's weight.
 - c. If the UNITS_CTYP column equals 2 — Multiply the value found in the dose column by the patient's body surface area.
 4. Continue on to Part 2 using the converted values.

Part 2: Compares Dosing Information to the Prescribed Units of Measure Then Converts Dosing information to the Prescribed Units of Measure

1. Select the DR2_UNITS column of the RDRCUND0_UNITS_DESC table using the various unit code column values from step 1 of Part 1 to retrieve each dose's Results Unit Code (**UNITS_RUI**) value. The descriptions for these values appear in the RDRCUND0_UNITS_DESC table.
2. Query the Dose Units Code Description (**UNITS_DESC**) column of the RDRCUND0_UNITS_DESC table using each prescribed dose unit of measure to find their DR2_UNITS values.



The information in the DRCM Dose Units Code Description (**UNITS_DESC**) column might include abbreviations considered inappropriate by the Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To retrieve the corresponding TJC-compliant unit descriptions for the given unit in the **UNITS_DESC** column, query the **Units Description Table** (RUNITSD0_UNITS_DESC).

3. Compare the DR2_UNITS values from step 2 to the UNITS_RUI values found in step 1 to see if the DRCM

units of measure match the prescribed units of measure.

- a. If all values match, no unit conversion is necessary for the given data. Skip the remaining steps of this application and continue the dosage range check operation.
 - b. If any values do not match, a unit conversion is necessary for dosage range checking. Continue on to step 4.
4. Query the Prescribed Unit Indicator (**DCNV_PUI**) and UNITS_RUI columns of the **DRCM Unit Conversion Table** (RDRCCVU0_UNITS_CONVERSION). Use the values from step 1 to query the DCNV_PUI column, and use the values from step 2 to query the UNITS_RUI column.
- Retrieve their Units Math Indicator (**DCNV_MTHI**) and Units Conversion Factor (**DCNV_CNVF**) columns.
5. Perform the conversions indicated by the previous step on the dosing values found in Part 1.

Example—Converting Units During Dosage Range Checking

A 25-day-old patient who weighs 12 pounds (5.45 kg) has a prescription for a maintenance dose of amoxicillin oral suspension (Clinical Formulation ID [GCN_SEQNO] 8997) 0.125 g oral twice daily. No reason for use is supplied. The reason for using an unorthodox dosage of 0.125 g for this example will become apparent in Part 2 of the application.

Part 1: Convert weight-based or surface-area-based dosing information, if necessary

1. Select the following columns from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR):
 - a. Low Dose Per Day (**DR2_LODOSD**)
 - b. Low Dose Per Day Units Code (**DR2_LODOSU**)
 - c. High Dose Per Day (**DR2_HIDOSD**)
 - d. High Dose Per Day Units Code (**DR2_HIDOSU**)
 - e. Maximum Dose Per Day (**DR2_MXDOSD**)
 - f. Maximum Dose Per Day Units Code (**DR2_MXDOSU**)
 - g. Maximum Amount Per Single Dose (**DR2_MX1DOS**)
 - h. Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**)
 - i. Not-to-Exceed Amount Per Single Dose Units Code (**NTE_SINGLE_DOSE_UNIT_CODE**)
 - j. Maximum Amount Per Single Dose Units Code (**DR2_MX1DSU**)
 - k. Maximum Lifetime Dose (**DR2_MXLIFD**)
 - l. Maximum Lifetime Dose Units Code (**DR2_MXLIFU**)

where:

 - a. the Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID value of (GCN_SEQNO) 8997 (Amoxicillin 0.125 g), and

- b. the DRCM Route of Administration Indicator (**DR2_RT**) column equals DR2_RT 064 (Oral), and
- c. the DRCM Low Age in Days (**DR2_LOAGED**) column is 0, which less than 25 days, and
- d. the DRCM High Age in Days (**DR2_HIAGED**) column is 29, which is greater than 25 days, and
- e. the FML Disease Indicator (**DXID**) column equals DXID = 4892 (default screening record), and
- f. the DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals DR2_DOSTPI 02 (Maintenance).

GCN_SEQNO	8997
DR2_LODOSD	20
DR2_LODOSU	02
DR2_HIDOSD	30
DR2_HIDOSU	02
DR2_MXDOSD	30
DR2_MXDOSU	02
DR2_MX1DOS	15
DR2_MX1DOU	03
NTE_SINGLE_DOSE	1000
NTE_SINGLE_DOSE_UNIT_CODE	28
DR2_MXLIFD	0
DR2_MXLIFU	

2. Select the DRCM Units Code (**DR2_UNITS**) column from the **DRCM Unit Description Table** (RDRCUND0_UNITS_DESC) using the various unit code column values from the previous step to retrieve each dose's Units Required Calculation Type Code (**UNITS_CTYP**) column.

Note that DR2_MXLIFU has no value and therefore has no corresponding UNITS_CTYP value. Also, the NTE_SINGLE_DOSE_UNIT_CODE has a non-patient parameter unit and therefore does not require conversion.

Unit Column	DR2_UNITS	UNITS_DESC	UNITS_CTYP
DR2_LODOSU	02	MG/KG/DAY	1
DR2_HIDOSU	02	MG/KG/DAY	1
DR2_MXDOSU	02	MG/KG/DAY	1
DR2_MX1DOU	03	MG/KG	1
NTE_SINGLE_DOSE_UNIT_CODE	28	MG	0

DR2_MXLIFU
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3. Depending on the value of the UNITS_CTYP for each dosing value, perform the appropriate action:

- If the UNITS_CTYP column equals 0 — Neither weight-based nor surface-area-based conversion is necessary. Skip the remaining steps in Part 1 of this application, use the dosing values found in step 1, and proceed to Part 2.
- If the UNITS_CTYP column equals 1 — Multiply the value found in the dose column by the patient's weight.
- If the UNITS_CTYP column equals 2 — Multiply the value found in the dose column by the patient's body surface area.

In this example, four dosing values have a UNITS_CTYP value of 1. Therefore, multiply the values found in the **DRCM Neonatal and Adult Master Table** by the patient's weight to arrive at a converted unit of measure.

Low Dose Per Day	$5.45\text{KG} \times 20 \frac{\text{MG}}{\text{KG} \times \text{Day}} = 109$
High Dose Per Day	$5.45\text{KG} \times 30 \frac{\text{MG}}{\text{KG} \times \text{Day}} = 163.$
Maximum Dose Per Day	$5.45\text{KG} \times 30 \frac{\text{MG}}{\text{KG} \times \text{Day}} = 163.5 \frac{\text{MG}}{\text{Day}}$
Maximum Amount Per Single Dose	$5.45\text{KG} \times 15 \frac{\text{MG}}{\text{KG}} = 81.75\text{MG}$

4. Continue on to Part 2 using the converted values.

Part 2: Convert dosing information to the prescribed units of measure, if necessary

- Select the DR2_UNITS column of the RDRCUND0_UNITS_DESC table using the various unit code column values from step 1 of Part 1 to retrieve each dose's Results Unit Code (**UNITS_RUI**) value. The descriptions for these values appear in the RDRCUND0_UNITS_DESC table and appear below for context.

Unit Column	DR2_UNITS	UNITS_RUI	UNITS_DESC
DR2_LODOSU	02	01	MG/DAY
DR2_HIDOSU	02	01	MG/DAY
DR2_MXDOSU	02	01	MG/DAY
DR2_MX1DOU	03	28	MG
NTE_SINGLE_DOSE_UNIT_CODE	28	28	MG
DR2_MXLIFU	

2. Select the Dose Units Code Description (**UNITS_DESC**) column of the RDRCUND0_UNITS_DESC table using each prescribed dose unit of measure to find their DR2_UNITS values.

This example has two different prescription units of measure: 0.125G is expressed in grams (G), and 0.125G twice daily is expressed in grams/day (G/DAY).

UNITS_DESC	DR2_UNITS
G	29
G/DAY	51

i The information in the DRCM Dose Units Code Description (**UNITS_DESC**) column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To retrieve the corresponding TJC-compliant unit descriptions for the given unit in the UNITS_DESC column, query the [Units Description Table \(RUNITSD0_UNITS_DESC\)](#).

3. Compare the DR2_UNITS values from step 2 to the UNITS_RUI values found in step 1 to see if the DRCM units of measure match the prescribed units of measure.

- If all values match, no unit conversion is necessary for the given data. Skip the remaining steps of this application and continue the dosage range check operation.
- If any values do not match, a unit conversion is necessary for dosage range checking. Continue on to step 4.

In the example case the prescribed values of 29 and 51 do not match any of the UNITS_RUI values from step 1, so a unit conversion is required before dosage range checking can continue.

UNITS_RUI		DR2_UNITS
01 (MG/DAY)	equal to? → 29 (G)	NO
28 (MG)	equal to? → 29 (G)	NO
01 (MG/DAY)	equal to? → 51 (G/DAY)	NO
28 (MG)	equal to? → 51 (G/DAY)	NO

4. Select the Prescribed Unit Indicator (**DCNV_PUI**) and UNITS_RUI columns of the **DRCM Unit Conversion Table** (RDRCCVU0_UNITS_CONVERSION). Use the values from step 1 to query the DCNV_PUI column, and use the values from step 2 to query the UNITS_RUI column.

Retrieve their Units Math Indicator (**DCNV_MTHI**) and Units Conversion Factor (**DCNV_CNVF**) columns.

The extra table below provides descriptions to illustrate the way this table works.

DCNV_PUI	UNITS_RUI	DCNV_MTHI	DCNV_CNVF
01	51	2	1000
28	29	2	1000
Input Unit	Resulting Unit	Math Operation	Factor of Operation
Milligrams/Day (MG/DAY)	Grams/Day (G/DAY)	Divide	1000
Milligrams (MG)	Grams (G)	Divide	1000

5. Perform the conversions indicated by the previous step on the dosing values found in Part 1.

Low Dose Per Day	$109 \frac{MG}{Day} \times \frac{1 G}{1000 MG} = 0.109 \frac{G}{Day}$
High Dose Per Day	$163.5 \frac{MG}{Day} \times \frac{1 G}{1000 MG} = 0.1635 \frac{G}{Day}$
Maximum Dose Per Day	$163.5 \frac{MG}{Day} \times \frac{1 G}{1000 MG} = 0.1635 \frac{G}{Day}$

Maximum Amount Per Single Dose	$81.75\text{MG} \times \frac{1\text{ G}}{1000\text{ MG}} = 0.08175\text{ G}$
Not-to-Exceed Amount Per Single Dose	$1000\text{MG} \times \frac{1\text{ G}}{1000\text{ MG}} = 1\text{G}$

Performing Dosage Range Checking Using a DxID or ICD Code

For this application, refer to the FDB Medical Lexicon DxID and ICD Code Search Tables to perform dosage range checking that is specific to a particular diagnosis or disease state. Applying these examples are dependent upon the following:

- Familiarity with the [FDB Medical Lexicon™ \(FML™\) 2.0](#) and the Disease Identifier (DxID).
- Assignment of a DxID or ICD Code to a given disease state.

Part 1: Retrieve Related DxIDs

A patient with status epilepticus has a prescription for a single dose (DR2_DOSTPI 07) of Diazepam 5 mg/mL (Clinical Formulation ID [GCN_SEQNO] 3761) 0.75 mg intravenous (DR2_RT 052). The patient is 10 days old and weighs 1,500 grams (1.5 kg). The gestational age at birth was 29 weeks.

This section consists of two subparts and describes how to retrieve related DxIDs using either an ICD Code or a DxID. When following the application, follow instruction for A or B, depending on which disease identifier (DxID or ICD Code) being used to retrieve related DxIDs. Do not perform both. For example, if using an ICD Code to retrieve related DxIDs, perform Part 1A, then continue to Part 2.

Part 1A: Using an ICD Code to Retrieve Related DxIDs

- Given the ICD Code, query the [FML ICD Search Table](#) (RFMLISR1_ICD_SEARCH) for FML Related DxIDs ([RELATED_RXID](#)) and FML Navigation Codes ([FML_NAV_CODE](#)), specifying the following:
 - The ICD Code for the Search ICD Code ([SEARCH_ICD_CD](#)) column.
 - **04** for the FML Clinical Module Code ([FML_CLIN_CODE](#)) column, which specifies the query is for the Dosage Range Check Module.

The following table shows an example of retrieved data:

SEARCH_ICD_CD	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
345.3	1099	04	01
345.3	1105	04	03
345.3	3053	04	03

Results with [FML_NAV_CODE](#) 01 indicate the [RELATED_RXID](#) is equal. In this example, one [RELATED_RXID](#) is returned that is rated equal. In this example the patient has been diagnosed with Status Epilepticus and RxID 1099 is a match. Refer to [FDB Medical Lexicon™ \(FML™\) 2.0](#) for information on accessing RxID descriptions.

- Query the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) and retrieve all records associated to the prescribed Clinical Formulation ID ([GCN_SEQNO](#)) and the [RELATED_RXID](#) rated equal. In this example, one record is returned.

GCN_SEQNO	DXID
3761	1099

3. Depending on the query results, do one of the following:
 - If records are retrieved using the DxID rated equal, as they are in this example, continue to Collect Dosage Range Check Data for more information about retrieving the appropriate record for dosage range checking.
 - If no records are retrieved using the DxID rated equal, continue to Step 4.
4. If no records are retrieved using the DxID rated equal, query the RDRCNMA1_MSTR table for all records associated to the prescribed Clinical Formulation ID (GCN_SEQNO) and the RELATED_DxIDs rated broader (FML_NAV_CODE **02**), narrower (FML_NAV_CODE **03**), and related (FML_NAV_CODE **04**).
5. Depending on the query results, do one of the following:
 - If records are retrieved using DxIDs rated broader and/or narrower, continue to Collect Dosage Range Check Data for more information about retrieving the appropriate record for dosage range checking.
Preface all DRCM message text using records retrieved with DxIDs rated broader, narrower, or related with the following statement: “Dosing range for [**Dose ICD Code**] is not available. Dosing range information for the associated term [**Related DxID name**] has been used.”
 - If no records are retrieved for DxIDs rated broader and/or narrower, continue to Step 6.
6. Query the RDRCNMA1_MSTR table and retrieve all records associated to the prescribed Clinical Formulation ID (GCN_SEQNO) and the default screening record DxID of 4892. Continue to Collect Dosage Range Check Data for more information about retrieving the appropriate record for dosage range checking.
Preface all DRCM message text using records retrieved with the default screening record DxID of 4892 with the following statement: “Dosing range for [**Dose ICD Code**] is not available. Dosing range information for the default screening record DxID of 4892 has been used.”

Part 1B: Using a DxID to Retrieve Related DxIDs

1. Given the DxID, query the **FML Disease Identifier (DxID) Search Table** (RFMLDSR0_RXID_SEARCH) for RELATED_RXIDs and FML_NAV_CODES, specifying the following:
 - The DxID for the SEARCH_RXID column.
 - **04** for the FML_CLIN_CODE column, which specifies the query is for DRCM. The following table shows an example of retrieved data:

SEARCH_RXID	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
1099	1099	04	01

Results with FML_NAV_CODE **01** indicate the RELATED_RXID is equal. In this example, one RELATED_RXID is returned that is rated equal. In this example, the patient has been diagnosed with status epilepticus and DxID 1099 has the RXID_DESC_56 of Status Epilepticus (refer to **FDB Medical Lexicon™ (FML™) 2.0** for information on accessing RxID descriptions) which matches the scenario patient's reason for use.

2. Query the RNEOMMA1_MSTR table and retrieve all records associated to the prescribed Clinical Formulation ID (GCN_SEQNO) and the RELATED_DxID rated equal.

GCN_SEQNO	DXID
3761	1099

3. Depending on the query results, do one of the following:

- If records are retrieved using the DxID rated equal, as they are in this example, continue to Collect Dosage Range Check Data for more information about retrieving the appropriate record for dosage range checking.
- If no records are retrieved using the DxID rated equal, continue to Step 4.

4. If no records are retrieved using the DxID rated equal, query the RDRCNMA1_MSTR table for all records associated to the prescribed Clinical Formulation ID (GCN_SEQNO) and the RELATED_RXIDs rated broader (FML_NAV_CODE **02**) and/or narrower (FML_NAV_CODE **03**).

5. Depending on the query results, do one of the following:

- If records are retrieved using RxIDs rated broader and/or narrower, continue to Collect Dosage Range Check Data for more information about retrieving the appropriate record for dosage range checking.

Preface all DRCM message text using records retrieved with RxIDs rated broader and/or narrower with the following statement: “Dosing range for [**Dose RxID name**] is not available. Dosing range information for the associated term [**Related RxID name**] has been used.”

- If no records are retrieved for RxIDs rated broader and/or narrower, continue to Step 6.

6. Query the RDRCNMA1_MSTR table and retrieve all records associated to the prescribed Clinical Formulation ID (GCN_SEQNO) and the default screening record DxID of 4892. Continue to Collect Dosage Range Check Data for more information about retrieving the appropriate record for dosage range checking.

Preface all DRCM message text using records retrieved with the default screening record DxID of 4892 with the following statement: “Dosing range for [**Dose RxID name**] is not available. Dosing range information for the Default Screening Record DxID of 4892 has been used.”

Part 2: Collect Dosage Range Check Data

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. GCN_SEQNO column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and

- d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
- f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

GCN_SEQNO	3761
DR2_RT	052
DR2_DOSTPI	07
DR2_LOAGED	0
DR2_HIAGED	29
DXID	1099

2. Select the Dosing Age Source Identifier (**DOSING_AGE_SOURCE_ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:

- a. Display the data source information to the end-user.
- b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING_AGE_SOURCE_ID equals 3, indicating that this supporting reference may not be specific to the given age.

3. Check the NEOM Weight Required Indicator (**NEOM_WEIGHT_REQ_IND**):

- a. If NEOM_WEIGHT_REQ_IND equals 0, the current weight is not required to select the screening record.
- b. If NEOM_WEIGHT_REQ_IND equals 1, the current weight is required to select the screening record.

In this example, NEOM_WEIGHT_REQ_IND equals 0, indicating that the current weight is not required to select the screening record. The system checks the gestational age at birth required indicator.

4. Check the NEOM Gestational Birth Age Required Indicator (**NEOM_GEST_BIRTH_AGE_REQ_IND**):

- a. If NEOM_GEST_BIRTH_AGE_REQ_IND equals 0, the gestational age at birth is not required to select the screening record.
- b. If NEOM_GEST_BIRTH_AGE_REQ_IND equals 1, the gestational age at birth is required to select the screening record.

In this example, NEOM_GEST_BIRTH_AGE_REQ_IND equals 0 indicating that the gestational age

at birth is not required to select the screening record. The system begins dose range checking using the record retrieved in Part 1.

Part 3: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 2 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):
 - a. If the prescribed frequency is equal to either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* DR2_LOFREQ, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug ([sample message 8](#)).
 - c. If the prescribed frequency is *greater than* DR2_HIFREQ, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug ([sample message 9](#)).

DR2_LOFREQ	DR2_HIFREQ	Prescribed Frequency
1	1	1 per day

In this example, the prescribed frequency of 1 per day is equal to the DR2_LOFREQ and the DR2_HIFREQ values of 1 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):
 - a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the recommended low duration for the drug ([sample message 10](#)).
 - c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
1	1	1 day

In this example, the prescribed duration is *equal* to the DR2_LODOTX and DR2_HIDOTX value of 1 day. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):

- a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.
- b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is less than the recommended low daily dose for the drug ([sample message 1](#)).
- c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the recommended maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	0.1
DR2_LODOSU	02
UNITS_DESC	MG/KG/DAY
DR2_HIDOSD	0.3
DR2_HIDOSU	02
UNITS_DESC	MG/KG/DAY
Prescribed dose per day	0.75 mg/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/DAY	mg/day	milligram per day

In this example, the prescribed dose of 0.75 mg/day is greater than the DR2_HIDOSD value of 0.45 mg/day. The system alerts the user that the prescribed dose is greater than the DR2_HIDOSD value of 0.45 mg/day. The system compares the prescribed daily dose to the recommended maximum daily dose.

4. Compare the prescribed daily dose (convert units if necessary) to DRCM Maximum Dose per Day ([DR2_MXDOSD](#)):
 - a. If the prescribed daily dose is *equal to* or *less than* DR2_MXDOSD, alert the user that the prescribed dose exceeds the recommended high daily dose for the drug but is less than the recommended maximum daily dose ([sample message 2](#)).
 - b. If the prescribed daily dose is *greater than* DR2_MXDOSD, alert the user that the prescribed dose exceeds the recommended maximum daily dose for the drug ([sample message 3](#)).

DR2_MXDOSD	DR2_MXDOSU	Prescribed Single Dose
0.75	02	0.75 mg/day

Since the retrieved units are given in mg/kg/day and the prescription is written in mg/day, it is necessary to convert the units of measure. See [Converting Units During Dosage Range Checking](#) for more information about converting units.

DR2_MXDOSD	DR2_MXDOSU	Prescribed Single Dose
1.125	01	0.75 mg/day

In this example, the prescribed dose of 0.75 mg/day is *less than* the DR2_MXDOSD value of 1.125 mg/day. The system alerts the user that the prescribed dose exceeds the recommended high daily dose for the drug but is less than the recommended maximum daily dose and continues screening.

5. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount Per Single Dose ([DR2_MX1DOS](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):

- a. If the prescribed single dose is *equal to or less than* DR2_MX1DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
- b. If the prescribed individual dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug ([sample message 4a, 4b, or 4c](#)).

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
2	28	2	28	0.75 mg

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG	mg	milligram

In this example, the prescribed single dose of 0.75 mg is less than the DR2_MX1DOS and NTE_SINGLE_DOSE values of 2 mg. The system passes the order and continues screening.

6. Display the DRCM Maximum Lifetime Dose ([DR2_MXLIFD](#)) value:

- a. If DR2_MXLIFD *equals 0*, the maximum lifetime dose is unavailable.
- b. If DR2_MXLIFD *does not equal 0*, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).

In this example, the maximum lifetime dose *equals 0* and is unavailable for display.

Part 4: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's DRCM Renal Impairment Assessment Indicator (**DR2_RENIMP**):
 - a. If DR2_RENIMP equals *N*, the order is acceptable and does not produce an alert.
 - b. If DR2_RENIMP equals *Y*, alert the user that the dose may need to be adjusted for renal impairment ([sample message 5](#)).

This example has a *negative* return. The system passes the order.

2. Display the patient's creatinine clearance (convert units if necessary) and the DRCM Creatinine Clearance Threshold (**DR2_CRCLTH**) if necessary:

- a. If DR2_CRCLTH *equals 0*, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
- c. If the patient's creatinine clearance is less than or equal to DR2_CRCLTH, alert the user that a drug dosage adjustment should be considered ([sample message 6](#) appended to [message 5](#)).
- d. If the patient's creatinine clearance is *greater than* DR2_CRCLTH, continue screening the order without displaying any additional messages.

In this example, the patient's creatinine clearance *equals 0*. The system alerts the user that creatinine clearance threshold checking is unavailable.

3. Check the DRCM Hepatic Impairment Assessment Indicator (**DR2_HEPIMP**):

- a. If DR2_HEPIMP equals *N*, the order is acceptable and does not produce an alert.
- b. If DR2_HEPIMP equals *Y*, alert the user that the dose may need to be adjusted for hepatic impairment ([sample message 7](#)).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for hepatic impairment and checks the display availability of the elimination half-life values.

4. Display the DRCM Low Elimination Half-Life (**DR2_THAFLO**) and DRCM High Elimination Half-Life (**DR2_THAFHI**) range (or value):

- a. If DR2_THAFLO and DR2_THAFHI *equals 0*, the elimination half-life range (or value) is unavailable.
- b. If DR2_THAFLO or DR2_THAFHI *does not equal 0*, display the elimination half-life range (or value) for the patient. ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description
20	100	02	Hours

In this example, the elimination half-life for the order *does not equal 0*. The system displays the elimination half-life range as 20 hours - 100 hours.

Example—Using a Gender-Specific DxID Code

A patient with insomnia has a prescription for a maintenance dose (DR2_DOSTPI = 02) of zolpidem 10 mg tablet (DR2_RT = 064) (Clinical Formulation ID [GCN_SEQNO] 19188) once a day for 7 days. The patient is female (DXID = 14160), is 20,000 days old, and weighs 68,000 grams (68 kg).

- i Due to an FDA alert about gender-specific dosing levels for zolpidem, FDB added new gender-specific DXID values. Use the values in place of the default screening record only when the gender is known and when performing dosage range checking for zolpidem. See [Gender-Specific Record](#) of the FDB Medical Lexicon (FML) for additional information. Refer to the [Performing Dosage Range Checking Using a DxID or ICD Code](#) for standard indication-specific checking.

Part 1: Collect Dosage Range Check Data

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication.
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient's gender

GCN_SEQNO	19188
DR2_RT	064
DR2_DOSTPI	02
DR2_LOAGED	6570
DR2_HIAGED	23724
DXID	14160

2. Select the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING_AGE_SOURCE_ID equals 2, indicating that the source reference is for the age range.

3. Check the NEOM Weight Required Indicator ([NEOM_WEIGHT_REQ_IND](#)):

- If NEOM_WEIGHT_REQ_IND equals 0, the current weight is not required to select the screening record.
- If NEOM_WEIGHT_REQ_IND equals 1, the current weight is required to select the screening record.

In this example, NEOM_WEIGHT_REQ_IND equals 0, indicating that the current weight is not required to select the screening record. The system continues to the gestational age at birth required indicator.

4. Check the NEOM Gestational Birth Age Required Indicator ([NEOM_GEST_BIRTH_AGE_REQ_IND](#)):

- If NEOM_GEST_BIRTH_AGE_REQ_IND equals 0, the gestational age at birth is not required to select the screening record.
- If NEOM_GEST_BIRTH_AGE_REQ_IND equals 1, the gestational age at birth is required to select the screening record.

In this example, NEOM_GEST_BIRTH_AGE_REQ_IND equals 0, indicating that the gestational age at birth is not required to select the screening record. The system continues to the renal impairment assessment indicator.

5. Select the DRCM Renal Impairment Assessment Indicator ([DR2_RENIMP](#)):

- If DR2_RENIMP equals N, the order is acceptable and does not produce an alert. Skip to Part 2: Dose Range Checking.
- If DR2_RENIMP equals Y, alert the user that the dose may need to be adjusted for renal impairment ([sample message 5](#)) and continue with creatinine clearance checking.

In this example, DR2_RENIMP equals N, indicating a negative return (that is, the order is acceptable). The system begins dose range checking using the record retrieved in step 1.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to DRCM Low Frequency of Administration ([DR2_LOFREQ](#)) and DRCM High Frequency of Administration ([DR2_HIFREQ](#)):

- If the prescribed frequency is equal to either DR2_LOFREQ or DR2_HIFREQ, or within the value range, the order is acceptable and does not produce an alert.
- If the prescribed frequency is *less than* DR2_LOFREQ, alert the user that the prescribed frequency is less than the minimum frequency for the drug ([sample message 8](#)).
- If the prescribed frequency is *greater than* DR2_HIFREQ, alert the user that the prescribed

frequency exceeds the maximum frequency for the drug ([sample message 9](#)).

DR2_LOFREQ	DR2_HIFREQ	Prescribed Frequency
1	2	1 per day

In this example, the prescribed frequency of 1 per day is *equal* to the DR2_LOFREQ and the DR2_HIFREQ values of 1 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to DRCM Low Duration of Therapy ([DR2_LODOTX](#)) and DRCM High Duration of Therapy ([DR2_HIDOTX](#)):

- a. If the prescribed duration of therapy is equal to either DR2_LODOTX or DR2_HIDOTX, or within the value range, the order is acceptable and does not produce an alert.
- b. If the prescribed duration of therapy is *less than* DR2_LODOTX, alert the user that the prescribed duration is less than the low duration for the drug ([sample message 10](#)).
- c. If the prescribed duration of therapy is *greater than* DR2_HIDOTX, compare the maximum duration of therapy to the prescribed duration of therapy.

DR2_LODOTX	DR2_HIDOTX	Prescribed duration
1	35	7 days

In this example, the prescribed duration is equal to the DR2_LODOTX and DR2_HIDOTX value of 1 day. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to DRCM Low Dose per Day ([DR2_LODOSD](#)) and DRCM High Dose per Day ([DR2_HIDOSD](#)):

- a. If the prescribed daily dose is equal to either DR2_LODOSD or DR2_HIDOSD, or within the value range, the order is acceptable and does not produce an alert.
- b. If the prescribed daily dose is *less than* DR2_LODOSD, alert the user that the prescribed dose is *less than* the low daily dose for the drug ([sample message 1](#)).
- c. If the prescribed daily dose is *greater than* DR2_HIDOSD, compare the maximum daily dose to the prescribed daily dose.

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_LODOSD	5
DR2_LODOSU	01
UNITS_DESC	MG/DAY
DR2_HIDOSD	5
DR2_HIDOSU	01

UNITS_DESC	MG/DAY
Prescribed dose per day	10 mg/day

In this example, the prescribed dose of 10 mg/day is *greater than* the DR2_HIDOSD value of 5 mg/day. The system alerts the user that the prescribed dose is greater than the DR2_HIDOSD value of 5 mg/day. The system will continue to compare the prescribed daily dose to the maximum daily dose.

4. Compare the prescribed daily dose (convert units if necessary) to DRCM Maximum Dose per Day ([DR2_MXDOSD](#)):

- a. If the prescribed daily dose is *equal to or less than* DR2_MXDOSD, alert the user that the prescribed dose exceeds the high daily dose for the drug but is equal to or less than to the maximum daily dose ([sample message 2](#)).
- b. If the prescribed daily dose is *greater than* DR2_MXDOSD, alert the user that the prescribed dose exceeds the maximum daily dose for the drug ([sample message 6](#)).

DR2_MXDOSD	DR2_MXDOSU	Prescribed Single Dose
10	01	10 mg/day

In this example, the prescribed dose of 10 mg/day is *equal to* the DR2_MXDOSD value of 10 mg/day. The system alerts the user that the prescribed dose exceeds the high daily dose for the drug but is equal to the maximum daily dose. The system continues screening.

5. Compare the prescribed single dose (convert units if necessary) to DRCM Maximum Amount Per Single Dose ([DR2_MX1DOS](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):

- a. If the prescribed single dose is *equal to or less than* DR2_MX1DOS and NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the high daily dose for the drug but is equal to the maximum daily dose ([sample message 2](#)) and equal to or less than the single dose.
- b. If the prescribed individual dose is *greater than* either DR2_MX1DOS and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the single dose for the drug ([sample message 4a](#), [4b](#), or [4c](#)).

The DRCM Dose Units Code Description ([UNITS_DESC](#)) column is from the [DRCM Unit Description Table](#) (RDRCUND0_UNITS_DESC).

DR2_MX1DOS	DR2_MX1DSU	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
10	28	10	28	10 mg

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG	mg	milligram

In this example, the prescribed single dose of 10 mg is *equal to* the DR2_MX1DOS and NTE_SINGLE_DOSE values of 10 mg. The system alerts the user that the prescribed dose exceeds the high daily dose for the drug but is equal to the maximum daily dose and the single dose and continues screening.

6. Display the DRCM Maximum Lifetime Dose (DR2_MXLIFD) value:

- a. If DR2_MXLIFD *equals* 0, the maximum lifetime dose is unavailable.
- b. If DR2_MXLIFD *does not equal* 0, display the maximum lifetime dose value for the prescribed medication ([sample message 15](#)).

In this example, the maximum lifetime dose equals 0, indicating that the maximum lifetime dose information is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Check the DRCM Hepatic Impairment Assessment Indicator ([DR2_HEPIMP](#)):

- a. If DR2_HEPIMP *equals* N, the order is acceptable and does not produce an alert.
- b. If DR2_HEPIMP *equals* Y, alert the user that the dose may need to be adjusted for hepatic impairment ([sample message 7](#)).

In this example, the returned value is Y, indicating a positive return. The system alerts the user that the dose may need to be adjusted for hepatic impairment and checks the display availability of the elimination half-life values.

2. Display the DRCM Low Elimination Half-Life ([DR2_THAFLO](#)) and DRCM High Elimination Half-Life ([DR2_THAFHI](#)) range (or value):

- a. If DR2_THAFLO and DR2_THAFHI *equals* 0, the elimination half-life range (or value) is unavailable.
- b. If DR2_THAFLO or DR2_THAFHI *does not equal* 0, display the elimination half-life range (or value) for the patient. ([sample message 14](#)).

DR2_THAFLO	DR2_THAFHI	DR2_THAFU	Description
1.4	4.5	02	Hours

In this example, the elimination half-life for the order *does not equal* 0, indicating there is half-life range information. The system displays the elimination half-life range as 1.4 hours - 4.5 hours.

Customer-Compiled Warning Messages

The section provides examples of text message alerts that are displayed that explain why clinical screening information may not appear in dosing records due to age gaps. These customer-compiled alerts include precaution severity levels, the age range exclusion reason, and the next dosing record text information.

- Example—Severe Precaution and Pediatric Gap
- Example—Geriatric Gap
- Example—Contraindicated
- Example—Medication with Overlapping Precautions
- Example—When Only Child and Adolescent Dosage Checking Values Are Present
- Example—Child Age Range Exclusion Only

Example—Severe Precaution and Pediatric Gap

A physician is screening a 1-day-old patient for the administration of potassium acetate 1 meq/kg/day (Clinical Formulation ID [[GCN_SEQNO](#)] 1241) intravenous([DR2_RT](#) 052) for a maintenance dose ([DR2_DOSTPI](#) 02).

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the prescribed medication and
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR), check the [DRCM Exclusion Table](#) (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID ([GCN_SEQNO](#)) value of the prescribed medication.

In this example, no corresponding records are returned.
3. If no matching record is returned in the [DRCM Exclusion Table](#) (RDRCEX0_EXCLUSIONS), retrieve records from the [DRCM Age Exclusion Table](#) (RDRCAR0_EXCLUSION_REASON) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID value of the

- prescribed medication and
- DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
 - DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
 - First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	1241
DR2_RT	052
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	2
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 2.

- Select the corresponding values in the **DRCM Exclusion Reason Table** (**RDRCAR0_EXCLUSION_REASON**) and **DRCM Severity Level Description Table** (**RDRCSD0_SEVER_LEVEL_DESC**) where the:
 - Exclusion Reason Code (**EXCLUSION_REASON_CD**) column from the **DRCM Age Exclusion Table** (**RDRCAE0_AGE_EXCLUSION**) is equal to the Exclusion Reason Code (**EXCLUSION_REASON_CD**) column in the **DRCM Exclusion Reason Table** (**RDRCAR0_EXCLUSION_REASON**).
 - Severity Level Code (**DR2_SL**) column from the **DRCM Age Exclusion Table** (**RDRCAE0_AGE_EXCLUSION**) table is equal to the Severity Level Code (**DR2_SL**) column in the **DRCM Severity Level Description Table** (**RDRCSD0_SEVER_LEVEL_DESC**).
- The system produces an alert stating any precaution severity level, age range exclusion reason, and the next dosing record text information.

Possible Warning Scenario	Sample Display Message

Medication is Contraindicated	<DrugDescription> is contraindicated for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Severe Precaution	<DrugDescription> has a severe precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Management or Monitoring Precaution	<DrugDescription> has a management or monitoring precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]

In this example, the following alert will be produced as the medication has a severe precaution and uses the GNN60 for the drug description:

"Potassium acetate has a severe precaution for this patient. Administration of potassium to newborn infants must be done with extreme caution until their renal function has been determined. The next available dosing age range is for 3 days to 13 years of age. Low dose per day is 0.5 mEq/kg/day. High dose per day is 3 mEq/kg/day. Max dose per day is 5 mEq/kg/day. Max single dose is 1 mEq/kg. Not to exceed single dose is 40 mEq."

Example—Geriatric Gap

A physician is screening a 70-year-old patient for the administration of desogestrel-ethinyl estradiol (Clinical Formulation ID [GCN_SEQNO, page 1569] 17616) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID value of the prescribed medication and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR),

check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.

In this example, no corresponding records are returned.

3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID value of the prescribed medication and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	17616
DR2_RT	064
DR2_DOSTPI	02
EXCLUSION_LOAGED	23725
EXCLUSION_HIAGED	40150
FDBDX	999

In this example, the DRCM Age Exclusion record for the DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) is 23725 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) is 40150.

4. Select the corresponding values from the **DRCM Exclusion Reason Table** (RDRCAR0_EXCLUSION_REASON) and **DRCM Severity Level Description Table** (RDRCSD0_SEVER_LEVEL_DESC) where the:
 - a. Exclusion Reason Code (**EXCLUSION_REASON_CD**) column from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) is equal to the Exclusion Reason Code (**EXCLUSION_REASON_CD**) column in the **DRCM Exclusion Reason Table**

(RDRCAR0_EXCLUSION_REASON)

- b. Severity Level Code (**DR2_SL**) column from the **DRCM Age Exclusion Table** (**DRRCAE0_AGE_EXCLUSION**) table is equal to the Severity Level Code (**DR2_SL**) column in the **DRCM Severity Level Description Table** (**RDRCSD0_SEVER_LEVEL_DESC**).
5. The system produces an alert that includes precaution severity levels, the age range exclusion reason, and the next dosing record text information.

Possible Warning Scenario	Sample Display Message
Medication is Contraindicated	<DrugDescription> is contraindicated for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Severe Precaution	<DrugDescription> has a severe precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Management or Monitoring Precaution	<DrugDescription> has a management or monitoring precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]

In this example, the following alert will be produced as the medication has a management or monitoring precaution and uses the GNN60 for the drug description:

“Desogestrel-ethinyl estradiol has a management or monitoring precaution for this patient. This drug's indications for use do not normally occur in geriatric and/or post menopausal patients. The next available dosing age range is for 18 years to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.”

Example—Contraindicated

A physician is screening a 1-year-old patient for the administration of democycline HCL (Clinical Formulation ID [**GCN_SEQNO**] 9213) orally (**DR2_RT** 064) for a maintenance dose (**DR2_DOSTPI** 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (**RDRCNMA1_MSTR**) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and

- e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).
- In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.
- In this example, no corresponding records are returned.
3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) table, retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:
- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	9213
DR2_RT	064
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	2919
FDBDX	999

In this example, the corresponding DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) is 0 and the DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) is 2919.

4. Select the corresponding values in the **DRCM Exclusion Reason Table**

(RDRCAR0_EXCLUSION_REASON) and DRCM Severity Level Description Table (RDRCSD0_SEVER_LEVEL_DESC, page 610) where the:

- a. Exclusion Reason Code (**EXCLUSION_REASON_CD**) column from the **DRCM Age Exclusion Table (RDRCAE0_AGE_EXCLUSION)** table is equal to the Exclusion Reason Code (**EXCLUSION_REASON_CD**) in the **DRCM Exclusion Reason Table (RDRCAR0_EXCLUSION_REASON)** Table

The system produces an alert that includes precaution severity levels, age range exclusion reason, and the next dosing record text information.

- b. Severity Level Code (**DR2_SL**) column from the **DRCM Age Exclusion Table (RDRCAE0_AGE_EXCLUSION)** is equal to the Severity Level Code (**DR2_SL**) column in the **DRCM Severity Level Description Table (RDRCSD0_SEVER_LEVEL_DESC)**.

5. The system produces an alert that includes precaution severity levels, age range exclusion reason, and the next dosing record text information.

Possible Warning Scenario	Sample Display Message
Medication is Contraindicated	<DrugDescription> is contraindicated for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Severe Precaution	<DrugDescription> has a severe precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Management or Monitoring Precaution	<DrugDescription> has a management or monitoring precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]

In this example, the following alert will be produced as the medication has a contraindication and uses the GNN60 for the drug description:

“Democycline HCL is contraindicated for this patient. Due to potential toxicity, the drug is not normally used in this aged patient. The next available dosing age range is for 8 years to 18 years of age. Low dose per day is 6.6 mg/kg/day. High dose per day is 13.2 mg/kg/day. Max dose per day is 600 mg/day. Max single dose is 6.6 mg/kg. Not to exceed single dose is 300 mg.”

Example—Medication with Overlapping Precautions

This scenario provides an example of reducing the number of alerts produced if a customer is screened using DRC Age Exclusions, Pediatric Precautions Module, and Geriatric Precautions Module.

A physician is screening a 12-year-old patient for the administration of moxifloxacin HCl (Clinical Formulation ID [**GCN_SEQNO**] 43879) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table (RDRCNMA1_MSTR)** where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**)

- value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).
- In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.
- In this example, no corresponding records are located in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS).
3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	43879
DR2_RT	064

DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	6569
FDBDX	999

In this example, the corresponding DRCM Age Exclusion record is found for the DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 6569.

- Check the Available Precaution Indicator (**AVAILABLE_PRECAUTION_IND**). If the value is true (1), then suppress the Pediatric Precautions Module or Geriatric Precautions Module alerts and display the alert generated from the DRCM Age Exclusion. If the value is false (0), then generate the alert from DRC Age Exclusion and no other similar alerts from the Pediatric Precautions Module or Geriatric Precautions Module exist.

In this example, the Available Precaution Indicator (**AVAILABLE_PRECAUTION_IND**) is true (1), so the Pediatric Precautions Module alert should be suppressed and the related DRCM Age Exclusion alert should be displayed to users.

- Select the corresponding values in the **DRCM Exclusion Reason Table** (**RDRCAR0_EXCLUSION_REASON**) and **DRCM Severity Level Description Table** (**RDRCSD0_SEVER_LEVEL_DESC**) where the:

- Exclusion Reason Code (**EXCLUSION_REASON_CD**) column from the **DRCM Age Exclusion Table** (**RDRCAE0_AGE_EXCLUSION**) is equal to the Exclusion Reason Code (**EXCLUSION_REASON_CD**) column in the **DRCM Exclusion Reason Table** (**RDRCAR0_EXCLUSION_REASON**)
- The Severity Level Code (**DR2_SL**) column from the **DRCM Age Exclusion Table** (**RDRCAE0_AGE_EXCLUSION**) is equal to the Severity Level Code (**DR2_SL**) column in the **DRCM Severity Level Description Table** (**RDRCSD0_SEVER_LEVEL_DESC**).

The system produces an alert that includes the precaution severity levels, the age range exclusion reason, and the next dosing record text information.

Possible Warning Scenario	Sample Display Message
Medication is Contraindicated	<DrugDescription> is contraindicated for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Severe Precaution	<DrugDescription> has a severe precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]

Medication has a Management or Monitoring Precaution	<DrugDescription> has a management or monitoring precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
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In this example, the following alert will be produced as the medication has a contraindication and uses the GNN60 for the drug description:

"Moxifloxacin HCl is contraindicated for this patient. Use of fluoroquinolones is contraindicated, according to FDA-approved product labeling, in children and adolescents patients. The American Academy of Pediatrics does have dosing recommendations for ciprofloxacin and levofloxacin. The next available dosing age range is for 18 years to 65 years of age. Low dose per day is 400 mg/day. High dose per day is 400 mg/day. Max dose per day is 400 mg/day. Max single dose is 400 mg. Not to exceed single dose is 400 mg."

Example—When Only Child and Adolescent Dosage Checking Values Are Present

A physician is screening a 6-month-old patient for the administration of procainamide HCL (Clinical Formulation ID [GCN_SEQNO, page 1569] 230) intraosseously (DR2_RT 007) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.

2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.
- In this example, no corresponding records are returned.
3. If no matching record is returned in **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:

- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
- c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
- d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	230
DR2_RT	007
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	364
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for the DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and the DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 364.

4. Select the corresponding values in the **DRCM Exclusion Reason Table** (**RDRCAR0_EXCLUSION_REASON**) and **DRCM Severity Level Description Table** (**RDRCSD0_SEVER_LEVEL_DESC**) where the:
 - a. Exclusion Reason Code (**EXCLUSION_REASON_CD**) column from the **DRCM Age Exclusion Table** (**RDRCAE0_AGE_EXCLUSION**) is equal to the Exclusion Reason Code (**EXCLUSION_REASON_CD**) column in the **DRCM Exclusion Reason Table** (**RDRCAR0_EXCLUSION_REASON**)
 - b. The Severity Level Code (**DR2_SL**) column from the **DRCM Age Exclusion Table** (**RDRCAE0_AGE_EXCLUSION**) is equal to the Severity Level Code (**DR2_SL**) column in the

DRCM Severity Level Description Table (RDRCSD0_SEVER_LEVEL_DESC).

The system produces an alert that includes the precaution severity levels, the age range exclusion reason, and the next dosing record text information.

Possible Warning Scenario	Sample Display Message
Medication is Contraindicated	<DrugDescription> is contraindicated for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Severe Precaution	<DrugDescription> has a severe precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Management or Monitoring Precaution	<DrugDescription> has a management or monitoring precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]

In this example, the following alert will be produced as the medication has a management or monitoring precaution and uses the GNN60 for the drug description:

"Procainamide HCL has a management or monitoring precaution for this patient. The dose of this drug has not been established, by this route, for patients less than 1 years of age. The next available dosing age range is for 1 year to 18 years of age. Low dose per day is 14.25 mg/kg/day. High dose per day is 15.75 mg/kg/day. Max dose per day is 15.75 mg/kg/day. Max single dose is 15.75 mg/kg. Not to exceed single dose is 525 mg."

Example—Child Age Range Exclusion Only

A physician is screening a 2-year-old patient for the administration of caffeine (Clinical Formulation ID [[GCN_SEQNO](#)] 33) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the [DRCM Neonatal and Adult Master Table](#) (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator ([DR2_RT](#)) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator ([DR2_DOSTPI](#)) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days ([DR2_LOAGED](#)) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days ([DR2_HIAGED](#)) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier ([DXID](#)) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age

range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.

2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.

In this example, no corresponding records are returned.

3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:

- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
- c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
- d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	33
DR2_RT	064
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	365
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for the DRCM Low Age in Days DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 365 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 4744.

4. Select the corresponding values in the **DRCM Exclusion Reason Table** (RDRCAR0_EXCLUSION_REASON) and **DRCM Severity Level Description Table** (RDRCSD0_SEVER_LEVEL_DESC) where the:

- a. The Exclusion Reason Code (**EXCLUSION_REASON_CD**) column from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) is equal to the Exclusion Reason Code (**EXCLUSION_REASON_CD**) column in the **DRCM Exclusion Reason Table** (RDRCAR0_EXCLUSION_REASON).
 - b. The Severity Level Code (**DR2_SL**) column from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) is equal to the Severity Level Code (**DR2_SL**) column in the **DRCM Severity Level Description Table** (RDRCSD0_SEVER_LEVEL_DESC).
5. The system produces an alert that includes precaution severity levels, the age range exclusion reason, and the next dosing record text information.

Possible Warning Scenario	Sample Display Message
Medication is Contraindicated	<DrugDescription> is contraindicated for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Severe Precaution	<DrugDescription> has a severe precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]
Medication has a Management or Monitoring Precaution	<DrugDescription> has a management or monitoring precaution for this patient. [EXCLUSION_REASON_TEXT_SHORT] [NEXT_SCREENING_DOSE_TEXT]

In this example, the following alert will be produced as the medication has a management or monitoring precaution and uses the GNN60 for the drug description:

"Caffeine has a management or monitoring precaution for this patient. Dosing has not been established for children between the ages of 1 to 13 years. The next available dosing age range is for 18 years to 110 years of age. Low dose per day is 50 mg/day. High dose per day is 800 mg/day. Max dose per day is 1000 mg/day. Max single dose is 200 mg/kg. Not to exceed single dose is 200 mg."

Utilizing FDB Preassembled Warning Messages

The section provides examples of text message alerts that are displayed that explain why clinical screening information may not appear in dosing records due to age gaps. These FDB preassembled alerts include precaution severity levels, the age range exclusion reason, and the next dosing record text information.

Example—Severe Precaution and Pediatric Gap

A physician is screening a 1-day-old patient for the administration of potassium acetate 1 meq/kg/day (Clinical Formulation ID [GCN_SEQNO] 1241) intravenous (DR2_RT 052) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.
In this example, no corresponding records are returned.
3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the

patient age in days, and

- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	1241
DR2_RT	052
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	2
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is returned for DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 2.

4. Select the corresponding Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
5. Substitute actual the drug description for the “<DrugDescription>” tag in the Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
6. The system produces an alert that includes the precaution severity levels, the age range exclusion reason, and the next dosing record text information.

In this example, the following alert will be produced as the medication has a severe precaution and uses the GNN60 for the drug description:

“Potassium acetate has a severe precaution for this patient. Administration of potassium to newborn infants must be done with extreme caution until their renal function has been determined. The next available dosing age range is for 3 days to 13 years of age. Low dose per day is 0.5 mEq/kg/day. High dose per day is 3 mEq/kg/day. Max dose per day is 5 mEq/kg/day. Max single dose is 1 mEq/kg. Not to exceed single dose is 40 mEq.”

Example—Geriatric Gap

A physician is screening a 70-year-old patient for the administration of desogestrel-ethinyl estradiol (Clinical Formulation ID [GCN_SEQNO] 17616) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the

prescribed medication, and

- c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
- d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
- f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.

2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.

In this example, no corresponding records are returned.

3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where:

- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
- c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
- d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	17616
DR2_RT	064
DR2_DOSTPI	02
EXCLUSION_LOAGED	23725

EXCLUSION_HIAGED	40150
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 23725 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 40150.

4. Select the corresponding Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
5. Substitute actual the drug description for the “<DrugDescription>” tag in the Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
6. The system generates an alert stating any precaution severity levels, age range exclusion reason, and the next dosing record text information.

In this example, the following alert will be produced as the medication has a management or monitoring precaution and uses the GNN60 for the drug description:

“Desogestrel-ethynodiol has a management or monitoring precaution for this patient. This drug's indications for use do not normally occur in geriatric and/or post menopausal patients. The next available dosing age range is for 18 years to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.”

Example—Contraindicated

A physician is screening a 1-year-old patient for the administration of democycline HCL (Clinical Formulation ID [GCN_SEQNO] 9213) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.

2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.

In this example, no corresponding records are returned.

3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:

- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
- c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
- d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	9213
DR2_RT	064
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	2919
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 2919.

4. Select the corresponding Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
5. Substitute actual the drug description for the “<DrugDescription>” tag in the Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
6. The system generates an alert stating any precaution severity levels, age range exclusion reason, and the next dosing record text information.

In this example, the following alert will be produced as the medication is contraindicated and uses the GNN60 for the drug description:

"Democycline HCL is contraindicated for this patient. Due to potential toxicity, the drug is not normally used in this aged patient. The next available dosing age range is for 8 years to 18 years of age. Low dose per day is 6.6 mg/kg/day. High dose per day is 13.2 mg/kg/day. Max dose per day is 600 mg/day. Max single dose is 6.6 mg/kg. Not to exceed single dose is 300 mg."

Example—Medication with Overlapping Precautions

The intent of this scenario is to decrease the number of alerts generated if a customer is screening by using DRC Age Exclusions and the Pediatric Precautions Module.

A physician is screening a 12-year-old patient for the administration of moxifloxacin HCl (Clinical Formulation ID [GCN_SEQNO] 43879) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.

2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.

In this example, no corresponding records are returned.

3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:

- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the

prescribed medication, and

- c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
- d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	43879
DR2_RT	064
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	6569
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 6569.

4. Check the value of the Available Precaution Indicator (**AVAILABLE_PRECAUTION_IND**). If the value is “true” (1), then suppress the Pediatric Precautions Module or Geriatric Precautions Module alerts and display the alert produced from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION). If the value is “false” (0), then no alerts will be produced from **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) and no other similar alerts from the Pediatric Precautions Module or Geriatric Precautions Module exist.

In this example, the (**AVAILABLE_PRECAUTION_IND**) is “true”(1), so the Pediatric Precautions Module alert should be suppressed and the related DRCM Age Exclusion alert should be displayed to users.

5. Select the corresponding Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
6. Substitute actual the drug description for the “<DrugDescription>” tag in the Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**)
7. The system generates an alert stating any precaution severity levels, age range exclusion reason, and the next dosing record text information.

In this example, the following alert will be produced as the medication has a contraindication and uses the GNN60 for the drug description:

"Moxifloxacin HCl is contraindicated for this patient. Use of fluoroquinolones is contraindicated, according to FDA-approved product labeling, in children and adolescents patients. The American Academy of Pediatrics does have dosing recommendations for ciprofloxacin and levofloxacin. The next available dosing age range is for 18 years to 65 years of age. Low dose per day is 400 mg/day. High dose per day is 400 mg/day. Max dose per day is 400 mg/day. Max single dose is 400 mg. Not to exceed single dose is 400 mg."

Example—Only Child and Adolescent Dosage Checking Values Present

A physician is screening a 6-month-old patient for the administration of procainamide HCL (Clinical Formulation ID [GCN_SEQNO] 230) intraosseously (DR2_RT 007) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).

In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication.
In this example, no corresponding records are returned.
3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and

- d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
- e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
- f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	230
DR2_RT	007
DR2_DOSTPI	02
EXCLUSION_LOAGED	0
EXCLUSION_HIAGED	364
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 0 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 364.

4. Select the corresponding Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
5. Substitute the actual the drug description for the “<DrugDescription>” tag in the Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**)
6. The system generates an alert stating any precaution severity levels, age range exclusion reason, and the next dosing record text information.

In this example, the following alert will be produced as the medication has a contraindication and uses the GNN60 for the drug description:

“Procainamide HCL has a management or monitoring precaution for this patient. The dose of this drug has not been established, by this route, for patients less than 1 years of age. The next available dosing age range is for 1 year to 18 years of age. Low dose per day is 14.25 mg/kg/day. High dose per day is 15.75 mg/kg/day. Max dose per day is 15.75 mg/kg/day. Max single dose is 15.75 mg/kg. Not to exceed single dose is 525 mg.”

Example—Child Age Range Exclusion Only

A physician is screening a 2-year-old patient for the administration of caffeine (Clinical Formulation ID [GCN_SEQNO] 33) orally (DR2_RT 064) for a maintenance dose (DR2_DOSTPI 02).

1. Select records from the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**)

- value of the prescribed medication, and
- b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator(**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Low Age in Days (**DR2_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM High Age in Days (**DR2_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 4892 (default screening record).
- In this example, no corresponding dosing records are returned for the given criteria.
2. If no matching record is returned in the **DRCM Neonatal and Adult Master Table** (RDRCNMA1_MSTR), check the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS) for the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication.
- In this example, no corresponding records are returned.
3. If no matching record is returned in the **DRCM Exclusion Table** (RDRCEX0_EXCLUSIONS), retrieve records from the **DRCM Age Exclusion Table** (RDRCAE0_AGE_EXCLUSION) where the:
- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. DRCM Route of Administration Indicator (**DR2_RT**) column equals the route of administration for the prescribed medication, and
 - c. DRCM Dose Type Indicator (**DR2_DOSTPI**) column equals the dose type for the prescribed medication, and
 - d. DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) column is less than or equal to the patient age in days, and
 - e. DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) column is greater than or equal to the patient age in days, and
 - f. First Databank Disease Code (**FDBDX**) column equals the FDBDX of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the FDBDX equals 999 (default screening record).

GCN_SEQNO	33
DR2_RT	064
DR2_DOSTPI	02

EXCLUSION_LOAGED	365
EXCLUSION_HIAGED	4744
FDBDX	999

In this example, a corresponding DRCM Age Exclusion record is found for the DRCM Exclusion Low Age in Days (**EXCLUSION_LOAGED**) equal to 365 and DRCM Exclusion High Age in Days (**EXCLUSION_HIAGED**) equal to 4744.

4. Select the corresponding Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**).
5. Substitute the actual drug description for the “<DrugDescription>” tag in the Exclusion Message Text (**EXCLUSION_MESSAGE_TEXT**)
6. The system produces an alert that includes the precaution severity levels, age range exclusion reason, and the next dosing record text information.

In this example, the following alert will be produced as the medication has a management or monitoring precaution and uses the GNN60 for the drug description:

“Caffeine has a management or monitoring precaution for this patient. Dosing has not been established for children between the ages of 1 to 13 years. The next available dosing age range is for 18 years to 110 years of age. Low dose per day is 50 mg/day. High dose per day is 800 mg/day. Max dose per day is 1000 mg/day. Max single dose is 200 mg/kg. Not to exceed single dose is 200 mg.”

Generating DRCM Warning Messages

This application illustrates the general steps involved in creating DRCM messages and provides a list of sample messages that can be used while screening. Messages should be generated to display DRCM data, and to notify the end user when a prescribed dose falls outside an acceptable dose, administration frequency, or duration range according to DRCM data. See the [Dosage Range Checking](#) application and [Performing Dosage Range Checking Using a DxID or ICD Code](#) application.

- Unit code descriptions for a message may be retrieved from the DRCM Dose Units Code Description (`UNITS_DESC`) column in the [DRCM Unit Description Table](#) (`RDRCUND0_UNITS_DESC`). However, that column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To retrieve the corresponding TJC-compliant unit descriptions for the given unit in the `UNITS_DESC` column, query the [Units Description Table](#) (`RUNITSD0_UNITS_DESC`).

1. Familiarize yourself with the following possible warning scenarios and resulting display messages.

This table provides a list of sample messages that may be used when performing dosage range screening. Variables within the Sample Display Message column refer to information found in the [DRCM Neonatal and Adult Master Table](#) (`RDRCNMA1_MSTR`) or to patient-specific information. The Message Number column contains a reference number used to identify appropriate messages for the scenarios illustrated within the [Dosage Range Checking](#) application examples.

Possible Warning Scenario	Sample Display Message	Message Number
Prescribed daily dose is <i>less than</i> the recommended low daily dose for the drug.	Dosing range for [drug name] for [patient name] [weight] [age] is [LODOSD x patient weight (if applicable)] [Low Dose UNITS_RUI] - [HIDOSD x patient weight (if applicable)] [High Dose UNITS_RUI]. Prescribed dose of [prescribed daily dose] [prescribed dose units] is less than the recommended low daily dose for the drug. Please evaluate dose.	1

<p>Prescribed daily dose is <i>greater than</i> the recommended high daily dose for the drug but is <i>less than</i> the recommended maximum daily dose for the drug.</p>	<p>Dosing range for [drug name] for [patient name] [weight] [age] is [LODOSD x patient weight (if applicable)] [Low Dose UNITS_RUI] - [HIDOSD x patient weight (if applicable)] [High Dose UNITS_RUI]. Prescribed dose of [prescribed daily dose] [prescribed dose units] is greater than the recommended high daily dose for the drug but is less than the recommended maximum daily dose of [MXDOSD x patient weight (if applicable)] [Maximum Daily Dose UNITS_RUI]. Please evaluate dose.</p>	<p>2</p>
<p>Prescribed daily dose is <i>greater than</i> the recommended maximum daily dose for the drug.</p>	<p>Maximum dose per day for [drug name] for [patient name] [weight] [age] is [MXDOSD x patient weight (if applicable)] [Maximum Daily Dose UNITS_RUI]. Prescribed dose of [prescribed daily dose] [prescribed dose units] exceeds the recommended maximum daily dose for the drug. Please evaluate dose.</p>	<p>3</p>
<p>Prescribed single dose is <i>greater than</i> the recommended maximum single dose for the drug where MX1DOS equals the NTE_SINGLE_DOSE.</p>	<p>Maximum single dose for [drug name] for [patient name] [weight] [age] is [MX1DOS x patient weight (if applicable)] [MX1DSU] or [NTE_SINGLE_DOSE] [NTE_SINGLE_DOSE_UNIT_CODE]. Prescribed dose of [prescribed single dose] [prescribed dose units] exceeds the recommended maximum single dose for the drug. Please evaluate dose.</p>	<p>4a</p>
<p>Prescribed single dose is <i>greater than</i> the recommended maximum single dose for the drug where the MX1DOS is less than the NTE_SINGLE_DOSE.</p>	<p>Maximum single dose for [drug name] for [patient name] [weight] [age] is [MX1DOS x patient weight (if applicable)] [MX1DSU]. Prescribed dose of [prescribed single dose] [prescribed dose units] exceeds the recommended maximum single dose for the drug. Please evaluate dose.</p>	<p>4b</p>

Prescribed single dose is <i>greater than</i> the recommended maximum single dose for the drug where the MX1DOS is greater than the NTE_SINGLE_DOSE.	Maximum single dose for [drug name] for [patient name] [weight] [age] is [NTE_SINGLE_DOSE] [NTE_SINGLE_DOSE_UNIT_CODE]. Prescribed dose of [prescribed single dose] [prescribed dose units] exceeds the recommended maximum single dose for the drug. Please evaluate dose.	4c
Significant renal impairment requires a dosing adjustment.	Dosage regimen needs to be adjusted for significant renal impairment.	5
Patient's creatinine clearance is <i>less than</i> the accepted creatinine clearance threshold for the drug.	If the patient's creatinine clearance is lower than [CRCLTH] [CRCLU], a drug dosage adjustment should be considered.	6
Significant hepatic impairment requires a dosing adjustment.	Dosage regimen needs to be adjusted for hepatic impairment.	7
Prescribed frequency of administration per day is <i>less than</i> the recommended minimum frequency of administration range for the drug.	Administration frequency for [drug name] for [patient name] [weight] [age] is [LOFREQ] - [HIFREQ] per day. Prescribed frequency of [prescribed frequency] per day is less than the recommended minimum administration frequency for the drug. Please evaluate frequency.	8
Prescribed frequency of administration per day is <i>greater than</i> the recommended maximum frequency of administration for the drug.	Administration frequency for [drug name] for [patient name] [weight] [age] is [LOFREQ] - [HIFREQ] per day. Prescribed frequency of [prescribed frequency] per day exceeds the recommended maximum administration frequency for the drug. Please evaluate frequency.	9
Prescribed duration is <i>less than</i> the recommended low duration for the drug.	Duration range for [drug name] for [patient name] [weight] [age] is [LODOTX] - [HIDOTX] days. Prescribed duration of [prescribed duration] days is less than the recommended low duration for the drug. Please evaluate duration of therapy.	10

Prescribed duration is <i>greater than</i> the highest recommended duration for the drug.	Duration range for [drug name] for [patient name] [weight] [age] is [LODOTX] - [HIDOTX] days. Prescribed duration of [prescribed duration] days exceeds the recommended high duration for the drug. Please evaluate duration of therapy.	11
Prescribed duration is <i>greater than</i> the recommended high duration range for the drug but is <i>less than</i> the recommended maximum duration for the drug.	Duration range for [drug name] for [patient name] [weight] [age] is [LODOTX] - [HIDOTX] days. Prescribed duration of [prescribed duration] days exceeds the recommended high duration for the drug but is less than the recommended maximum duration of [MXDOTX] days. Please evaluate duration of therapy.	12
Prescribed duration is <i>greater than</i> the recommended maximum duration range for the drug.	Maximum duration for [drug name] for [patient name] [weight] [age] is [MXDOTX] days. Prescribed duration of [prescribed duration] days exceeds the recommended maximum duration for the drug. Please evaluate duration of therapy.	13
Patient's elimination half-life range.	Elimination half-life for [drug name] for [patient name] [weight] [age] is [THAFLO] - [THAFHI] [THAFU].	14
Maximum lifetime dose for the drug.	Maximum lifetime dose is [MXLIFD] [MXLIFU].	15

2. Create informational or warning messages that meet your business needs using a combination of static text and variables acquired from columns within the knowledge base or from patient specific information.
3. Display these messages to the end-user as the warning scenario dictates. See the [Dosage Range Checking](#) application.

Example—Warning Message

A pharmacist screens a prescription for amoxicillin 250 mg oral of 2 times per day for 10 days for a patient that is 18 years old (6,570 days) and weighs 120 pounds (54.5 kg). DRCM finds that the prescribed frequency of administration is less than the accepted frequency of administration for the drug. See the [Dosage Range Checking](#) application.

The following message may be displayed:

Administration frequency for amoxicillin 250 mg oral for an 18-year-old patient weighing 120 pounds is 3 - 4 per day. Prescribed frequency of 2 per day is below the accepted administration frequency range for the drug. Please evaluate frequency.

Considerations for Screening Drugs That Have a Frequency of Less Than Once Per Day Greater Than Once Per Month

Considerations for Screening When Frequency for Prescribed Dose Is Less Than Once a Month

When screening a drug that has a dosing interval of greater than one month, screen the dose amount only.

Dosing intervals of greater than one month are coded as a single dose; therefore, screen the dose amount only. Do not calculate a daily dose.

For example, a doctor prescribes 3 mg IV every 3 months of Ibandronate Sodium (GCN_SEQNO 60257) for a 21-year old patient. To perform screening, use the dose amount of 3 mg and compare it to the following values:

Low Daily Dose: 3 mg/day

High Daily Dose: 3 mg/day

Max Daily Dose: 3 mg/day

Max Single dose: 3 mg

NTE Single Dose: 3 mg

To pass screening, the single dose value should not be less than the low daily dose and not greater than the high daily dose, max daily dose, or the NTE single dose values.

This order passes screening.

Considerations for Screening for Once Orders (Chemotherapy)

Chemotherapy drugs are coded as a single dose if not administered on consecutive days of a cycle.

When screening for drugs that have a frequency of once, such as with chemotherapy drugs, use the prescribed dose as the single dose and screen the dose amount only.

For example, a doctor prescribes 500 mg IM once of Fulvestrant (GEN_SEQNO 50308) for a 21-year old patient.

To perform screening, use the dose amount of 500 mg and compare it to the following values:

Low Daily Dose: 500 mg/day

High Daily Dose: 500 mg/day

Max Daily Dose: 500 mg/day

Max Single dose: 500 mg

NTE Single Dose: 500 mg

To pass screening, the single dose value should not be less than the low daily dose and not greater than the high daily dose, max daily dose, or the NTE single dose values.

This order passes screening.

Considerations for Screening When the Frequency of Prescribed Dose Is Less Than Once A Day/Greater Than Once Per Month

When screening for drugs that have a frequency of less than once a day/greater than once per month, use the

frequency value from the table in Frequency of Administration (see the [Rules for Data Elements](#)) to calculate the daily dose.

For example, a doctor prescribes 150 mg once per month of risedronate sodium (GCN_SEQNO 63925) for a 21-year old patient.

Per the table, the frequency for 1 time every 30 days is 0.03.

To calculate the daily dose amount, multiply the dose amount (150) x the frequency retrieved from the table (0.03) = 4.5 mg/day.

To perform screening, use the daily dose amount of 4.5 mg and compare it to the following values:

Low Daily Dose: 4.05 mg/day

High Daily Dose: 6.6 mg/day

Max Daily Dose: 6.6 mg/day

Max Single dose: 165 mg

NTE Single Dose: 165 mg

To pass screening, the daily dose value should not be less than the low daily dose and not greater than the high daily dose, max daily dose, or the NTE single dose values.

The order passes screening.

Considerations for Screening Drugs That Do Not Have a Match in Dose Checking Data for a Specific Route or Age Range

There are instances in which FDB data does not include dose checking data for drugs of a certain route or age range. If you screen a drug that is not in the [DRCM Exclusion Table](#) (RDRCES0_EXCLUSIONS) (meaning it is not excluded from DRCM data), and there is no match in dose checking data for the specific route or age range, display the following alert to the user:

Dosing information not available for dose checking. Check dose manually.

Considerations for Screening When the Strength of the Prescribed Dose Amount Is Expressed in Terms of the Alternate Strength Type

When the strength of the prescribed dose is expressed in terms of the alternate strength type ([ALT_STRENGTH](#) and [ALT_STRENGTH_TYP_CODE](#) columns) as opposed to the primary strength type ([STRENGTH](#) and [STRENGTH_UOM_ID](#) columns in the [Clinical Formulation Ingredient Strength Component Table](#)), special considerations apply.

For example, the doctor prescribes 80 mg of elemental Iron for GCN_SEQNO 1645 for a 21-year old patient. For GCN_SEQNO 1645, the primary strength is 200 mg (expressed as base plus salt), and the alternate strength is 40 mg (expressed as elemental). Because the strength of the prescribed dose is expressed in terms of the alternate strength type, follow these steps:

1. Divide the prescribed strength by the alternate strength.
80 divided by 40 (alternate strength) = 2

2. Multiply the result by the primary strength.

$$2 \times 200 \text{ mg (strength)} = 400 \text{ mg}$$

Perform screening based on the 400 mg value.

Refer to Dosing Ranges and Ingredient Strength in the [Rules for Data Elements](#) for more information.

Min/Max Applications

This section provides information on the practical use of the data for the Min/Max Dose Modules and is divided into the following two sections:

MMAD, MMGD, MMAR, and MMGR Applications

- Calculating and Screening the Prescribed Daily Dose for a Single-Ingredient Product
- Calculating and Screening the Prescribed Daily Dose for a Multi-ingredient Product
- Calculating and Screening the Prescribed Daily Dose for Drugs with Dosing in Intervals Greater Than 24 Hours
- Calculating and Screening the Prescribed Daily Dose for Puffs, Applicator(s)ful, or Scoops
- Calculating and Screening the Prescribed Daily Dose for Ophthalmic Solution and Suspension Products

PDM Applications

- Calculating and Screening the Prescribed Daily Dose for a Single-Ingredient Product
- Calculating and Screening the Prescribed Daily Dose for a Multi-ingredient Product
- Calculating and Screening the Prescribed Daily Dose for Puffs, Applicator(s)ful, or Scoops
- Calculating and Screening the Prescribed Daily Dose for Ophthalmic Solution and Suspension Products

MMAD, MMGD, MMAR, and MMGR Applications

The examples in this section illustrate the following for the Adult Daily Dose (MMAD), Geriatric Daily Dose (MMGD), Adult Daily Range (MMAR), and Geriatric Daily Range (MMGR) Min/Max Dose Modules:

Calculating and Screening the Prescribed Daily Dose for a Single-Ingredient Product

Calculating and Screening the Prescribed Daily Dose for a Multi-ingredient Product

Calculating and Screening the Prescribed Daily Dose for Drugs with Dosing in Intervals Greater Than 24 Hours

Calculating and Screening the Prescribed Daily Dose for Puffs, Applicator(s)ful, or Scoops

Calculating and Screening the Prescribed Daily Dose for Ophthalmic Solution and Suspension Products

Any of the following four tables can be used in the examples however, for the purposes of demonstration, the data in each example is retrieved from the RMMADMA1_ADULT_DOSE_MSTR table:

- **MMAD Master Table** (RMMADMA1_ADULT_DOSE_MSTR)
- **MMGD Master Table** (RMMGDMA1_GERI_DOSE_MSTR)
- **MMAR Master Table** (RMMARMA0_ADULT_RANGE_MSTR)
- **MMGR Master Table** (RMMGRMA1_GERI_RANGE_MSTR)

The column names and column descriptions are also presented generically. There are asterisks before each column name and column description to represent that these columns are common to all four modules and that any of the four modules can be used in the application. For example, *_MND could represent the MMGR_MND column in MMGR, the MMAR_MND column in MMAR, and so on.

In addition, the Dosing Age Source Identifier (**DOSING_AGE_SOURCE_ID**) indicates if the dosing range populated for a specific age was based on referential information related directly to the specified age range or was assigned based upon evaluation of dosing information for a different age range. Because all adult records are considered as the referential standard for the given dosing information, only the Geriatric Min/Max tables contain the DOSING_AGE_SOURCE_ID attribute. Therefore, these examples do not contain the DOSING_AGE_SOURCE_ID example data. Please see the PDM Applications, page 653 section for illustrations of these values.

Calculating and Screening the Prescribed Daily Dose for a Single-Ingredient Product

This application illustrates how to compare the prescribed dose for a single-ingredient product to an acceptable daily dosage range. The prescribed daily dose can be screened using either daily dose strength or daily dose units. The following examples demonstrate both scenarios:

- Example—Comparing Ranges Using Dose Strength
- Example—Comparing Ranges Using Dose Units

Example—Comparing Ranges Using Dose Strength

A physician prescribes a 20-year-old patient Diazepam 10 mg tablets (Clinical Formulation ID [GCN_SEQNO] 003766). One tablet is to be taken twice daily, and the pharmacist wants to screen the daily dose using the dose strength to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. Since the dose is to be given two times per day, multiply 10 mg by 2 to yield the prescribed dose per day of 20 mg.
2. Select the following column values from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug:
 - *Minimum Daily Dose Strength Quantity (*_MND)
 - *Minimum Daily Dose Strength Units (*_MNDU)
 - *Maximum Daily Dose Strength Quantity (*_MXD)
 - *Maximum Daily Dose Strength Units (*_MXDU)

GCN_SEQNO	*_MND	*_MNDU	*_MXD	*_MXDU
003766	000005.000	MG	000040.000	MG

*_MND is 5, which works in conjunction with the *_MNDU value of MG to express the minimum value as 5 mg per day. The *_MXD is 40, which works in conjunction with the *_MXDU value of MG to express the ceiling as 40 mg per day. Therefore, this example shows that the minimum recommended strength of a diazepam 5 mg tablet is 5 mg and that the maximum is 40 mg per day.

3. To retrieve the corresponding TJC-compliant unit descriptions, query the **Units Description Table** (RUNITSD0_UNITS_DESC) using the values from the *Minimum Daily Dose Strength Units column (*_MNDU) and *Maximum Daily Dose Strength Units column (*_MXDU).

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
V		
MG	mg	milligram

4. Compare the prescribed daily dose (20 mg) to the retrieved range (5 mg to 40 mg). The daily dose of 20 mg is greater than the minimum value (5 mg) but less than the maximum value (40 mg), so the prescribed daily dose falls within an acceptable range.
5. Using the module's Master Table and Clinical Formulation ID (GCN_SEQNO), retrieve the Dosing Age Source Identifier (DOSING_AGE_SOURCE_ID) value. According to your business needs:

- Display the data source information to the end-user.
- Determine by the source if the collected dosing record can be used in screening.
- Because this example uses the **MMAD Master Table** (RMMADM1_ADULT_DOSE_MSTR), the DOSING AGE SOURCE ID values are not available but may be considered as a Source Reference for the Age Range.

Example—Comparing Ranges Using Dose Units

A physician prescribes a 20-year-old patient Diazepam 10 mg tablets (Clinical Formulation ID [GCN_SEQNO] 003766). One tablet is to be taken twice daily, and the pharmacist wants to screen the daily dose using the dose units to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. The dose is to be given two times per day, so the prescribed daily dose is 2 tablets per day.
2. Select the following columns from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug:
 - *Minimum Daily Dose Units Quantity (*_MNU)
 - *Minimum Daily Dose Units Form (*_MNUF)
 - *Maximum Daily Dose Units Quantity (*_MXU)
 - *Maximum Daily Dose Units Form (*_MXUF)

GCN_SEQNO	*_MNU	*_MNUF	*_MXU	*_MXUF
003766	000005.000	MG	000040.000	MG

*_MNU is 0.5, which works in conjunction with the *_MNUF value of EA to express the minimum value of 0.5 each (or half of a tablet) per day. The *_MXU is 4, which works in conjunction with the *_MXUF value of EA to express the maximum of 4 each (or 4 tablets) per day. Therefore, this example shows that the minimum recommended dose of the diazepam 10 mg tablet is 0.5 tablet and that the maximum is 4 tablets per day.

3. Compare the prescribed daily dose (2 tablets) to the retrieved range (0.5 to 4 tablets). The prescribed daily dose of 2 tablets is greater than the minimum value (0.5 tablet) but less than the maximum value (4 tablets). Therefore, the prescribed daily dose falls within the acceptable range.
4. Using the module's Master Table and Clinical Formulation ID (GCN_SEQNO), retrieve the Dosing Age Source Identifier (DOSING AGE SOURCE ID) value. According to your business needs:
 - Display the data source information to the end-user.
 - Determine by the source if the collected dosing record can be used in screening.

Because this example uses the **MMAD Master Table** (RMMADM1_ADULT_DOSE_MSTR), the DOSING AGE SOURCE ID values are not available but may be considered as a Source Reference for Age Range.

Calculating and Screening the Prescribed Daily Dose for a Multi-ingredient Product

This application illustrates how to compare the prescribed daily dose for a multi-ingredient product to an acceptable daily dosage range. For a multi-ingredient product, the prescribed daily dose can only be screened using daily dose units.

For purposes of demonstrating this application, the following scenario is used: A physician prescribes APO-Levocarb 25-100 mg tablet (Clinical Formulation ID [GCN_SEQNO] 019563) for a 60-year-old patient. The patient is to take 5 tablets twice daily. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. The patient is to take 5 tablets twice daily, so multiply 5 times 2 to yield the prescribed daily dose of 10 sustained release tablets per day.
2. Select the following column values from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug:
 - *_Minimum Daily Dose Units Quantity (*_MNU)
 - *_Minimum Daily Dose Units Form (*_MNUF)
 - *_Maximum Daily Dose Units Quantity (*_MXU)
 - *_Maximum Daily Dose Units Form (*_MXUF)

GCN_SEQNO	*_MNU	*_MNUF	*_MXU	*_MXUF
019563	0004.000	EA	0008.000	EA

*_MNU is 4, which works in conjunction with the *_MNUF value of EA to express the minimum value of 4 each (or 2 extended release tablets) per day. The *_MXU is 8, which works in conjunction with the *_MXUF value of EA to express the maximum of 8 each (or 8 extended release tablets) per day. Therefore, this example shows that the minimum recommended dose unit for Carbidopa/Levodopa in 25/100 mg extended release tablet is 4 each and that the maximum is 8 each per day.

3. Compare the prescribed daily dose (10 extended release tablets) to the retrieved range (2 to 8 extended release tablets). The prescribed daily dose of 10 extended release tablets is greater than the minimum value (2 extended release tablets) and greater than the maximum value (8 extended release tablets). Therefore, the prescribed daily dose does not fall within the acceptable range.
4. Since the prescribed dose does not fall within the acceptable range, generate the following message: "This daily dose exceeds the daily maximum."



The Min/Max Dose Modules do not generate warning messages. Your system must be programmed to generate appropriate messages when the prescribed daily dose falls outside an acceptable range.

Using the module's Master Table and Clinical Formulation ID (GCN_SEQNO), retrieve the Dosing Age Source Identifier (DOSING_AGE_SOURCE_ID) value. According to your business needs:

- Display the data source information to the end-user.

- Determine by the source if the collected dosing record can be used in screening.

Because this example uses the **MMAD Master Table** (RMMADMA1_ADULT_DOSE_MSTR), the DOSING AGE SOURCE ID values are not available but may be considered as a Source Reference for Age Range.

Calculating and Screening the Prescribed Daily Dose for Drugs with Dosing in Intervals Greater Than 24 Hours

This application illustrates how to screen doses which are expressed in intervals greater than 24 hours. The prescribed daily dose can be screened using either daily dose strength or daily dose units. The following examples demonstrate both scenarios:

- Example—Comparing Ranges Using Dose Strength
- Example—Comparing Ranges Using Dose Units

Example—Comparing Ranges Using Dose Strength

A physician prescribes a 62-year-old patient an Estraderm patch (Clinical Formulation ID [GCN_SEQNO] 016767) used for hormone replacement therapy. This patch is a bi-weekly patch and can be worn up to 3.5 days. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. Divide total strength by 3.5 days to yield 0.025 mg.
2. Select the following column values from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug:
 - *Minimum Daily Dose Strength Quantity (*_MND)
 - *Minimum Daily Dose Strength Units (*_MNDU)
 - *Maximum Daily Dose Strength Quantity (*_MXD)
 - *Maximum Daily Dose Strength Units (*_MXDU)

GCN_SEQNO	*_MND	*_MNDU	*_MXD	*_MXDU
016767	000000.025	MG	000000.025	MG

*_MND is 0.025, which works in conjunction with the *_MNDU value of MG to express the minimum value as 0.025 mg per day. The *_MXD is 0.025, which works in conjunction with the *_MXDU value of MG to express the ceiling as 0.025 mg per day. Therefore, this example shows that the minimum recommendation is 0.025 mg and that the maximum is 0.025 mg per day.

3. Compare the prescribed daily dose (0.025 mg) to the retrieved range (0.025 mg to 0.025 mg). The daily dose of 0.025 mg is equal to the minimum value (0.025 mg) and the maximum value (0.025 mg), so the prescribed daily dose falls within an acceptable range.



The recommended dosage is an exact number instead of a range.

4. Using the module's Master Table and Clinical Formulation ID (GCN_SEQNO), retrieve the Dosing Age Source Identifier (DOSING_AGE_SOURCE_ID) value. According to your business needs:

- Display the data source information to the end-user.
- Determine by the source if the collected dosing record can be used in screening.

Since this example uses the MMAD Master Table (RMMADM1_ADULT_DOSE_MSTR), the

DOSING_AGE_SOURCE_ID values are not available but may be considered as a Source Reference for Age Range.

Example—Comparing Ranges Using Dose Units

A physician prescribes a 62-year-old patient an Estraderm patch (Clinical Formulation ID [GCN_SEQNO] 016767) used for hormone replacement therapy. This patch is a bi-weekly patch and can be worn up to 3.5 days. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. Divide 1 patch by 3.5 days to yield a daily dose of 0.286 patches.
2. Select the following column values from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug:
 - *_Minimum Daily Dose Units Quantity (*_MNU)
 - *_Minimum Daily Dose Units Form (*_MNUF)
 - *_Maximum Daily Dose Units Quantity (*_MXU)
 - *_Maximum Daily Dose Units Form (*_MXUF)

GCN_SEQNO	*_MNU	*_MNUF	*_MXU	*_MXUF
016767	0000.261	EA	0000.319	EA

*_MNU is 0.261, which works in conjunction with the *_MNUF value of EA to express the minimum value of 0.261 each (or 0.261 patches) per day. The *_MXU is 0.319, which works in conjunction with the *_MXUF value of EA to express the maximum of 0.319 each (or 0.319 patches) per day. Therefore, this example shows that the minimum recommendation is 0.261 each and that the maximum is 0.319 each per day.

3. Compare the prescribed daily dose (0.286 each) to the retrieved range (0.261 each to 0.319 each per day). The prescribed daily dose is greater than the minimum value (0.261 each) and is less than the maximum value (0.319 each). Therefore, the prescribed daily dose falls within the acceptable range.



The recommended dosage is an exact number instead of a range.

4. Using the module's Master Table and Clinical Formulation ID (GCN_SEQNO), retrieve the Dosing Age Source Identifier (DOSING_AGE_SOURCE_ID) value. According to your business needs:
 - Display the data source information to the end-user.
 - Determine by the source if the collected dosing record can be used in screening.

Because this example uses the **MMAD Master Table** (RMMADM1_ADULT_DOSE_MSTR), the DOSING_AGE_SOURCE_ID values are not available but may be considered as a Source Reference for Age Range.

Calculating and Screening the Prescribed Daily Dose for Puffs, Applicator(s)ful, or Scoops

For products administered via inhalers, scoops, or applicators, the min/max daily units values are available in terms of gram weight per inhalation, scoop, or applicator.

The following application shows how to determine the daily dose for a product administered via an inhaler and how to compare that daily dose to acceptable ranges.

For purposes of demonstrating this application, the following scenario is used: A 30-day supply of Alvesco inhaler 100 mcg aerosol (Clinical Formulation ID [GCN_SEQNO] 058671) is dispensed to a 45-year-old patient. A total of 6.1 g is dispensed to the patient. The patient is to take 2 puffs four times per day. The third party payer wants to screen the daily dose to see if it falls within an acceptable range for reimbursement purposes.

Part 1: Determine the Prescribed Daily Dose in Units of Grams

Third party payers typically will only know the total quantity of the drug dispensed and the total number of days the supply will last (known as “days supply”); therefore, the prescribed daily dose is determined by dividing the total quantity dispensed (6.1 g) by the “days supply” (30 days). The result is 0.203 g per day.

Part 2: Retrieve Daily Dose Unit Ranges

Select the following column values from the module’s Master Table where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) of the prescribed drug.

- *Minimum Daily Dose Units Quantity (*_MNU)
- *Minimum Daily Dose Units Form (*_MNUF)
- *Maximum Daily Dose Units Quantity (*_MXU)
- *Maximum Daily Dose Units Form (*_MXUF)

GCN_SEQNO	*_MNU	*_MNUF	*_MXU	*_MXUF
058671	0000.102	G	0000.813	G

*_MNU is 0.102, which works in conjunction with the *_MNUF value of G to express the minimum value of 0.102 g per day. The *_MXU is 0.813, which works in conjunction with the *_MXUF value of G to express the maximum of 0.813 g per day. Therefore, this example shows that the minimum recommendation is 0.102 g per day and that the maximum is 0.813 g per day.

Part 3: Compare the Prescribed Daily Dose to the Acceptable Range

1. To determine whether the dose falls within an acceptable range, compare the prescribed daily dose (0.203 g per day) to the minimum daily dose units value (0.102 g per day) and the maximum daily dose units value (0.813 g per day). The daily dose falls within the acceptable range so there are no dosing warnings to issue.
2. Using the module’s Master Table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the Dosing Age Source Identifier ([DOSING AGE SOURCE ID](#)) value. According to your business needs:

- Display the data source information to the end-user.
- Determine by the source if the collected dosing record can be used in screening.

Because this example uses the **MMAD Master Table** (RMMADMA1_ADULT_DOSE_MSTR), the DOSING AGE SOURCE ID values are not available but may be considered as a Source Reference for Age Range.

Calculating and Screening the Prescribed Daily Dose for Ophthalmic Solution and Suspension Products

This application illustrates how to determine the minimum/maximum dosing per day for ophthalmic solution and suspension products. The prescribed daily dose can be screened using either daily dose strength or daily dose units. The following examples demonstrate both scenarios:

- Example—Compare Ranges Using Dose Strength
- Example—Compare Ranges Using Dose Units

Example—Compare Ranges Using Dose Strength

A physician prescribes APO-Timoptic 0.25% eye drops (Clinical Formulation ID [GCN_SEQNO] 007855) for a 30-year-old patient. The patient is to administer one drop into one eye twice daily. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. One drop is to be administered twice a day in one eye, so multiply 2 times 1 to yield the prescribed daily dose of 2 drops per day.



Dose strength is reported in the number of drops.

2. Select the following column values from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) of the prescribed drug.
 - *Minimum Daily Dose Strength Quantity (*_MND)
 - *Minimum Daily Dose Strength Units (*_MNDU)
 - *Maximum Daily Dose Strength Quantity (*_MXD)
 - *Maximum Daily Dose Strength Units (*_MXDU)

GCN_SEQNO	*_MND	*_MNDU	*_MXD	*_MXDU
007855	000001.000	GTT	000004.000	GTT

*_MND is 1.000, which works in conjunction with the *_MNDU value of GTT to express the minimum value as 1 gtt per day. The *_MXD is 4.000, which works in conjunction with the *_MXDU value of GTT to express the ceiling as 4 gtt per day. Therefore, this example shows that the minimum recommendation is 1 drop per day with a maximum of 4 drops per day.

3. To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the *Minimum Daily Dose Strength Units column (*_MNDU) and *Maximum Daily Dose Strength Units column (*_MXDU).

DOSING_MODULE_UNIT_ABBRE	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
V		
GTT	drop	drop

4. Compare the prescribed daily dose (2 drops) to the retrieved range (1 to 4 drops). The daily dose of 2 drops is greater than the minimum value (1 drops) but less than the maximum value (4 drops), so the

prescribed daily dose falls within an acceptable range.

- Using the module's Master Table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)) value. According to your business needs:

- Display the data source information to the end-user.
- Determine by the source if the collected dosing record can be used in screening.

Because this example uses the [MMAD Master Table](#) (RMMADMA1_ADULT_DOSE_MSTR), the DOSING_AGE_SOURCE_ID values are not available but may be considered as a Source Reference for Age Range.

Example—Compare Ranges Using Dose Units

A physician prescribes APO-Timoptic 0.25% eye drops (Clinical Formulation ID [GCN_SEQNO] 007855) for a 30-year-old patient. The patient is to administer one drop into one eye twice daily. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

- Calculate the prescribed daily dose. FDB uses 20 drops/mL to determine droplet size. To determine the size of one drop, divide 1 by 20 to yield 0.05 mL. Since the prescribed dose is 2 drops, multiply 2 by 0.05 to yield 0.100 mL.



Dose units are reported in milliliters (mL) to match the drug form.

- Select the following column values from the module's Master Table where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug.

- *Minimum Daily Dose Units Quantity (*_MNU)
- *Minimum Daily Dose Units Form (*_MNUF)
- *Maximum Daily Dose Units Quantity (*_MXU)
- *Maximum Daily Dose Units Form (*_MXUF)

GCN_SEQNO	*_MNU	*_MNUF	*_MXU	*_MXUF
007855	0000.050	ML	0000.200	ML

*_MND is 1.000, which works in conjunction with the *_MNDU value of GTT to express the minimum value as 1 gtt per day. The *_MXD is 4.000, which works in conjunction with the *_MXDU value of GTT to express the ceiling as 4 gtt per day. Therefore, this example shows that the minimum recommendation is 1 drop per day with a maximum of 4 drops per day.

- To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the *Minimum Daily Dose Strength Units column (*_MNDU) and *Maximum Daily Dose Strength Units column (*_MXDU).

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
GTT	drop	drop

4. Compare the prescribed daily dose (2 drops) to the retrieved range (1 to 4 drops). The daily dose of 2 drops is greater than the minimum value (1 drops) but less than the maximum value (4 drops), so the prescribed daily dose falls within an acceptable range.
5. Using the module's Master Table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the Dosing Age Source Identifier ([DOSING AGE SOURCE ID](#)) value. According to your business needs:
 - Display the data source information to the end-user.
 - Determine by the source if the collected dosing record can be used in screening.

Because this example uses the [MMAD Master Table](#) (RMMADMA1_ADULT_DOSE_MSTR), the DOSING_AGE_SOURCE_ID values are not available but may be considered as a Source Reference for Age Range.

PDM Applications

This section provides information on the practical use of the data for the Pediatric Dose Module (PDM). PDM applications are noted separately because dosing for some drugs for certain age ranges within the pediatric age group may be dependent upon the weight of the child. Because of this, PDM applications may require additional steps or the use of a [PDM Weight/Age Table \(RPDMWT1_PEDI_WEIGHT\)](#). In addition, some of the applications for the other four Min/Max Dose Modules (MMAD, MMGD, MMAR, and MMGR) may not apply to PDM.

The following sections are included:

[*Calculating and Screening the Prescribed Daily Dose for a Single-Ingredient Product*](#)

[*Calculating and Screening the Prescribed Daily Dose for a Multi-ingredient Product*](#)

[*Calculating and Screening the Prescribed Daily Dose for Puffs, Applicator\(s\)ful, or Scoops*](#)

[*Calculating and Screening the Prescribed Daily Dose for Ophthalmic Solution and Suspension Products*](#)

Calculating and Screening the Prescribed Daily Dose for a Single-Ingredient Product

This application illustrates how to compare the prescribed daily dose of a single-ingredient product to an acceptable daily dosage range in three parts. Part 1 requires the Clinical Formulation ID (GCN_SEQNO) and patient age to retrieve the min/max dosing range. The type of units reflected in the retrieved range indicates whether the dose is weight-based. This information determines whether you move on to Part 2 or Part 3:

- If the dose is weight-based, complete the steps in Part 2 in order to calculate the weight-based min/max dosing range. Move on to Part 3 to use this range to determine whether the prescribed daily dose falls within an acceptable range.
- If the dose is not weight-based, move on to Part 3 to compare the prescribed daily dose to the daily dose range retrieved in Part 1.

The prescribed daily dose can be screened using either daily dose strength or daily dose units. The following examples demonstrate both scenarios:

- Example—Comparing Ranges Using Dose Strength
- Example—Compare Ranges Using Dose Units

Example—Comparing Ranges Using Dose Strength

A physician prescribes APO-Ampicillin 250 mg capsules (Clinical Formulation ID [GCN_SEQNO] 008941) to an 11-year-old male patient. This dose is weight-based, and the weight of the patient is unknown. One capsule is to be taken twice daily, and the pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

Part 1: Retrieve Age-Specific Min/Max Dosing Range

1. For the given Clinical Formulation ID (GCN_SEQNO), query the PDM Master Table (RPDMMA1_PEDI_MSTR) and retrieve the minimum daily dose strength value using the PDM Minimum Daily Dose Strength Quantity (PDM_MND) column and the PDM Minimum Daily Dose Strength Units (PDM_MNDU) column for the appropriate age of the patient. The patient age must be in the range noted by the PDM Minimum Dosing Age (PDM_MNAGE) column and the PDM Maximum Dosing Age (PDM_MXAGE) column.

GCN_SEQNO	PDM_MNAGE	PDM_MXAGE	PDM_MND	PDM_MNDU
008941	0030	4744	000050.000000	10

The PDM_MNAGE column and the PDM_MXAGE column report age in days. One year equals 365 days.

2. Using the same table and Clinical Formulation ID (GCN_SEQNO), retrieve the maximum daily dose strength value using the PDM Maximum Daily Dose Strength Quantity (PDM_MXD) column and the PDM Maximum Daily Dose Strength Units (PDM_MXDU) column for the appropriate age.

GCN_SEQNO	PDM_MNAGE	PDM_MXAGE	PDM_MXD	PDM_MXDU

008941	0030	4744	000100.000000	10
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3. Use the [PDM Unit Description Table](#) (RPDMUND0_PEDI_DOSE_UNIT_DESC) and the values from the PDM_MNDU and PDM_MXDU columns to retrieve the dosing units from the PDM Units Code Description column ([PDM_UNDESC](#)).

PDM_UNIT	PDM_UNDESC
10	MG/KG/DAY

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the PDM_UNDESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/KG/DAY	mg/kg/day	milligram per kilogram per day

PDM_MND is 50, which works in conjunction with the PDM_MNDU value of 10 (MG/KG/DAY) to express the minimum value as 50 mg/kg/day. The PDM_MXD is 100, which works in conjunction with the PDM_MXDU of 10 (MG/KG/DAY) to express the maximum as 100 mg/kg/day. Therefore, this example shows that the minimum recommended weight-based guideline is 50 mg/kg/day and that the maximum is 100 mg/kg/day.

The dosing units reference kilograms, which means that the dose is weight-based. Therefore, proceed to Part 2 to calculate the weight-based min/max dosing range. This is the range that the prescribed daily dose will be compared to.

- If the retrieved dosing units only reference an amount per time frame (such as milligram/day) and not kilogram, the dose is not based on patient weight and it is not necessary to calculate the weight-based min/max dosing range. If this is the case, skip Part 2 and move on to Part 3.

Part 2: Calculate Weight-Based Min/Max Dosing Range

If the results from Part 1 indicate that dosing is based on patient weight, complete the steps in Part 2 to calculate the weight-based min/max dosing range. This calculation can be made by multiplying the patient's weight by the previously retrieved min/max dosing range from Part 1. After the calculation is made, the maximum value must be compared to the not-to-exceed daily dose value, and the lesser of the two should be used as the maximum value.

For the calculation, use either the actual weight of the patient or an estimate using the PDM Weight/Age Table. This example assumes that the actual weight of the patient is unknown.

- Estimate the weight of the patient if the actual weight is unknown. Using the sex and age of the patient, query the [PDM Weight/Age Table](#) (RPDMWT1_PEDI_WEIGHT) to retrieve the weight of the patient using the 50th percentile for an 11-year-old male.

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M50WT
-----------	-----------	------------	-----------

4015	4196	11.0 years	035.30
------	------	------------	--------

The weight for an 11-year-old male patient in the 50th percentile is 35.3KG.

- i If the weight of the patient is known, use the actual weight.

- i Dosage ranges displayed and used for checking in the Pediatric Dose Module (PDM) can be customized by picking the age/weight percentile to use for min/max ranges.

2. Multiply patient weight (35.3 kg) by the retrieved minimum daily weight-based dose (50 mg/kg/day) to yield a minimum daily dose of 1765 mg/day.
3. Multiply patient weight (35.3 kg) by the retrieved maximum daily weight-based dose (100 mg/kg/day) to yield a maximum daily dose of 3530 mg/day.
4. For the given Clinical Formulation ID ([GCN_SEQNO](#)), query the [PDM Master Table](#) (RPDMMA1_PEDI_MSTR) and retrieve the not-to-exceed daily dose strength values using Pediatric Dosing Not-to-Exceed Daily Dose Strength Quantity ([PDM_NTED](#)) and Pediatric Dosing Not-to-Exceed Daily Dose Strength Units ([PDM_NTEDU](#)).

GCN_SEQNO	PDM_NTED	PDM_NTEDU
008941	003000.000000	11

PDM_NTED is 3000, which works in conjunction with the PDM_NTEDU value of 11 (MG/DAY) to express the not-to-exceed value of 3000 mg/day.

5. Compare maximum daily dose strength value (3530 mg/day) to the not-to-exceed daily dose strength value (3000 mg/day); use the lesser of the two values as the maximum daily dose strength value.

This example shows that the weight-based min/max dosing range is 1765 mg/day to 3000 mg/day for a typical 11-year-old male.

Part 3: Compare the Prescribed Daily Dose to the Min/Max Dosing Range

Compare the prescribed daily dose to either the weight-based min/max dosing range from Part 2 or to the non-weight-based Min/Max dosing range from Part 1. For this example, use the weight-based Min/Max dosing range from Part 2.

1. Calculate the prescribed daily dose. Since the dose is to be given two times per day, multiply 250 mg by 2 to yield the prescribed daily dose of 500 mg per day.
2. Compare the prescribed daily dose (500 mg) to the retrieved daily dose range (1765 mg/day to 3000 mg/day). The daily dose of 500 mg is less than the minimum value (1765 mg/day) and the maximum value (3000 mg/day), so the prescribed daily dose falls outside an acceptable range.
3. Since the prescribed dose does not fall within the acceptable range, the following message could be generated: "This daily dose is below the daily minimum."

i PDM does not generate warning messages. Your system must be programmed to generate appropriate messages when the prescribed daily dose falls outside an acceptable range.

- Using the module's Master Table and Clinical Formulation ID (GCN_SEQNO), retrieve the Dosing Age Source Identifier (DOSING AGE SOURCE ID) value. According to your business needs:

- Display the data source information to the end-user.
- Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that the populated dosing information may not be specific to this age range.

Example—Compare Ranges Using Dose Units

A physician prescribes APO-Ampicillin 250 mg capsules (Clinical Formulation ID [GCN_SEQNO] 008941) to an 11-year-old male patient. This dose is weight-based, and the weight of the patient is unknown. One capsule is to be taken twice daily, and the pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

Part 1: Retrieve Age-Specific Min/Max Dosing Range

- For a given Clinical Formulation ID (GCN_SEQNO), query the RPDMMA0_PEDI_MSTR table and retrieve the minimum daily dose units value using PDM Minimum Daily Dose Units Quantity column (PDM_MNU) and PDM Minimum Daily Dose Units Form column (PDM_MNUF) for the appropriate age of the patient. The patient age must be in the range noted by the PDM Minimum Dosing Age (PDM_MNAGE) column and the PDM Maximum Dosing Age (PDM_MXAGE) column.

GCN_SEQNO	PDM_MNAGE	PDM_MXAGE	PDM_MNU	PDM_MNUF
008941	0030	4744	000000.200000	01

i The PDM_MNAGE column and the PDM_MXAGE column report age in days. One year equals 365 days.

- Using the same table and Clinical Formulation ID (GCN_SEQNO), retrieve the maximum daily dose units value using PDM Maximum Daily Dose Units Quantity column (PDM_MXU, page 2079) and PDM Maximum Daily Dose Units Form column (PDM_MXUF, page 2080) for the appropriate age.

GCN_SEQNO	PDM_MNAGE	PDM_MXAGE	PDM_MXU	PDM_MXUF
008941	0030	4744	000000.400000	01

Use the PDM Unit Description Table (RPDMUND0_PEDI_DOSE_UNIT_DESC, page 620) and the values from the PDM_MNUF and PDM_MXUF columns to retrieve the dosing units from the PDM Units Code Description column (PDM_UNDESC, page 2085).

PDM_UNIT	PDM_UNDESC

01

EA/KG/DAY

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the PDM_UNDESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
EA/KG/DAY	each/kg/day	milligram per kilogram per day

PDM_MNU is 0.2, which works in conjunction with the PDM_MNUF value of 01 (EA/KG/DAY) to express the minimum value of 0.2 capsules per kg per day. The PDM_MXU is 0.4, which works in conjunction with the PDM_mxuf value of 01 (EA/KG/DAY) to express the maximum of 0.4 capsules per kg per day. Therefore, this example shows that the minimum recommended dose unit is 0.2 each/kg/day and that the maximum is 0.4 each/kg/day.

The dosing units reference kilogram, which means that the dose is weight based. Therefore, proceed to Part 2 to calculate the weight-based min/max dosing range. This is the range that the prescribed daily dose will be compared to.

- i If the retrieved dosing units only reference an amount per time frame (such as mg/day), the dose is not based on patient weight and it is not necessary to calculate the weight-based min/max dosing range. If this is the case, move on to Part 3.

Part 2: Calculate Min/Max Weight-Based Dosing Range

If the results from Part 1 indicate that dosing is based on patient weight, complete the steps in Part 2 to calculate the weight-based min/max dosing range. This calculation can be made by multiplying the patient's weight by the previously retrieved min/max dosing range from Part 1. After the calculation, the maximum value must be compared to the not-to-exceed daily dose value, and the lesser of the two should be used as the maximum value.

Use either the actual weight of the patient or an estimate using the PDM Weight/Age Table. This example assumes that the actual weight of the patient is unknown.

1. Determine the weight of the patient. Using the sex and age of the patient, query the [PDM Weight/Age Table](#) (RPDMWT1_PEDI_WEIGHT) to retrieve the weight of the patient using the 50th percentile for an 11-year-old male.

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M50WT
4015	4196	11.0 years	035.30

The weight for an 11-year-old male patient in the 50th percentile is 35.3 kg.

- i If the weight of the patient is known, use the actual weight.

- i

 Dosage ranges displayed in the Pediatric Dosing Module (PDM) can be customized by picking the age/weight percentile to use for min/max ranges.

2. Multiply patient weight (35.3 kg) by the retrieved minimum daily weight-based dose (0.2 each/kg/day) to yield a minimum daily dose of 7.06 each/day.
3. Multiply patient weight (35.3 kg) by the retrieved maximum daily weight-based dose (0.4 each/kg/day) to yield a maximum daily dose of 14.12 each/day.
4. For the given Clinical Formulation ID ([GCN_SEQNO](#)), query the [PDM Master Table](#) (RPDMMA1_PEDI_MSTR) and retrieve the not-to-exceed daily dose unit values using Pediatric Dosing Not-to-Exceed Daily Dose Units Quantity ([PDM_NTEU](#)) and the Pediatric Dosing Not-to-Exceed Daily Dose Units Form ([PDM_NTEUF](#)).

GCN_SEQNO	PDM_NTED	PDM_NTEDU
008941	000012.0000	02

5. Use the [PDM Unit Description Table](#) (RPDMUND0_PEDI_DOSE_UNIT_DESC) and the values from the PDM_NTEUF column to retrieve the dosing units from the PDM Units Code Description column ([PDM_UNDESC](#)).

PDM_UNIT	PDM_UNDESC
02	EA/DAY

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the PDM_UNDESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
V		
EA/DAY	each/day	each per day

PDM_NTEU is 12, which works in conjunction with the PDM_NTEUF value of 02 (EA/DAY) to express the not-to-exceed value of 12 each/day.

6. Compare maximum daily dose (14.12 each/day) to the not-to-exceed daily dose (12 each/day); use the lesser of the two values as the maximum daily dose.

This example shows that the weight-based min/max dosing range is 7.06 each/day to 12 each/day.

Part 3: Compare the Prescribed Daily Dose to the Weight-Based Dosing Range

Compare the prescribed daily dose to either the weight-based min/max dosing range from Part 2 or to the non-weight-based min/max dosing range from Part 1. For this example, use the weight-based min/max dosing range from Part 2.

1. Calculate the prescribed daily dose. The dose is to be given two times per day, so the prescribed daily dose is 2 capsules per day.

2. Compare the prescribed daily dose (2 capsules) to the retrieved daily dose range (7.06 each/day to 12 each/day). The daily dose of 2 capsules is less than the minimum value (7.06 capsules) and the maximum value (12 capsules), so the prescribed daily dose falls outside an acceptable range.
3. Since the prescribed dose does not fall within the acceptable range, the following message could be generated: "This daily dose is below the daily minimum."

 PDM does not generate warning messages. Your system must be programmed to generate appropriate messages when the prescribed daily dose falls outside an acceptable range.

4. Using the module's Master Table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the Dosing Age Source Identifier ([DOSING AGE SOURCE ID](#)) value. According to your business needs:

- Display the data source information to the end-user.
- Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that the populated dosing information may not be specific to this age range.

Calculating and Screening the Prescribed Daily Dose for a Multi-ingredient Product

PDM compares the prescribed daily dose for a multi-ingredient product to an acceptable daily dosage range. For a multi-ingredient product, the prescribed daily dose can only be screened using daily dose units.

For purposes of demonstrating this application, the following scenario is used: A physician prescribes Amoxicillin Trihydrate/Clavulanic acid tablets (Clinical Formulation ID [GCN_SEQNO, page 1569] 008991) for a 13-year-old patient. The patient is to take 5 tablets twice daily. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range.

1. Calculate the prescribed daily dose. The patient is to take 5 tablets twice daily, so multiply 5 times 2 to yield the prescribed daily dose of 10 tablets per day.
2. For a given Clinical Formulation ID (GCN_SEQNO), query the [PDM Master Table](#) (RPDMMA1_PEDI_MSTR) and retrieve the minimum daily dose units value using PDM Minimum Daily Dose Units Quantity column ([PDM_MNU](#)) and PDM Minimum Daily Dose Units Form column ([PDM_MNUF](#)) for the appropriate age. The patient age must be in the range noted by the PDM Minimum Dosing Age ([PDM_MNAGE](#)) column and the PDM Maximum Dosing Age ([PDM_MXAGE](#)) column.
3. Using the same table and Clinical Formulation ID (GCN_SEQNO), retrieve the maximum daily dose units value using PDM Maximum Daily Dose Units Quantity column ([PDM_MXU](#)) and PDM Maximum Daily Dose Units Form column ([PDM_MXUF](#)) for the appropriate age.

GCN_SEQNO	PDM_MNAGE	PDM_MXAGE	PDM_MNU	PDM_MNI	PDM_MXU	PDM_MXUF
008991	3285	6569	000003.00000	02	000003.00000	02

The PDM_MNAGE and PDM_MXAGE columns report age in days. One year equals 365 days.

4. Use the [PDM Unit Description Table](#) (RPDMUND0_PEDI_DOSE_UNIT_DESC) and the values from the PDM_MNUF and PDM_MXUF columns to retrieve the dosing units from the PDM Units Code Description column ([PDM_UNDESC](#)).

PDM_UNIT	PDM_UNDESC
02	EA/DAY

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the PDM_UNDESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
EA/DAY	each/day	each per day

PDM_MNU is 3, which works in conjunction with the PDM_MNUF value of 02 (EA/DAY) to express the minimum value of 3 tablets per day. The PDM_MXU is 3, which works in conjunction with the PDM_MXUF value of 02 (EA/DAY) to express the maximum of 3 tablets per day. Therefore, this example shows that the

minimum recommended dose unit for Amoxicillin Trihydrate/Clavulanic acid tablets is 3 each/day and that the maximum is 3 each/day.

5. Compare the prescribed daily dose (10 tablets) to the retrieved range (3 each/day to 3 each/day). The prescribed daily dose of 10 tablets is greater than the minimum and maximum value of 3 tablets. Therefore, the prescribed daily dose falls outside the acceptable range.
6. Since the prescribed dose does not fall within the acceptable range, the following message could be generated: "This daily dose exceeds the daily maximum."

 PDM does not generate warning messages. Your system must be programmed to generate appropriate messages when the prescribed daily dose falls outside an acceptable range.

7. Using the module's Master Table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the Dosing Age Source Identifier ([DOSING AGE SOURCE ID](#)) value. According to your business needs:
 - Display the data source information to the end-user.
 - Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that the populated dosing information may not be specific to this age range.

Calculating and Screening the Prescribed Daily Dose for Puffs, Applicator(s)ful, or Scoops

For products administered via inhalers, scoops, or applicators, the min/max daily units values are available in terms of gram weight per inhalation, scoop, or applicator.

- i** Min/max daily dose units for inhalers are coded based on one package size. When more than one package size exists, the data is coded based upon the most common size which is determined by the FDB clinical staff. Inhalers will use the minimum dosage based upon the smallest package size, and the maximum dosage based upon the largest package size. This provides a true dosing range, but does not reflect each individual container.

The following application shows how to determine the daily dose for a product administered via an inhaler and how to compare that daily dose to acceptable ranges retrieved from PDM.

For purposes of demonstrating this application, the following scenario is used: A 30-day supply of Alvesco 100 mcg aerosol inhaler (Clinical Formulation ID [GCN_SEQNO] 058671) is dispensed to a 15-year-old patient. A total of 6.1 g is dispensed to the patient. The patient is to take 2 puffs four times per day. The third party payer wants to screen the daily dose to see if it falls within an acceptable range.

Part 1: Determine the Prescribed Daily Dose in Units of Grams

Third party payers typically will only know the total quantity of the drug dispensed and the total number of days the supply will last (known as “days supply”); therefore, the prescribed daily dose is determined by dividing the total quantity dispensed (6.1 g) by the “days supply” (30 days). The result is 0.203 g/day.

Part 2: Retrieve Daily Dose Unit Ranges

1. For a given Clinical Formulation ID (**GCN_SEQNO**), query the **PDM Master Table** (**RPDMMA1_PEDI_MSTR**) and retrieve the minimum daily dose units value using PDM Minimum Daily Dose Units Quantity column (**PDM_MNU**) and PDM Minimum Daily Dose Units Form column (**PDM_MNUF**) for the appropriate age. The patient age must be in the range noted by the PDM Minimum Dosing Age (**PDM_MNAGE**) column and the PDM Maximum Dosing Age (**PDM_MXAGE**) column.
2. Using the same table and Clinical Formulation ID (**GCN_SEQNO**), retrieve the maximum daily dose units value using PDM Maximum Daily Dose Units Quantity column (**PDM_MXU**) and PDM Maximum Daily Dose Units Form column (**PDM_MXUF**) for the appropriate age.

- i** The PDM_MNAGE and PDM_MXAGE columns report age in days. One year equals 365 days.

Use the PDM Unit Description Table (**RPDMUND0_PEDI_DOSE_UNIT_DESC**, page 620) and the values from the PDM_MNUF and PDM_MXUF columns to retrieve the dosing units from the PDM Units Code Description column (**PDM_UNDESC**, page 2085).

PDM_UNIT	PDM_UNDESC
06	G/DAY

To retrieve the corresponding TJC-compliant unit descriptions, query the Units Description Table (RUNITSD0_UNITS_DESC, page 131) using the values from the PDM_UNDESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
G/DAY	gram/day	gram per day

PDM_MNU is 0.102, which works in conjunction with the PDM_MNUF value of 06 (G/DAY) to express the minimum value of 0.102 g/day. The PDM_MXU is 0.813, which works in conjunction with the PDM_MXUF value of 06 (G/DAY) to express the maximum of 0.813 g/day. Therefore, this example shows that the minimum recommendation is 0.102 g/day and that the maximum is 0.813 g/day.

Part 3: Compare the Prescribed Daily Dose to the Acceptable Range

1. To determine whether the dose falls within an acceptable range, compare the prescribed daily dose (0.203 g/day) to the Minimum Daily Dose Units value (0.102 g/day) and the Maximum Daily Dose Units values (0.813 g/day). The daily dose falls within the acceptable range so there are no dosing warnings to issue.
2. Using the module's Master Table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the Dosing Age Source Identifier ([DOSING AGE SOURCE ID](#)) value. According to your business needs:
 - Display the data source information to the end-user.
 - Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 3, indicating that the populated dosing information may not be specific to this age range.

Calculating and Screening the Prescribed Daily Dose for Ophthalmic Solution and Suspension Products

This application illustrates how to determine the minimum/maximum dosing per day for ophthalmic solution and suspension products. The prescribed daily dose can be screened using either daily dose strength or daily dose units. This example below uses a multi-ingredient product, which requires dose unit screening.

For purposes of demonstrating this application, the following scenario is used: A physician prescribes Tobramycin Sulfate/Dexamethasone eye drops (Clinical Formulation ID [GCN_SEQNO] 007986) for a 15-year-old patient. The patient is to administer one drop into one eye twice daily. The pharmacist wants to screen the daily dose to see if it falls within an acceptable range. The prescribed daily dose can be screened using either daily dose strength or daily dose units.

1. Calculate the prescribed daily dose. FDB uses a convention of 20 drops/mL to determine droplet volume. To determine the volume of one drop, divide 1 by 20 to yield 0.05 mL. Since the prescribed dose is 2 drops, multiply 2 by 0.05 to yield 0.100 mL.



Dose units are reported in milliliters (mL) to match the drug form.

2. For a given Clinical Formulation ID ([GCN_SEQNO](#)), query the [PDM Master Table](#) ([RPDMMA1_PEDI_MSTR](#)) table and retrieve the minimum daily dose units value using PDM Minimum Daily Dose Units Quantity column ([PDM_MNU](#)) and PDM Minimum Daily Dose Units Form column ([PDM_MNUF](#)) for the appropriate age of the patient. The patient age must be in the range noted by the PDM Minimum Dosing Age ([PDM_MNAGE](#)) column and the PDM Maximum Dosing Age ([PDM_MXAGE](#)) column.
3. Using the same table and Clinical Formulation ID ([GCN_SEQNO](#)), retrieve the maximum daily dose units value using PDM Maximum Daily Dose Units Quantity column ([PDM_MXU](#)) and PDM Maximum Daily Dose Units Form column ([PDM_MXUF](#)).

GCN_SEQNO	PDM_MNAGE	PDM_MXAGE	PDM_MNU	PDM_MNI	PDM_MXU	PDM_MXUF
007986	4380	6569	000000.200000 0	04	000001.200000 0	04



The PDM_MNAGE and PDM_MXAGE columns report age in days. One year equals 365 days.

4. Use the [PDM Unit Description Table](#) ([RPDMUND0_PEDI_DOSE_UNIT_DESC](#)) and the values from the PDM_MNUF and PDM_MXUF columns to retrieve the dosing units from the PDM Units Code Description column ([PDM_UNDESC](#)).

PDM_UNIT	PDM_UNDESC
04	ML/DAY

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) ([RUNITSD0_UNITS_DESC](#)) using the values from the PDM_UNDESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
V	ML/DAY	milliliter per day

PDM_MNU is 0.2, which works in conjunction with the PDM_MNUF value of 04 (ML/DAY) to express the minimum value of 0.200 mL/day. The PDM_MXU is 1.200, which works in conjunction with the PDM_MXUF value of 04 (ML/DAY) to express the maximum of 1.200 mL/day. Therefore, this example shows that the minimum value is 0.200 mL/day and that the maximum is 1.200 mL/day.

5. Compare the prescribed daily dose (0.100 mL) to the retrieved range (0.200 mL/day to 1.200 mL/day). The prescribed daily dose of 0.100 mL is less than the minimum value (0.200 mL/day) and less than the maximum value (1.200 mL/day). Therefore, the prescribed daily dose falls outside the acceptable range.
6. Since the prescribed dose does not fall within the acceptable range, the following message can be generated: "This daily dose is below the daily minimum."

PDM does not generate warning messages. Your system must be programmed to generate appropriate messages when the prescribed daily dose falls outside an acceptable range.

7. Using the module's Master Table and Clinical Formulation ID (**GCN_SEQNO**), retrieve the Dosing Age Source Identifier (**DOSING AGE SOURCE ID**) value. According to your business needs:
 - Display the data source information to the end-user.
 - Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE ID equals 2, indicating that the populated dosing information is for this age range.

NEOM Applications

This section provides information about the practical application of data contained in the Neonatal and Infant Dosage Range Check Module (NEOM). The following sections are included:

FDB offers a variety of drug concepts and their identifiers to support a range of applications using the data in MedKnowledge. These identifiers represent drug products, ingredients, and formulations and are referred to as Multiple Access Points (MAPs). From a development point of view, familiarity with the Multiple Access Points™ (MAPs™) section is advantageous before attempting the applications contained in this section.

Performing Dosage Range Checking

Considerations for Using NEOM

Performing Dosage Range Checking

NEOM can be used to perform dosage range checking when a patient's reason for use is either known or unknown.

-  For an example of performing dosage range checking when a patient's reason for use is known, see [Performing Dosage Range Checking Using a DxID or ICD Code](#).

Dosage range checking can be performed when some patient information is unknown, but the information retrieved is less specific. For example, you can query for dosage range checking and not specify a dose type which results in all of the available dose types being retrieved. If you still want to perform dosage range checking without knowing the dose type, you can default to a dose type, such as a maintenance dose, and present the dosage range information to the end user prefaced with a note that the range information is using the maintenance dose type as the default.

-  When performing dosage range checking it may be necessary to convert the NEOM units to the prescribed units. When performing dosage range checking on extemporaneously compounded drugs, each active ingredient should be screened individually.

The following application assumes familiarity with the various drug concepts and their identifiers and how to access clinical information. This application begins at the Clinical Formulation level with the Clinical Formulation ID (GCN_SEQNO). See [Multiple Access Points™ \(MAPs™\)](#) for more information.

The examples following the application demonstrate the following:

- Example—Dose Range Checking for a Neonatal Patient
- Example—Dose Range Checking of Non-patient Parameters
- Example—Performing Dosage Range Checking of a Continuous Infusion
- Example—Performing Dose Range Checking of an Intermittent Infusion

Part 1: Collect Dosage Range Check Data

This part of the application collects the appropriate data for dosage range checking.

1. Select records from the [NEOM Master Table](#) (RNEOMMA1_MSTR) where the:
 - a. Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
 - b. NEOM Route Code ([NEOM_ROUTE_CODE](#)) column equals the route of administration for the prescribed medication, and
 - c. NEOM Dose Type Code ([NEOM_DOSE_TYPE_CODE](#)) column equals the dose type for the prescribed medication, and
 - d. NEOM High Age in Days ([NEOM_HIGH AGE DAYS](#)) column is greater than or equal to the patient age in days, and

- e. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).
2. Select the Dosing Age Source Identifier (**DOSING AGE SOURCE ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.
 3. Check the NEOM Weight Required Indicator (**NEOM WEIGHT REQ IND**):
 - a. If **NEOM_WEIGHT_REQ_IND** equals 0, the current weight is not required to select the screening record.
 - b. If **NEOM_WEIGHT_REQ_IND** equals 1, the current weight is required to select the screening record.
 4. Check the NEOM Gestational Birth Age Required Indicator (**NEOM_GEST_BIRTH_AGE_REQ_IND**):
 - a. If **NEOM_GEST_BIRTH_AGE_REQ_IND** equals 0, the gestational age at birth is not required to select the screening record.
 - b. If **NEOM_GEST_BIRTH_AGE_REQ_IND** equals 1, the gestational age at birth is required to select the screening record.
 5. Filter the records returned in step 1 where the:
 - a. NEOM Low Gestational Age at Birth in Weeks (**NEOM_LOW_GEST_BIRTH_AGE_WEEKS**) column is less than or equal to the patient's gestational birth age in weeks, and
 - b. NEOM High Gestational Age at Birth in Weeks (**NEOM_HIGH_GEST_BIRTH_AGE_WEEKS**) column is greater than or equal to the patient's gestational birth age in weeks.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed. See Considerations for [Generating DRCM Warning Messages](#) to view sample user alerts for each of the dose range checks.

1. Compare the prescribed frequency of administration per day to NEOM Low Frequency (**NEOM_LOW_FREQUENCY**) and NEOM High Frequency (**NEOM_HIGH_FREQUENCY**):
 - a. If the prescribed frequency is *equal to* either **NEOM_LOW_FREQUENCY** or **NEOM_HIGH_FREQUENCY**, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* **NEOM_LOW_FREQUENCY**, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug (sample message 8).

- c. If the prescribed frequency is *greater than* NEOM_HIGH_FREQUENCY, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug (sample message 9).
2. Compare the prescribed duration of therapy in days to NEOM Low Duration of Therapy (**NEOM_LOW_DURATION_OF_TX**) and NEOM High Duration of Therapy (**NEOM_HIGH_DURATION_OF_TX**):
 - a. If the prescribed duration of therapy is *equal to* either NEOM_LOW_DURATION_OF_TX or NEOM_HIGH_DURATION_OF_TX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* NEOM_LOW_DURATION_OF_TX, alert the user that the prescribed duration is less than the recommended low duration for the drug (sample message 10).
 - c. If the prescribed duration of therapy is *greater than* NEOM_HIGH_DURATION_OF_TX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.
3. Compare the prescribed daily dose (convert units if necessary) to NEOM Low Dose per Day (**NEOM_LOW_DOSE_PER_DAY**) and NEOM High Dose per Day (**NEOM_HIGH_DOSE_PER_DAY**):
 - a. If the prescribed daily dose is *equal to* either NEOM_LOW_DOSE_PER_DAY or NEOM_HIGH_DOSE_PER_DAY, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed daily dose is *less than* NEOM_LOW_DOSE_PER_DAY, alert the user that the prescribed dose is less than the recommended low daily dose for the drug (sample message 1).
 - c. If the prescribed daily dose is *greater than* NEOM_HIGH_DOSE_PER_DAY, compare the recommended maximum daily dose to the prescribed daily dose.
4. Compare the prescribed daily dose (convert units if necessary) to NEOM Maximum Dose per Day (**NEOM_MAX_DOSE_PER_DAY**):
 - a. If the prescribed daily dose is *equal to or less than* NEOM_MAX_DOSE_PER_DAY, alert the user that the prescribed dose exceeds the recommended high daily dose for the drug but is less than the recommended maximum daily dose (sample message 2).
 - b. If the prescribed daily dose is *greater than* NEOM_MAX_DOSE_PER_DAY, alert the user that the prescribed dose exceeds the recommended maximum daily dose for the drug (sample message 3).
5. Compare the prescribed single dose (convert units if necessary) to NEOM Maximum Single Dose (**NEOM_MAX_SINGLE_DOSE**) and the Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**):
 - a. If the prescribed single dose is *equal to or less than* NEOM_MAX_SINGLE_DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed individual dose is *greater than* either NEOM_MAX_SINGLE_DOSE and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum

single dose for the drug (sample message 4a, 4b, or 4c).

6. Display the NEOM Maximum Lifetime Dose (**NEOM_MAX_LIFE_DOSE**) value:
 - a. If **NEOM_MAX_LIFE_DOSE** equals 0, the maximum lifetime dose is unavailable.
 - b. If **NEOM_MAX_LIFE_DOSE** does not equal 0, display the maximum lifetime dose value for the prescribed medication (sample message 15).

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's NEOM Renal Impairment Indicator (**NEOM_RENAL_IMPAIRMENT_IND**):
 - a. If **NEOM_RENAL_IMPAIRMENT_IND** equals N, the order is acceptable and does not produce an alert.
 - b. If **NEOM_RENAL_IMPAIRMENT_IND** equals Y, alert the user that the dose may need to be adjusted for renal impairment (sample message 5).
2. Display the patient's creatinine clearance (convert units if necessary) and the NEOM Creatinine Clearance Threshold (**NEOM_CREATININE_CLR_THRESHOLD**) if necessary:
 - a. If **NEOM_CREATININE_CLR_THRESHOLD** equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
 - b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
 - c. If the patient's creatinine clearance is *less than* **NEOM_CREATININE_CLR_THRESHOLD**, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
 - d. If the patient's creatinine clearance is *greater than* **NEOM_CREATININE_CLR_THRESHOLD**, continue screening the order without displaying any additional messages.
3. Check the NEOM Hepatic Impairment Indicator (**NEOM_HEPATIC_IMPAIRMENT_IND**):
 - a. If **NEOM_HEPATIC_IMPAIRMENT_IND** equals N, the order is acceptable and does not produce an alert.
 - b. If **NEOM_HEPATIC_IMPAIRMENT_IND** equals Y, alert the user that the dose may need to be adjusted for hepatic impairment (sample message 7).
4. Display the NEOM Low Elimination Half Life (**NEOM_LOW_ELIM_HALF_LIFE**) and NEOM High Elimination Half Life (**NEOM_HIGH_ELIM_HALF_LIFE**) range (or value):
 - a. If both **NEOM_LOW_ELIM_HALF_LIFE** and **NEOM_HIGH_ELIM_HALF_LIFE** equal 0, the elimination half-life range (or value) is unavailable.
 - b. If either **NEOM_LOW_ELIM_HALF_LIFE** or **NEOM_HIGH_ELIM_HALF_LIFE** does not equal 0, display the elimination half-life range (or value) for the patient. (sample message 14).

Example—Dose Range Checking for a Neonatal Patient

A patient has a prescription for a loading dose (NEOM_DOSE_TYPE_CODE 01) of Digoxin 0.25 mg/mL (Clinical Formulation ID [GCN_SEQNO, page 1569] 15) 30 mcg intravenous(NEOM_ROUTE_CODE 052) given in 3 divided doses to be given as follows: 15 mcg now followed by 7.5 mcg for 2 doses. The reason for use is not available. The patient is 10 days old and weighs 1,500 grams (1.5 kg). The gestational age at birth was 29 weeks.

Part 1: Collect Dosage Range Check Data

1. Select records from the **NEOM Master Table** (RNEOMMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. NEOM Route Code (**NEOM_ROUTE_CODE**) column equals the route of administration for the prescribed medication, and
 - c. NEOM Dose Type Code (**NEOM_DOSE_TYPE_CODE**) column equals the dose type for the prescribed medication, and
 - d. NEOM High Age in Days (**NEOM_HIGH_AGE_DAYS**) column is greater than or equal to the patient age in days, and
 - e. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).

GCN_SEQNO	15	15
DR2_RT	052	052
DR2_DOSTPI	01	01
DR2_LOAGED	0	0
DR2_HIAGED	119	119
DXID	4892	4892

2. Select the Dosing Age Source Identifier (**DOSING_AGE_SOURCE_ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.
In this example, DOSING_AGE_SOURCE_ID equals 3, indicating that this supporting reference may not be specific to the given age group.
3. Check the NEOM Weight Required Indicator (**NEOM_WEIGHT_REQ_IND**):
 - a. If **NEOM_WEIGHT_REQ_IND** equals 0, the current weight is not required to select the screening record.

- b. If NEOM_WEIGHT_REQ_IND equals 1, the current weight is required to select the screening record.

In this example, NEOM_WEIGHT_REQ_IND equals 0, indicating that the current weight is not required to select the screening record. The system checks the gestational age at birth required indicator.

4. Check the NEOM Gestational Birth Age Required Indicator ([NEOM_GEST_BIRTH_AGE_REQ_IND](#)):

- If NEOM_GEST_BIRTH_AGE_REQ_IND equals 0, the gestational age at birth is not required to select the screening record.
- If NEOM_GEST_BIRTH_AGE_REQ_IND equals 1, the gestational age at birth is required to select the screening record.

In this example, NEOM_GEST_BIRTH_AGE_REQ_IND equals 1. The system prompts the user to enter the gestational age of the patient at birth in weeks.

5. Filter the records returned in step 1 where the:

- NEOM Low Gestational Age at Birth in Weeks ([NEOM_LOW_GEST_BIRTH_AGE_WEEKS](#)) column is less than or equal to the patient's gestational birth age in weeks, and
- NEOM High Gestational Age at Birth in Weeks ([NEOM_HIGH_GEST_BIRTH_AGE_WEEKS](#)) column is greater than or equal to the patient's gestational birth age in weeks.

GCN_SEQNO	15	15
DR2_RT	052	052
DR2_DOSTPI	01	01
DR2_LOAGED	0	0
DR2_HIAGED	119	119
DXID	4892	4892
NEOM_LOW_GEST_BIRTH_AGE_WEEKS		370
NEOM_HIGH_GEST_BIRTH_AGE_WEEKS	0	36

In this example, the weight range of 0 to 36 weeks is retrieved by the system after the user enters the patient's gestational age of the patient at birth of 29 weeks. Using the retrieved record, the system begins dose range checking.

Part 2: Dose Range Checking

This section compares the prescription information with the data retrieved in Part 1 and displays alerts when needed.

1. Compare the prescribed frequency of administration per day to NEOM Low Frequency ([NEOM_LOW_FREQUENCY](#)) and NEOM High Frequency ([NEOM_HIGH_FREQUENCY](#)):
 - a. If the prescribed frequency is *equal to* either NEOM_LOW_FREQUENCY or NEOM_HIGH_FREQUENCY, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* NEOM_LOW_FREQUENCY, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug (sample message 8).
 - c. If the prescribed frequency is *greater than* NEOM_HIGH_FREQUENCY, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug (sample message 9).

NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY	Prescribed Frequency
1	3	3 per day

In this example, the prescribed frequency of 3 per day is *within* the NEOM_LOW_FREQUENCY and the NEOM_HIGH_FREQUENCY value range of 1 to 3 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to NEOM Low Duration of Therapy ([NEOM_LOW_DURATION_OF_TX](#)) and NEOM High Duration of Therapy ([NEOM_HIGH_DURATION_OF_TX](#)):
 - a. If the prescribed duration of therapy is *equal to* either NEOM_LOW_DURATION_OF_TX or NEOM_HIGH_DURATION_OF_TX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* NEOM_LOW_DURATION_OF_TX, alert the user that the prescribed duration is less than the recommended low duration for the drug (sample message 10).
 - c. If the prescribed duration of therapy is *greater than* NEOM_HIGH_DURATION_OF_TX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

NEOM_LOW_DURATION_OF_TX	NEOM_HIGH_DURATION_OF_TX	Prescribed duration
1	2	1 day

In this example, the prescribed duration is *equal to* the NEOM_LOW_DURATION_OF_TX value of 1 day. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to NEOM Low Dose per Day (

NEOM_LOW_DOSE_PER_DAY) and NEOM High Dose per Day (NEOM_HIGH_DOSE_PER_DAY):

- a. If the prescribed daily dose is *equal to* either NEOM_LOW_DOSE_PER_DAY or NEOM_HIGH_DOSE_PER_DAY, or within the value range, the order is acceptable and does not produce an alert.
- b. If the prescribed daily dose is *less than* NEOM_LOW_DOSE_PER_DAY, alert the user that the prescribed dose is less than the recommended low daily dose for the drug (sample message 1).
- c. If the prescribed daily dose is *greater than* NEOM_HIGH_DOSE_PER_DAY, compare the recommended maximum daily dose to the prescribed daily dose.

The NEOM Unit Code Description (NEOM_UNIT_CODE_DESC) column is from the [NEOM Unit Code Description Table \(RNEOMUD0_UNITS_DESC\)](#).

NEOM_LOW_DOSE_PER_DAY	15
NEOM_LOW_DOSE_UNIT_CODE	46
NEOM_UNIT_CODE_DESC	MCG/KG/DAY
NEOM_HIGH_DOSE_PER_DAY	35
NEOM_HIGH_DOSE_UNIT_CODE	46
NEOM_UNIT_CODE_DESC	MCG/KG/DAY
Prescribed dose per day	30 mcg/day

In this example, 15 mcg is prescribed once and 7.5 is prescribed twice over 1 day. Therefore, the dose per day is $15 + (7.5 \times 2) = 30$ mcg/day.

Since the retrieved units are given in mcg/kg/day and the prescription is written in mcg/day, it is necessary to convert the units of measure. The following table shows the data after the conversion.

NEOM_LOW_DOSE_PER_DAY	22.5
NEOM_LOW_DOSE_UNIT_CODE	08
NEOM_UNIT_CODE_DESC	MCG/DAY
NEOM_HIGH_DOSE_PER_DAY	52.5
NEOM_HIGH_DOSE_UNIT_CODE	08
NEOM_UNIT_CODE_DESC	MCG/DAY
Prescribed dose per day	30 mcg/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table \(RUNITS0_UNITS_DESC\)](#) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MCG/DAY	mcg/day	microgram per day

In this example, the prescribed dose of 30 mcg/day is *within* the NEOM_LOW_DOSE_PER_DAY and NEOM_HIGH_DOSE_PER_DAY value range. The system passes the order and continues screening.

4. Compare the prescribed single dose (convert units if necessary) to NEOM Maximum Single Dose ([NEOM_MAX_SINGLE_DOSE](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):
 - a. If the prescribed single dose is *equal to or less than* NEOM_MAX_SINGLE_DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed individual dose is *greater than* either NEOM_MAX_SINGLE_DOSE and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug (sample message 4a, 4b, or 4c).

NEOM_MAX_SINGLE_DOSE	NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
20	19	0.6	28	15 mcg
20	19	0.6	28	7.5 mcg
20	19	0.6	28	7.5 mcg

Since the retrieved units are given in mcg/kg and mg and the prescription is written in mcg, it is necessary to convert the units of measure. The following table shows the data after the conversion.

NEOM_MAX_SINGLE_DOSE	NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
30	33	600	33	15 mcg
30	33	600	33	7.5 mcg
30	33	600	33	7.5 mcg

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MCG	mcg	microgram

The prescribed single doses of 15 mcg, 7.5 mcg, and 7.5 mcg are *less than* the NEOM_MAX_SINGLE_DOSE and NTE_SINGLE_DOSE values. The system passes the order and continues screening.

5. Display the NEOM Maximum Lifetime Dose (**NEOM_MAX_LIFE_DOSE**) value:

- If NEOM_MAX_LIFE_DOSE *equals* 0, the maximum lifetime dose is unavailable.
- If NEOM_MAX_LIFE_DOSE *does not equal* 0, display the maximum lifetime dose value for the prescribed medication (sample message 15).

In this example, the maximum lifetime dose *equals* 0 and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's NEOM Renal Impairment Indicator (**NEOM_RENAL_IMPAIRMENT_IND**):

- If NEOM_RENAL_IMPAIRMENT_IND equals *N*, the order is acceptable and does not produce an alert.
- If NEOM_RENAL_IMPAIRMENT_IND equals *Y*, alert the user that the dose may need to be adjusted for renal impairment (sample message 5).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for renal impairment and begins creatinine clearance checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the NEOM Creatinine Clearance Threshold (**NEOM_CREATININE_CLR_THRESHOLD**) if necessary:

- If NEOM_CREATININE_CLR_THRESHOLD equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- If the patient's creatinine clearance is *less than* NEOM_CREATININE_CLR_THRESHOLD, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- If the patient's creatinine clearance is *greater than* NEOM_CREATININE_CLR_THRESHOLD, continue screening the order without displaying any additional messages.

NEOM_CREATININE_CLR_THRESHOLD	NEOM_CREATININE_CLR_UNIT_CODE	Description	Patient's Creatinine Clearance
50	01	ML/MIN	---

Concatenate the NEOM_CREATININE_CLR_THRESHOLD value of 50 with the NEOM_CREATININE_CLR_UNIT_CODE description of ML/MIN to display the creatinine clearance threshold of 50 ML/MIN to the user.

In this example, the patient's creatinine clearance is *unavailable*. The system alerts the user that a drug dosage adjustment should be considered and checks the order to determine if an hepatic impairment adjustment is needed.

3. Check the NEOM Hepatic Impairment Indicator ([NEOM_HEPATIC_IMPAIRMENT_IND](#)):

- If NEOM_HEPATIC_IMPAIRMENT_IND equals *N*, the order is acceptable and does not produce an alert.
- If NEOM_HEPATIC_IMPAIRMENT_IND equals *Y*, alert the user that the dose may need to be adjusted for hepatic impairment (sample message 7).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for hepatic impairment and checks the display availability of the elimination half-life values.

4. Display the NEOM Low Elimination Half Life ([NEOM_LOW_ELIM_HALF_LIFE](#)) and NEOM High Elimination Half Life ([NEOM_HIGH_ELIM_HALF_LIFE](#)) range (or value):

- If both NEOM_LOW_ELIM_HALF_LIFE and NEOM_HIGH_ELIM_HALF_LIFE *equal 0*, the elimination half-life range (or value) is unavailable.
- If either NEOM_LOW_ELIM_HALF_LIFE or NEOM_HIGH_ELIM_HALF_LIFE *does not equal 0*, display the elimination half-life range (or value) for the patient. (sample message 14).

NEOM_LOW_ELIM_HALF_LIFE	NEOM_HIGH_ELIM_HALF_LIFE	NEOM_HALF_LIFE_UNIT_CODE	Description
18	170	02	Hours

In this example, the elimination half-life for the order *does not equal 0*. The system displays the elimination half-life range as 18 hours - 170 hours.

Example—Dose Range Checking of Non-patient Parameters

A patient has a prescription for a single dose (NEOM_DOSE_TYPE_CODE 07) of palivizumab (Clinical Formulation ID [GCN_SEQNO] 59246) 100 mg/mL vial intramuscular (NEOM_ROUTE_CODE 040) 15 mg/kg once per day. No reason for use is supplied. The patient is 1 year old (365 days) and weighs 22 pounds (10 kg).

Part 1: Collect Dosage Range Check Data

- Select records from the [NEOM Master Table](#) (RNEOMMA1_MSTR) where the:

- a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (GCN_SEQNO) value of the prescribed medication, and
- b. NEOM Route Code (**NEOM_ROUTE_CODE**) column equals the route of administration for the prescribed medication, and
- c. NEOM Dose Type Code (**NEOM_DOSE_TYPE_CODE**) column equals the dose type for the prescribed medication, and
- d. NEOM High Age in Days (**NEOM_HIGH_AGE_DAYS**) column is greater than or equal to the patient age in days, and
- e. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).

GCN_SEQNO	59246
NEOM_ROUTE_CODE	040
NEOM_DOSE_TYPE_CODE	02
NEOM_LOW_AGE_DAYS	0
NEOM_HIGH_AGE_DAYS	1094
DXID	4892

2. Select the Dosing Age Source Identifier (**DOSING_AGE_SOURCE_ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
- a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING_AGE_SOURCE_ID equals 3, indicating that this supporting reference may not be specific to the given age group.

Part 2: Dose Range Checking

1. Compare the prescribed frequency of administration per day to NEOM Low Frequency (**NEOM_LOW_FREQUENCY**) and NEOM High Frequency (**NEOM_HIGH_FREQUENCY**):
 - a. If the prescribed frequency is *equal to* either NEOM_LOW_FREQUENCY or NEOM_HIGH_FREQUENCY, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* NEOM_LOW_FREQUENCY, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug (sample message 8).
 - c. If the prescribed frequency is *greater than* NEOM_HIGH_FREQUENCY, alert the user that the

prescribed frequency exceeds the recommended maximum frequency for the drug (sample message 9).

NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY	Prescribed Frequency
1	1	1 per day

In this example, the prescribed frequency of 1 per day *equals* the NEOM_LOW_FREQUENCY and NEOM_HIGH_FREQUENCY values of 1. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to NEOM Low Duration of Therapy ([NEOM_LOW_DURATION_OF_TX](#)) and NEOM High Duration of Therapy ([NEOM_HIGH_DURATION_OF_TX](#)):
 - a. If the prescribed duration of therapy is *equal to* either NEOM_LOW_DURATION_OF_TX or NEOM_HIGH_DURATION_OF_TX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* NEOM_LOW_DURATION_OF_TX, alert the user that the prescribed duration is less than the recommended low duration for the drug (sample message 10).
 - c. If the prescribed duration of therapy is *greater than* NEOM_HIGH_DURATION_OF_TX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY	Prescribed Duration
1	1	1 day

In this example, the prescribed frequency is *equal to* the NEOM_LOW_DURATION_OF_TX and NEOM_HIGH_DURATION_OF_TX values of 1 day. The system passes the order and continues screening.

3. Compare the prescribed daily dose (convert units if necessary) to NEOM Low Dose per Day ([NEOM_LOW_DOSE_PER_DAY](#)) and NEOM High Dose per Day ([NEOM_HIGH_DOSE_PER_DAY](#)):
 - a. If the prescribed daily dose is *equal to* either NEOM_LOW_DOSE_PER_DAY or NEOM_HIGH_DOSE_PER_DAY, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed daily dose is *less than* NEOM_LOW_DOSE_PER_DAY, alert the user that the prescribed dose is less than the recommended low daily dose for the drug (sample message 1).
 - c. If the prescribed daily dose is *greater than* NEOM_HIGH_DOSE_PER_DAY, compare the recommended maximum daily dose to the prescribed daily dose.

NEOM_LOW_DOSE_PER_DAY	13.5
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NEOM_LOW_DOSE_UNIT_CODE	02
NEOM_UNIT_CODE_DESC	MG/KG/DAY
NEOM_HIGH_DOSE_PER_DAY	16.5
NEOM_HIGH_DOSE_UNIT_CODE	02
NEOM_UNIT_CODE_DESC	MG/KG/DAY
Prescribed dose per day	15 mg/kg

Since the retrieved and prescribed units are given in mg/kg/day, it is necessary to calculate the units of measure. The following table shows the data after the conversion.

NEOM_LOW_DOSE_PER_DAY	135
NEOM_LOW_DOSE_UNIT_CODE	01
NEOM_UNIT_CODE_DESC	MG/DAY
NEOM_HIGH_DOSE_PER_DAY	135
NEOM_HIGH_DOSE_UNIT_CODE	01
NEOM_UNIT_CODE_DESC	MG/DAY
Prescribed dose per day	150 mg/kg

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/DAY	mg/day	milligram per day

The prescribed daily dose is *less than* the NEOM_LOW_DOSE_PER_DAY value of 135 mg/day. The system passes the order and continues screening.

4. Compare the prescribed single dose (convert units if necessary) to NEOM Maximum Single Dose ([NEOM_MAX_SINGLE_DOSE](#)) and the Not-to-Exceed Amount Per Single Dose ([NTE_SINGLE_DOSE](#)):
 - a. If the prescribed single dose is *equal to or less than* NEOM_MAX_SINGLE_DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed individual dose is *greater than* either NEOM_MAX_SINGLE_DOSE and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug (sample message 4a, 4b, or 4c).

NEOM_MAX_SINGLE_DOSE	NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
16.5	03	16.5	03	15 mg/kg

To retrieve the corresponding TJC-compliant unit descriptions, query the **Units Description Table** (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG	mg	milligram

In this example, the prescribed dose of 15 mg/kg is *less than* the NEOM_MAX_SINGLE_DOSE and NTE_SINGLE_DOSE values of 16.5 mg/kg. The system passes the order and continues screening.

5. Display the NEOM Maximum Lifetime Dose (**NEOM_MAX_LIFE_DOSE**) value:

- If NEOM_MAX_LIFE_DOSE equals 0, the maximum lifetime dose is unavailable.
- If NEOM_MAX_LIFE_DOSE does not equal 0, display the maximum lifetime dose value for the prescribed medication (sample message 15).

In this example, the maximum lifetime dose *equals 0* and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's NEOM Renal Impairment Indicator (

NEOM_RENAL_IMPAIRMENT_IND):

- If NEOM_RENAL_IMPAIRMENT_IND equals N, the order is acceptable and does not produce an alert.
- If NEOM_RENAL_IMPAIRMENT_IND equals Y, alert the user that the dose may need to be adjusted for renal impairment (sample message 5).

This example has a *negative* return. The system passes the order and begins creatinine clearance checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the NEOM Creatinine Clearance Threshold (**NEOM_CREATININE_CLR_THRESHOLD**) if necessary:

- If NEOM_CREATININE_CLR_THRESHOLD equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).

- c. If the patient's creatinine clearance is *less than* NEOM_CREATININE_CLR_THRESHOLD, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- d. If the patient's creatinine clearance is *greater than* NEOM_CREATININE_CLR_THRESHOLD, continue screening the order without displaying any additional messages.

In this example, the patient's creatinine clearance *equals* 0. The system alerts the user that creatinine clearance threshold checking is unavailable and checks the order to determine if an hepatic impairment adjustment is needed.

3. Check the NEOM Hepatic Impairment Indicator ([NEOM_HEPATIC_IMPAIRMENT_IND](#)):

- a. If NEOM_HEPATIC_IMPAIRMENT_IND equals N, the order is acceptable and does not produce an alert.
- b. If NEOM_HEPATIC_IMPAIRMENT_IND equals Y, alert the user that the dose may need to be adjusted for hepatic impairment (sample message 7).

This example has a *negative* return. The system passes the order and checks the display availability of the elimination half-life values.

4. Display the NEOM Low Elimination Half Life ([NEOM_LOW_ELIM_HALF_LIFE](#)) and NEOM High Elimination Half Life ([NEOM_HIGH_ELIM_HALF_LIFE](#)) range (or value):

- a. If both NEOM_LOW_ELIM_HALF_LIFE and NEOM_HIGH_ELIM_HALF_LIFE *equal* 0, the elimination half-life range (or value) is unavailable.
- b. If either NEOM_LOW_ELIM_HALF_LIFE or NEOM_HIGH_ELIM_HALF_LIFE *does not equal* 0, display the elimination half-life range (or value) for the patient. (sample message 14).

NEOM_LOW_ELIM_HALF_LIFE	NEOM_HIGH_ELIM_HALF_LIFE	NEOM_HALF_LIFE_UNIT_CODE	Description
18	20	03	Days

In this example, the elimination half-life for the order *does not equal* 0 and is available for display. The system displays the elimination half-life range as 18 days - 20 days.

Example—Performing Dosage Range Checking of a Continuous Infusion

A patient has a prescription for a maintenance dose (NEOM_DOSE_TYPE_CODE 02) of Ondansetron HCL 4 mg/2 ml Vial (Clinical Formulation ID [GCN_SEQNO] 61716) 0.25 mg/h continuous infusion (NEOM_ROUTE_CODE 006) for 36 hours every 21 days. The reason for use is not available (DXID 4892). The patient is 8 months old (243 days) and weighs 22 lbs (10 kg).

Please note that NEOM does not screen administration information or course of treatment information

often included within infusion orders. For example, the “every 21 days” course of treatment requirement in the order above.

Part 1: Collect Dosage Range Check Data

1. Select records from the **NEOM Master Table** (RNEOMMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. NEOM Route Code (**NEOM_ROUTE_CODE**) column equals the route of administration for the prescribed medication, and
 - c. NEOM Dose Type Code (**NEOM_DOSE_TYPE_CODE**) column equals the dose type for the prescribed medication, and
 - d. NEOM High Age in Days (**NEOM_HIGH AGE DAYS**) column is greater than or equal to the patient age in days, and
 - e. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).

GCN_SEQNO	61716
NEOM_ROUTE_CODE	006
NEOM_DOSE_TYPE_CODE	02
NEOM_LOW_AGE_DAYS	0
NEOM_HIGH_AGE_DAYS	1094
DXID	4892

2. Select the Dosing Age Source Identifier (**DOSING_AGE_SOURCE_ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING_AGE_SOURCE_ID equals 3, indicating that this supporting reference may not be specific to the given age group.

3. Check the NEOM Weight Required Indicator (**NEOM_WEIGHT_REQ_IND**):
 - a. If **NEOM_WEIGHT_REQ_IND** equals 0, the current weight is not required to select the screening record.
 - b. If **NEOM_WEIGHT_REQ_IND** equals 1, the current weight is required to select the screening record.

In this example, NEOM_WEIGHT_REQ_IND equals *0*, indicating that the current weight is not required to select the screening record. The system checks the gestational age at birth required indicator.

4. Check the NEOM Gestational Birth Age Required Indicator ([NEOM_GEST_BIRTH_AGE_REQ_IND](#)):
 - a. If NEOM_GEST_BIRTH_AGE_REQ_IND *equals 0*, the gestational age at birth is not required to select the screening record.
 - b. If NEOM_GEST_BIRTH_AGE_REQ_IND *equals 1*, the gestational age at birth is required to select the screening record.

In this example, NEOM_GEST_BIRTH_AGE_REQ_IND equals *0*, indicating that the gestational age at birth is not required.

Part 2: Dose Range Checking

1. Compare the prescribed frequency of administration per day to NEOM Low Frequency ([NEOM_LOW_FREQUENCY](#)) and NEOM High Frequency ([NEOM_HIGH_FREQUENCY](#)):
 - a. If the prescribed frequency is *equal to* either NEOM_LOW_FREQUENCY or NEOM_HIGH_FREQUENCY, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed frequency is *less than* NEOM_LOW_FREQUENCY, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug (sample message 8).
 - c. If the prescribed frequency is *greater than* NEOM_HIGH_FREQUENCY, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug (sample message 9).

NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY	Prescribed Frequency
1	0	2 days

In this example, the prescribed duration of therapy is *greater than* the DR2_HIDOTX value of *0* days. The system compares the recommended maximum duration to the prescribed duration.

2. Compare the prescribed duration of therapy in days to NEOM Low Duration of Therapy ([NEOM_LOW_DURATION_OF_TX](#)) and NEOM High Duration of Therapy ([NEOM_HIGH_DURATION_OF_TX](#)):
 - a. If the prescribed duration of therapy is *equal to* either NEOM_LOW_DURATION_OF_TX or NEOM_HIGH_DURATION_OF_TX, or within the value range, the order is acceptable and does not produce an alert.

- b. If the prescribed duration of therapy is *less than* NEOM_LOW_DURATION_OF_TX, alert the user that the prescribed duration is less than the recommended low duration for the drug (sample message 10).
- c. If the prescribed duration of therapy is *greater than* NEOM_HIGH_DURATION_OF_TX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

NEOM_MAX_DURATION_OF_TX	Prescribed Duration
0	2 days

In this example, NEOM_MAX_DURATION_OF_TX equals 0, indicating that the maximum duration of therapy has no limit. The system passes the order and continues screening.

- 3. Compare the prescribed daily dose (convert units if necessary) to NEOM Low Dose per Day ([NEOM_LOW_DOSE_PER_DAY](#)) and NEOM High Dose per Day ([NEOM_HIGH_DOSE_PER_DAY](#)):

 - a. If the prescribed daily dose is *equal to* either NEOM_LOW_DOSE_PER_DAY or NEOM_HIGH_DOSE_PER_DAY, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed daily dose is *less than* NEOM_LOW_DOSE_PER_DAY, alert the user that the prescribed dose is less than the recommended low daily dose for the drug (sample message 1).
 - c. If the prescribed daily dose is *greater than* NEOM_HIGH_DOSE_PER_DAY, compare the recommended maximum daily dose to the prescribed daily dose.

NEOM_LOW_DOSE_PER_DAY	0.018
NEOM_LOW_DOSE_UNIT_CODE	18
NEOM_UNIT_CODE_DESC	MG/KG/H
NEOM_HIGH_DOSE_PER_DAY	0.02
NEOM_HIGH_DOSE_UNIT_CODE	18
NEOM_UNIT_CODE_DESC	MG/KG/H
Prescribed dose per day	0.25mg/h

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the NEOM_UNIT_CODE_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MG/KG/H	mg/kg/hour	milligram per kilogram per hour

Since the retrieved units are given in mg/kg/hour and the prescription is written in mg/hour, it is necessary to convert the units of measure. The following table shows the data after the conversion.

NEOM_LOW_DOSE_PER_DAY	0.18
NEOM_LOW_DOSE_UNIT_CODE	17
NEOM_UNIT_CODE_DESC	MG/H
NEOM_HIGH_DOSE_PER_DAY	0.2
NEOM_HIGH_DOSE_UNIT_CODE	17
NEOM_UNIT_CODE_DESC	MG/H
Prescribed dose per day	0.25mg/h

In this example, the prescribed dose of 0.25mg/h is *greater than* the NEOM_HIGH_DOSE_PER_DAY value of 0.2 mg/h. The system compares the prescribed daily dose to the recommended maximum daily dose.

4. Compare the prescribed single dose (convert units if necessary) to NEOM Maximum Single Dose (**NEOM_MAX_SINGLE_DOSE**) and the Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**):

- a. If the prescribed single dose is *equal to or less than* NEOM_MAX_SINGLE_DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
- b. If the prescribed individual dose is *greater than* either NEOM_MAX_SINGLE_DOSE and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug (sample message 4a, 4b, or 4c).

NEOM_MAX_SINGLE_DOSE	NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Single Dose
0.02	18	1	17	0.25 mg/h

Since one of the retrieved units are given in MG/KG/H and the prescription is written in mg/h, it is necessary to convert the units of measure. The following table shows the data after the conversion.

NEOM_MAX_SINGLE_DOS	NEOM_MAX_SINGLE_DOS_E_UNIT_CODE	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	UNITS_DESC	Prescribed Single Dose
0.2	17	1	17	MG/H	0.25 mg/h

To retrieve the corresponding TJC-compliant unit descriptions, query the **Units Description Table** (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
MCG	mcg	microgram

In this example, the prescribed single dose of 0.25 mg/h is *greater than* the NEOM_MAX_SINGLE_DOSE value of 0.2 mg/h but less than the NTE_SINGLE_DOSE value of 1 mg/h. The system alerts the user that the prescribed maximum single dose for the drug exceeds the recommended maximum single dose for the drug (see Message 4b) and continues screening.

5. Display the NEOM Maximum Lifetime Dose (**NEOM_MAX_LIFE_DOSE**) value:

- a. If NEOM_MAX_LIFE_DOSE equals 0, the maximum lifetime dose is unavailable.
- b. If NEOM_MAX_LIFE_DOSE does not equal 0, display the maximum lifetime dose value for the prescribed medication (sample message 15).

In this example, the maximum lifetime dose *equals 0* and is unavailable for display.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's NEOM Renal Impairment Indicator (**NEOM_RENAL_IMPAIRMENT_IND**):

- a. If NEOM_RENAL_IMPAIRMENT_IND equals N, the order is acceptable and does not produce an alert.
- b. If NEOM_RENAL_IMPAIRMENT_IND equals Y, alert the user that the dose may need to be adjusted for renal impairment (sample message 5).

This example has a *negative* return. The system begins creatinine clearance threshold checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the NEOM Creatinine Clearance Threshold (**NEOM_CREATININE_CLR_THRESHOLD**) if necessary:

- a. If NEOM_CREATININE_CLR_THRESHOLD equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- c. If the patient's creatinine clearance is *less than* NEOM_CREATININE_CLR_THRESHOLD, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- d. If the patient's creatinine clearance is *greater than* NEOM_CREATININE_CLR_THRESHOLD,

continue screening the order without displaying any additional messages.

NEOM_CREATININE_CLR_THRESHOLD	NEOM_CREATININE_CLR_UNIT_CODE	Patient's Creatinine Clearance
0	---	---

Concatenate the NEOM_CREATININE_CLR_THRESHOLD *equals 0*. The system alerts the user that creatinine clearance threshold checking is unavailable and checks the order to determine if an hepatic impairment adjustment is needed.

3. Check the NEOM Hepatic Impairment Indicator ([NEOM_HEPATIC_IMPAIRMENT_IND](#)):

- a. If NEOM_HEPATIC_IMPAIRMENT_IND equals *N*, the order is acceptable and does not produce an alert.
- b. If NEOM_HEPATIC_IMPAIRMENT_IND equals *Y*, alert the user that the dose may need to be adjusted for hepatic impairment (sample message 7).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for hepatic impairment and checks the display availability of the elimination half-life values.

4. Display the NEOM Low Elimination Half Life ([NEOM_LOW_ELIM_HALF_LIFE](#)) and NEOM High Elimination Half Life ([NEOM_HIGH_ELIM_HALF_LIFE](#)) range (or value):

- a. If both NEOM_LOW_ELIM_HALF_LIFE and NEOM_HIGH_ELIM_HALF_LIFE *equal 0*, the elimination half-life range (or value) is unavailable.
- b. If either NEOM_LOW_ELIM_HALF_LIFE or NEOM_HIGH_ELIM_HALF_LIFE *does not equal 0*, display the elimination half-life range (or value) for the patient. (sample message 14).

NEOM_LOW_ELIM_HALF_LIFE	NEOM_HIGH_ELIM_HALF_LIFE	NEOM_HALF_LIFE_UNIT_CODE
0	0	

In this example, the low and high elimination half life for the order *equals 0*, indicating that the elimination half-life range is unavailable and cannot be displayed.

Example—Performing Dose Range Checking of an Intermittent Infusion

A patient has a prescription for a maintenance dose (DR2_DOSTPI 02) of Cefazolin 1 GM Vial (Clinical Formulation ID [GCN_SEQNO] 9060) intravenous (DR2_RT 052) 0.075 G over 30 minutes every 8 hours times 3 doses. The reason for use is not available (DXID 4892 [default screening record]). The patient is 1 week old (7 days) and weighs 8 lbs (3.63 kg).

Please note that NEOM does not screen administration information or course of treatment information

often included within infusion orders. For example, the “over 30 minutes” administration information requirement in the order above.

Part 1: Collect Dosage Range Check Data

1. Select records from the **NEOM Master Table** (RNEOMMA1_MSTR) where the:
 - a. Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the prescribed medication, and
 - b. NEOM Route Code (**NEOM_ROUTE_CODE**) column equals the route of administration for the prescribed medication, and
 - c. NEOM Dose Type Code (**NEOM_DOSE_TYPE_CODE**) column equals the dose type for the prescribed medication, and
 - d. NEOM High Age in Days (**NEOM_HIGH AGE_DAYS**) column is greater than or equal to the patient age in days, and
 - e. FML Disease Identifier (**DXID**) column equals the DXID of the patient condition to be treated with this prescription. If the patient condition is not available or if a reason for use record for a given age range is not available, the DXID equals 00004892 (default screening record).

GCN_SEQNO	9060	9060
NEOM_ROUTE_CODE	052	052
NEOM_DOSE_TYPE_CODE	02	02
NEOM_LOW AGE_DAYS	7	7
NEOM_HIGH AGE_DAYS	29	29
DXID	4892	4892

2. Select the Dosing Age Source Identifier (**DOSING AGE SOURCE_ID**) from the RDRCNMA1_MSTR table where the columns equal the dosing record collected in step 1. According to your business needs:
 - a. Display the data source information to the end-user.
 - b. Determine by the source if the collected dosing record can be used in screening.

In this example, DOSING AGE SOURCE_ID equals 3, indicating that this supporting reference may not be specific to the given age group.

3. Check the NEOM Weight Required Indicator (**NEOM_WEIGHT_REQ_IND**):
 - a. If **NEOM_WEIGHT_REQ_IND** equals 0, the current weight is not required to select the screening record.
 - b. If **NEOM_WEIGHT_REQ_IND** equals 1, the current weight is required to select the screening record.

In this example, NEOM_WEIGHT_REQ_IND equals 1, indicating that the current weight is required to select the screening record

4. Check the NEOM Gestational Birth Age Required Indicator (**NEOM_GEST_BIRTH_AGE_REQ_IND**):

- If NEOM_GEST_BIRTH_AGE_REQ_IND equals 0, the gestational age at birth is not required to select the screening record.
- If NEOM_GEST_BIRTH_AGE_REQ_IND equals 1, the gestational age at birth is required to select the screening record.

GCN_SEQNO	9060	9060
NEOM_ROUTE_CODE	052	052
NEOM_DOSE_TYPE_CODE	02	02
NEOM_LOW_AGE_DAYS	7	7
NEOM_HIGH_AGE_DAYS	29	29
DXID	4892	4892
NEOM_LOW_CURRENT_WEIGHT_GRAMS	0	2001
NEOM_HIGH_CURRENT_WEIGHT_GRAMS	2000	0

In this example, the weight range of 2001 to 0 grams is retrieved by the system after the user enters the patient's current weight of 3630 G.

5. Filter the records returned in step 1 where the:

- NEOM Low Gestational Age at Birth in Weeks (**NEOM_LOW_GEST_BIRTH_AGE_WEEKS**) column is less than or equal to the patient's gestational birth age in weeks, and
- NEOM High Gestational Age at Birth in Weeks (**NEOM_HIGH_GEST_BIRTH_AGE_WEEKS**) column is greater than or equal to the patient's gestational birth age in weeks.

In this example, NEOM_GEST_BIRTH_AGE_REQ_IND equals 0, indicating that the gestational age at birth is not required.

Part 2: Dose Range Checking

1. Compare the prescribed frequency of administration per day to NEOM Low Frequency (**NEOM_LOW_FREQUENCY**) and NEOM High Frequency (**NEOM_HIGH_FREQUENCY**):

- If the prescribed frequency is *equal to* either NEOM_LOW_FREQUENCY or NEOM_HIGH_FREQUENCY, or within the value range, the order is acceptable and does not

produce an alert.

- b. If the prescribed frequency is *less than* NEOM_LOW_FREQUENCY, alert the user that the prescribed frequency is less than the recommended minimum frequency for the drug (sample message 8).
- c. If the prescribed frequency is *greater than* NEOM_HIGH_FREQUENCY, alert the user that the prescribed frequency exceeds the recommended maximum frequency for the drug (sample message 9).

NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY	Prescribed Frequency
3	3	3 per day

In this example, the prescribed frequency of 3 per day *equals* the NEOM_LOW_FREQUENCY and NEOM_HIGH_FREQUENCY value of 3 per day. The system passes the order and continues screening.

2. Compare the prescribed duration of therapy in days to NEOM Low Duration of Therapy ([NEOM_LOW_DURATION_OF_TX](#)) and NEOM High Duration of Therapy ([NEOM_HIGH_DURATION_OF_TX](#)):

 - a. If the prescribed duration of therapy is *equal to* either NEOM_LOW_DURATION_OF_TX or NEOM_HIGH_DURATION_OF_TX, or within the value range, the order is acceptable and does not produce an alert.
 - b. If the prescribed duration of therapy is *less than* NEOM_LOW_DURATION_OF_TX, alert the user that the prescribed duration is less than the recommended low duration for the drug (sample message 10).
 - c. If the prescribed duration of therapy is *greater than* NEOM_HIGH_DURATION_OF_TX, compare the recommended maximum duration of therapy to the prescribed duration of therapy.

NEOM_LOW_DURATION_OF_TX	NEOM_HIGH_DURATION_OF_TX	Prescribed Duration
5	10	1 day (24 hours)

In this example, the prescribed duration of therapy is less than the NEOM_LOW_DURATION_OF_TX value of 1 day. The system alerts the user that the prescribed duration is less than the recommended low duration for the drug.

3. Compare the prescribed daily dose (convert units if necessary) to NEOM Low Dose per Day ([NEOM_LOW_DOSE_PER_DAY](#)) and NEOM High Dose per Day ([NEOM_HIGH_DOSE_PER_DAY](#)):

 - a. If the prescribed daily dose is *equal to* either NEOM_LOW_DOSE_PER_DAY or NEOM_HIGH_DOSE_PER_DAY, or within the value range, the order is acceptable and does not

produce an alert.

- b. If the prescribed daily dose is *less than* NEOM_LOW_DOSE_PER_DAY, alert the user that the prescribed dose is less than the recommended low daily dose for the drug (sample message 1).
- c. If the prescribed daily dose is *greater than* NEOM_HIGH_DOSE_PER_DAY, compare the recommended maximum daily dose to the prescribed daily dose.

NEOM_LOW_DOSE_PER_DAY	54
NEOM_LOW_DOSE_UNIT_CODE	02
NEOM_UNIT_CODE_DESC	MG/KG/DAY
NEOM_HIGH_DOSE_PER_DAY	69
NEOM_HIGH_DOSE_UNIT_CODE	02
NEOM_UNIT_CODE_DESC	MG/KG/DAY
Prescribed dose per day	0.225 g/day

Since the retrieved units are given in mg/kg/day and the prescription is written in g/day, it is necessary to convert the units of measure. The following table shows the data after the conversion.

NEOM_LOW_DOSE_PER_DAY	0.19602 g/day
NEOM_LOW_DOSE_UNIT_CODE	51
NEOM_UNIT_CODE_DESC	G/DAY
NEOM_HIGH_DOSE_PER_DAY	0.25047 g/day
NEOM_HIGH_DOSE_UNIT_CODE	51
NEOM_UNIT_CODE_DESC	G/DAY
Prescribed dose per day	0.225 g/day

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITS0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABB REV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
G/DAY	gram/day	gram per day

In this example, the prescribed daily dose of 0.225 g/day is *within* the NEOM_LOW_DOSE_PER_DAY and NEOM_HIGH_DOSE_PER_DAY value range of 0.19602 g/day and 0.25047 g/day. The system passes the order and continues screening.

4. Compare the prescribed single dose (convert units if necessary) to NEOM Maximum Single Dose (**NEOM_MAX_SINGLE_DOSE**) and the Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**):
 - a. If the prescribed single dose is *equal to or less than* NEOM_MAX_SINGLE_DOS and NTE_SINGLE_DOSE, the order is acceptable and does not produce an alert.
 - b. If the prescribed individual dose is *greater than* either NEOM_MAX_SINGLE_DOSE and/or NTE_SINGLE_DOSE, alert the user that the prescribed dose exceeds the recommended maximum single dose for the drug (sample message 4a, 4b, or 4c).

NEOM_MAX_SINGLE_DOSE	NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NTE_SINGLE_DOSE	NTE_SINGLE_DOSE_UNIT_CODE	Prescribed Individual Dose
34.5	03	2	29	0.075 g

Since the retrieved NEOM_MAX_SINGLE_DOSE units are given in mg/kg and the prescription is written in g/day, it is necessary to convert the units of measure. The following table shows the data after the conversion.

NEOM_MAX_SINGLE_DOSE	0.125
NEOM_MAX_SINGLE_DOSE_UNIT_CODE	29
NTE_SINGLE_DOSE	2
NTE_SINGLE_DOSE_UNIT_CODE	29
Prescribed dose per day	0.075 g

To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the UNITS_DESC column.

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
G	gram	gram

In this example, the prescribed dose of 0.075 g is *less than* the NEOM_MAX_SINGLE_DOSE and the NTE_SINGLE_DOSE values. The system passes the order and continues screening.

Part 3: Optionally Display Additional Dose Adjustment Information

1. Select the prescribed medication's NEOM Renal Impairment Indicator (**NEOM_RENAL_IMPAIRMENT_IND**):
 - a. If NEOM_RENAL_IMPAIRMENT_IND equals *N*, the order is acceptable and does not produce an

alert.

- b. If NEOM_RENAL_IMPAIRMENT_IND equals Y, alert the user that the dose may need to be adjusted for renal impairment (sample message 5).

This example has a *positive* return. The system alerts the user that the dose may need to be adjusted for renal impairment and begins creatinine clearance threshold checking.

2. Display the patient's creatinine clearance (convert units if necessary) and the NEOM Creatinine Clearance Threshold (**NEOM_CREATININE_CLR_THRESHOLD**) if necessary:

- a. If NEOM_CREATININE_CLR_THRESHOLD equals 0, you may want to alert the user that creatinine clearance threshold checking is unavailable.
- b. If the patient's creatinine clearance is *unavailable*, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- c. If the patient's creatinine clearance is *less than* NEOM_CREATININE_CLR_THRESHOLD, alert the user that a drug dosage adjustment should be considered (sample message 6, appended to message 5).
- d. If the patient's creatinine clearance is *greater than* NEOM_CREATININE_CLR_THRESHOLD, continue screening the order without displaying any additional messages.

NEOM_CREATININE_CLR_THRESHOLD	NEOM_CREATININE_CLR_UNIT_CODE	Description	Patient's Creatinine Clearance
40	02	ML/MIN/1.73M ²	---

Concatenate the NEOM_CREATININE_CLR_THRESHOLD value of 40 with the NEOM_CREATININE_CLR_UNIT_CODE description ML/MIN/1.73M² to display the creatinine clearance threshold of 40 ML/MIN/1.73M² to the user.

In this example, the patient's creatinine clearance is *unavailable*. The system alerts the user that a drug dosage adjustment should be considered and checks the order to determine if an hepatic impairment adjustment is needed.

3. Check the NEOM Hepatic Impairment Indicator (**NEOM_HEPATIC_IMPAIRMENT_IND**):

- a. If NEOM_HEPATIC_IMPAIRMENT_IND equals N, the order is acceptable and does not produce an alert.
- b. If NEOM_HEPATIC_IMPAIRMENT_IND equals Y, alert the user that the dose may need to be adjusted for hepatic impairment (sample message 7).

This example has a *negative* return. The system passes the order and checks the display availability of the elimination half-life values.

4. Display the NEOM Low Elimination Half Life (**NEOM_LOW_ELIM_HALF_LIFE**) and NEOM High

Elimination Half Life (**NEOM_HIGH_ELIM_HALF_LIFE**) range (or value):

- a. If both **NEOM_LOW_ELIM_HALF_LIFE** and **NEOM_HIGH_ELIM_HALF_LIFE** *equal 0*, the elimination half-life range (or value) is unavailable.
- b. If either **NEOM_LOW_ELIM_HALF_LIFE** or **NEOM_HIGH_ELIM_HALF_LIFE** *does not equal 0*, display the elimination half-life range (or value) for the patient. (sample message 14).

NEOM_LOW_ELIM_HALF_LIFE	NEOM_HIGH_ELIM_HALF_LIFE	NEOM_HALF_LIFE_UNIT_CODE	Description
1.5	4	02	Hours

In this example, the elimination half life for the order *does not equal 0*. The system displays the elimination half life range of 1.5 hours to 4 hours.

Considerations for Using NEOM

Consider the following issues when preparing prescription data for processing:

- If the prescribed drug is an ophthalmic or otic product, input the data for a single eye/ear. If processing is returned without errors, the dose can be administered to both eyes/ears.
- Most doses for single ingredient products are entered as ingredient strength (such as MG per day, or MG/KG per day). When the product dosed is a combination of ingredients, the dosing is generally available in units (such as tabs-caps or ML per day).
- If the product is a single ingredient liquid product, the prescribed dose must be presented to NEOM as metric weight (such as MG). For example, if the dose is 5 ML of 250MG/5ML, the dose presented to NEOM for processing is 250MG.
- If the product strength is presented as a "%", the dose must be calculated to a metric weight unit (such as GM or MG). For liquid products, "%" equals "GM/100 ML"; therefore, a 10% solution converts to 10GM/100ML. Multiply the "10GM/100ML" by the volume of the order to convert to metric units (GM).
- If the prescribed drug is administered at intervals greater than one day, determine the appropriate frequency value from the table in Frequency of Administration.
- If the prescribed product is a topical preparation, NEOM performs screening on the number of applications per day.
- For drugs that can be dosed as either elemental vs. base plus salt, or base vs. base plus salt, the dosing range coded will match the Clinical Formulation ID (GCN_SEQNO).
- When dosage intervals are greater than 30 days, dosage records are entered as a single dose.
- Most chemotherapy dosage records are entered as a single dose under the assumption that the dose will be prescribed for each use.
- Consider the following dosing modifications to units in the NEOM Master Table:
 - The dose for Fosphenytoin is expressed in MG PE (phenytoin equivalent).
 - (1MG PE = 1MG of phenytoin.)
 - Ampicillin/Sulbactam is dosed as MG of total amount.
 - Amoxicillin/Clavulanate is dosed as ML/DAY.
 - Sulfamethoxazole/Trimethoprim is dosed as ML/KG.

Considerations for Setting Up a Weight Table

Since weight is an important factor in selecting the correct dose, it is vital that the system use a current weight. For this reason, consider setting up a Valid Weight Table where the end user could specify various weight ranges and the number of days a weight in that range is valid. The end user could use this table to verify that a particular weight is valid before checking the dose against the NEOM data. If the weight is not valid, the end user could be prompted to verify the system weight or enter a new weight. The following table is an example of a Valid Weight Table.

 The values in the table are provided for illustration purposes only.

- i** In the absence of the patient weight, FDB does not recommend using an estimated weight table to calculate a dosage range. An estimated weight table calculates a dosage range based on percentile weights for males and females. It may not detect dosages outside the appropriate range based on the clinical situation of the patient.

Example—Valid Weight Table

Low Weight in Grams	High Weight in Grams	Number of Days Weight Is Valid
400	1500	1
1501	2500	2
2501	6500	3

Considerations for Handling Extemporaneously Prepared Dosage Forms

To screen doses for extemporaneously prepared dosage forms, the amount of the drug actually being given must be calculated. For example, consider a .5MG tablet with a Clinical Formulation ID (GCN_SEQNO) of 123456. The pharmacy prepares a suspension of that drug by crushing 10 tablets (5MG total) and then adding enough water to make a final volume of 100ML (that is, a final concentration of .05MG/ML). The prescribed dose is 2ML every 12 hours (with a Daily Dose of 0.2MG and an Individual Dose of 0.1MG). Therefore, Clinical Formulation ID (GCN_SEQNO) 123456, Daily Dose 0.2MG, and Individual Dose 0.1MG would be screened.

The developer may wish to facilitate the screening of extemporaneously prepared products by developing tables where the products could be predefined. This is particularly important for a preparation containing more than one Clinical Formulation ID (GCN_SEQNO) because screening would need to be done on more than one Clinical Formulation ID (GCN_SEQNO). The same table could then be used to determine the components of the products for all clinical screening.

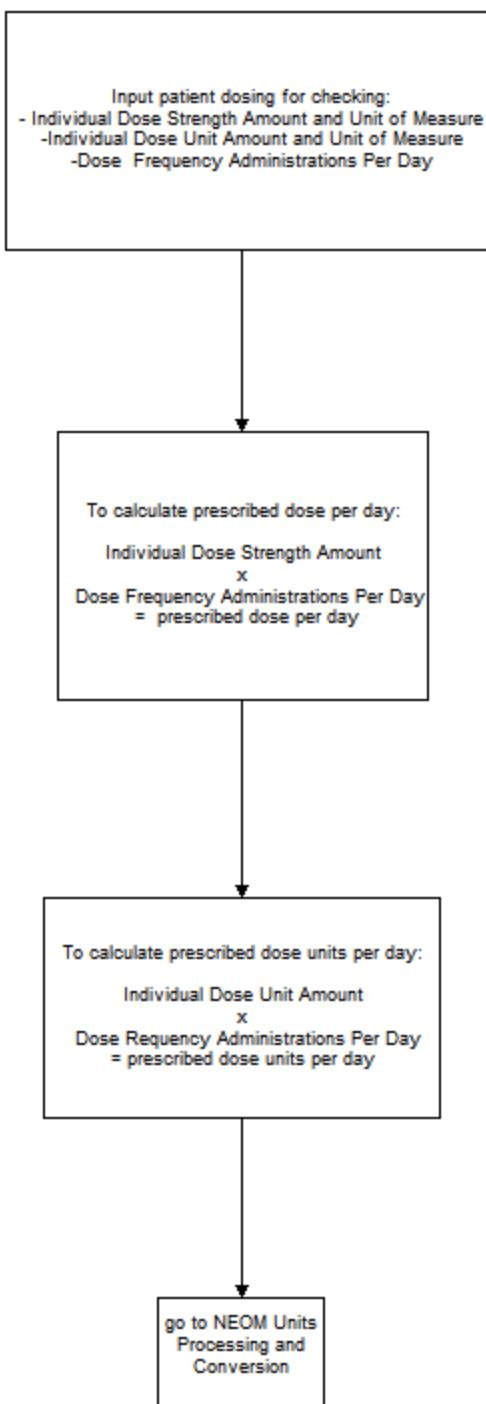
Considerations for Determining Prescribed Dose Calculations

The prescribed dose per day (used for a single ingredient product) is determined by multiplying the individual dose strength amount (MG, MG/KG) by dose frequency administrations per day.

The prescribed dose units per day (used for a product with a combination of ingredients) is determined by multiplying the individual dose unit amount (tabs-caps) by dose frequency administrations per day.

This process is also illustrated in the following diagram.

NEOM Calculations of Input Dosing Field



Considerations for Converting Units

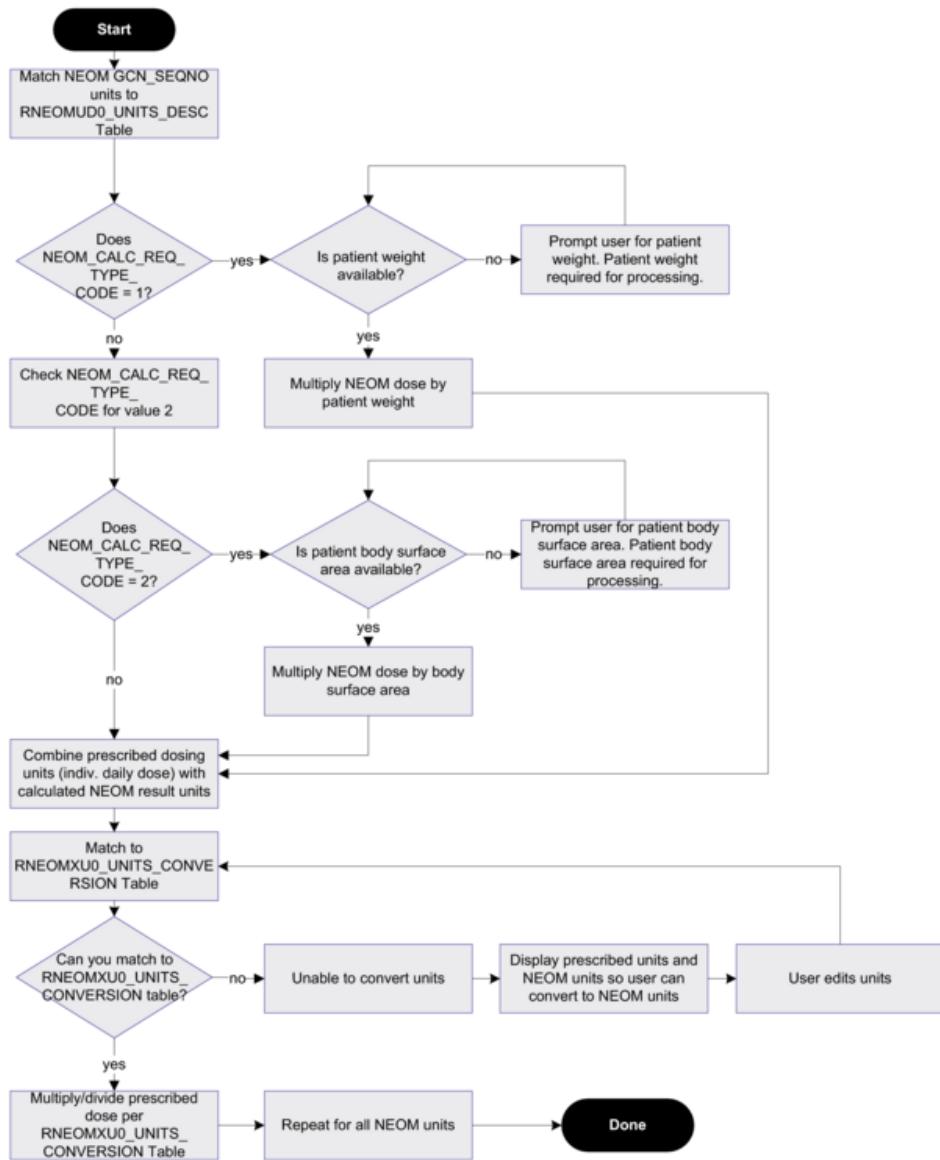
Before the prescribed dose units can be compared to the retrieved units for NEOM High/Low Dose Per Day, NEOM Maximum Dose Per Day, and NEOM Maximum Single Dose, the NEOM Unit Code Description Table (RNEOMUDO_UNITS_DESC) should be used to determine whether additional input is required to calculate

specific patient dose. Use the NEOM Conversion Factor (NEOM_CONVERSION_FACTOR) in the NEOM Unit Conversion Table (RNEOMXU0_UNITS_CONVERSION) to convert to common units.

- i** After you convert to common units, retrieve the unit code descriptions from the NEOM Unit Code Description (NEOM_UNIT_CODE_DESC) column in the [NEOM Unit Code Description Table](#) (RNEOMUD0_UNITS_DESC). However, the information in that column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC).

This process is also illustrated in the following diagram.

NEOM Units Processing and Conversion



Considerations for Generating Warning Messages

Warning messages are generated if the prescribed dose for a given drug falls outside an acceptable dose range, administration frequency, or duration range. In addition, messages are generated to indicate whether dosage adjustments need to be made for creatinine clearance, hepatic impairment, or renal impairment. For more information on the generation of these messages, refer to [Performing Dosage Range Checking](#).

This section provides some suggested text for each message as well as information regarding generating additional messages for High Elimination Half Life and Maximum Lifetime Dose.



Unit code descriptions for a message maybe retrieved from the NEOM Unit Code Description

(NEOM_UNIT_CODE_DESC) column in the [NEOM Unit Code Description Table](#) (RNEOMUD0_UNITS_DESC). However, the information in that column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To retrieve the corresponding TJC-compliant unit descriptions, query the [Units Description Table](#) (RUNITSD0_UNITS_DESC).

Familiarize yourself with the following possible warning scenarios and resulting display messages.

This table provides a list of sample messages that may be used when performing dosage range screening. Variables within the Sample Display Message column refer to information found in the [NEOM Master Table](#) (RNEOMMA1_MSTR) or to patient-specific information. The Message Number column contains a reference number used to identify appropriate messages for the scenarios illustrated within the Performing Dosage Range Checking, page 667 application examples.

Possible Warning Scenario	Sample Display Message	Message Number
Prescribed daily dose is less than the recommended low daily dose for the drug.	Dosing range for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_DOSE_PER_DAY x patient weight (if applicable)] [Low Dose NEOM_RESULT_UNIT_CODE] - [NEOM_HIGH_DOSE_PER_DAY x patient weight (if applicable)] [High Dose NEOM_RESULT_UNIT_CODE]. Prescribed dose of [prescribed daily dose] [prescribed dose units] is less than the recommended low daily dose for the drug. Please evaluate dose.	1
Prescribed daily dose is greater than the recommended high daily dose for the drug but is less than the recommended maximum daily dose for the drug.	Dosing range for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_DOSE_PER_DAY x patient weight (if applicable)] [Low Dose NEOM_RESULT_UNIT_CODE] - [NEOM_HIGH_DOSE_PER_DAY x patient weight (if applicable)] [High Dose NEOM_RESULT_UNIT_CODE]. Prescribed dose of [prescribed daily dose] [prescribed dose units] is greater than the recommended high daily dose for the drug but is less than the recommended maximum daily dose of [NEOM_MAX_DOSE_PER_DAY x patient weight (if applicable)] [Maximum Daily Dose NEOM_RESULT_UNIT_CODE]. Please evaluate dose.	2

Prescribed daily dose is greater than the recommended maximum daily dose for the drug.	Maximum dose per day for [drug name] for [patient name] [weight] [age] is [MXDOSD x patient weight (if applicable)] [Maximum Daily Dose UNITS_RUI]. Prescribed dose of [prescribed daily dose] [prescribed dose units] exceeds the recommended maximum daily dose for the drug. Please evaluate dose.	3
Prescribed single dose is greater than the recommended maximum single dose for the drug where MX1DOS equals NTE_SINGLE_DOSE.	Maximum single dose for [drug name] for [patient name] [weight] [age] is [NEOM_MAX_SINGLE_DOSE x patient weight (if applicable)] [NEOM_MAX_SINGLE_DOSE_UNIT_CODE] or [NTE_SINGLE_DOSE] [NTE_SINGLE_DOSE_UNIT_CODE]. Prescribed dose of [prescribed single dose] [prescribed dose units] exceeds the recommended maximum single dose for the drug. Please evaluate dose.	4a
Prescribed single dose is greater than the recommended maximum single dose for the drug where MX1DOS is less than NTE_SINGLE_DOSE.	Maximum single dose for [drug name] for [patient name] [weight] [age] is [NEOM_MAX_DOSE_PER_DAY x patient weight (if applicable)] [NEOM_MAX_SINGLE_DOSE_UNIT_CODE]. Prescribed dose of [prescribed single dose] [prescribed dose units] exceeds the recommended maximum single dose for the drug. Please evaluate dose.	4b
Prescribed single dose is greater than the recommended maximum single dose for the drug where MX1DOS is greater than NTE_SINGLE_DOSE.	Maximum single dose for [drug name] for [patient name] [weight] [age] is [NTE_SINGLE_DOSE] [NEOM_MAX_SINGLE_DOSE_UNIT_CODE]. Prescribed dose of [prescribed single dose] [prescribed dose units] exceeds the recommended maximum single dose for the drug. Please evaluate dose.	4c
Significant renal impairment requires a dosing adjustment.	Dosage regimen needs to be adjusted for significant renal impairment.	5
Patient's creatinine clearance is less than the accepted creatinine clearance threshold for the drug.	If the patient's creatinine clearance is lower than [NEOM_CREATININE_CLEAR_THRESHOLD] [NEOM_CREATININE_CLEAR_UNIT_CODE], a drug dosage adjustment should be considered.	6

Significant hepatic impairment requires a dosing adjustment.	Dosage regimen needs to be adjusted for hepatic impairment.	7
Prescribed frequency of administration per day is less than the recommended minimum frequency of administration range for the drug.	Administration frequency for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_FREQUENCY] - [NEOM_HIGH_FREQUENCY] per day. Prescribed frequency of [prescribed frequency] per day is less than the recommended minimum administration frequency for the drug. Please evaluate frequency.	8
Prescribed frequency of administration per day is greater than the recommended maximum frequency of administration for the drug.	Administration frequency for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_FREQUENCY] - [NEOM_HIGH_FREQUENCY] per day. Prescribed frequency of [prescribed frequency] per day exceeds the recommended maximum administration frequency for the drug. Please evaluate frequency.	9
Prescribed duration is less than the recommended low duration for the drug.	Duration range for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_DURATION_OF_TX] - [NEOM_HIGH_DURATION_OF_TX] days. Prescribed duration of [prescribed duration] days is less than the recommended low duration for the drug. Please evaluate duration of therapy.	10
Prescribed duration is greater than the highest recommended duration for the drug.	Duration range for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_DURATION_OF_TX] - [NEOM_HIGH_DURATION_OF_TX] days. Prescribed duration of [prescribed duration] days exceeds the recommended high duration for the drug. Please evaluate duration of therapy.	11
Prescribed duration is greater than the recommended high duration range for the drug but is less than the recommended maximum duration for the drug.	Duration range for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_DURATION_OF_TX] - [NEOM_HIGH_DURATION_OF_TX] days. Prescribed duration of [prescribed duration] days exceeds the recommended high duration for the drug but is less than the recommended maximum duration of [NEOM_MAX_DURATION_OF_TX] days. Please evaluate duration of therapy.	12

Prescribed duration is greater than the recommended maximum duration range for the drug.	Maximum duration for [drug name] for [patient name] [weight] [age] is [NEOM_MAX_DURATION_OF_TX] days. Prescribed duration of [prescribed duration] days exceeds the recommended maximum duration for the drug. Please evaluate duration of therapy.	13
Patient's elimination half-life range.	Elimination half-life for [drug name] for [patient name] [weight] [age] is [NEOM_LOW_ELIM_HALF_LIFE] - [NEOM_HIGH_ELIM_HALF_LIFE] [NEOM_HALF_LIFE_UNIT_CODE].	14
Maximum lifetime dose for the drug.	Maximum lifetime dose is [NEOM_MAX_LIFE_DOSE] [NEOM_MAX_LIFE_DOSE_UNIT_CODE].	15

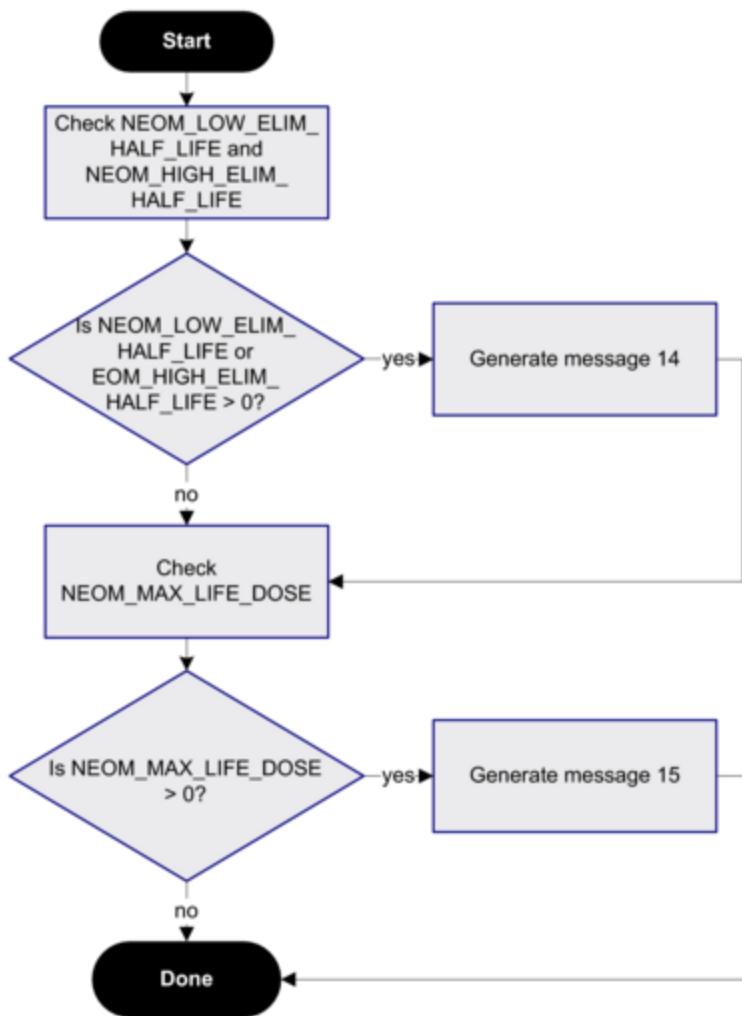
Generating Additional Messages

This section clarifies how the system should be programmed to generate messages regarding Elimination Half Life and Maximum Lifetime Dose.

1. If NEOM Low Elimination Half Life or NEOM High Elimination Half Life is greater than 0, generate message 14.
2. If the NEOM Maximum Lifetime Dose is greater than 0, generate message 15.

This process is also illustrated in the following diagram.

NEOM Additional Reports



DRCM ERD and Technical Specifications

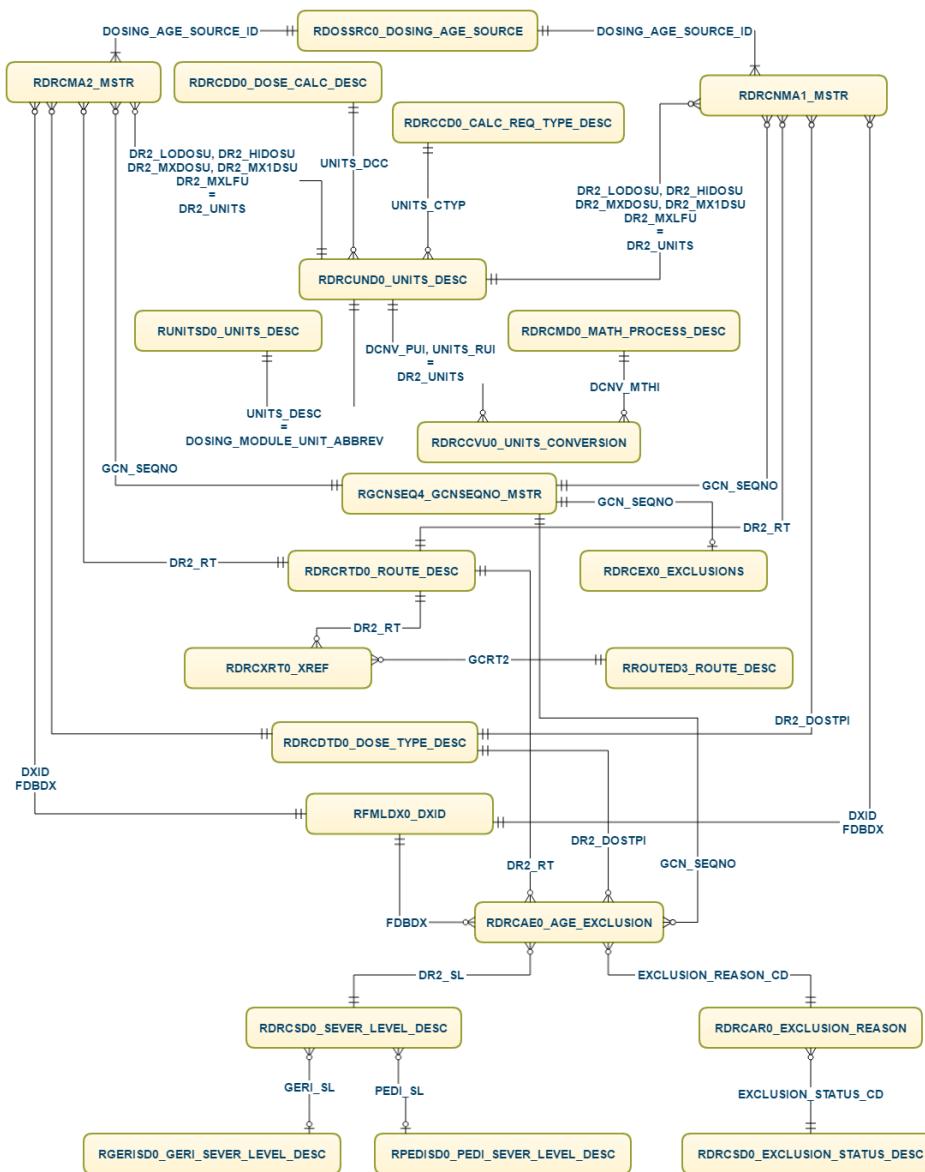
This section provides the technical specifications for each of the tables contained in this module. These table names are listed below.

- DRCM Tables
- Dosage Range Check Module ERD

DRCM Tables

- Dosing Age Source Description Table
- DRCM Age Exclusion Table
- DRCM Calculation Required Type Code Description Table
- DRCM Dose Calculation Code Description Table
- DRCM Dose Type Description Table
- DRCM Exclusion Reason Table
- DRCM Exclusion Status Description Table
- DRCM Exclusion Table
- DRCM Master Table
- DRCM Math Process Code Description Table
- DRCM Neonatal and Adult Master Table
- DRCM Route Conversion Table
- DRCM Route Description Table
- DRCM Severity Level Description Table
- DRCM Unit Conversion Table
- DRCM Unit Description Table
- DRCM Dosing Adjustment Type Table
- DRCM Monograph Format Code Description Table
- DRCM Monograph Section Code Description Table
- DRCM Renal Adjustment Monograph Line Table
- DRCM Renal Master Table

Dosage Range Check Module ERD



Dosing Age Source Description Table

Table Name	RDOSSRC0_DOSING_AGE_SOURCE
Revision Activity	add.06-24-10
Purpose	Relates the Dosing Age Source Identifier to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)
	DOSING_AGE_SOURCE_DESC	Dosing Age Source Description	AN	50	X(50)

DRCM Age Exclusion Table

Table Name	RDRCAE0_AGE_EXCLUSION
Revision Activity	add.01-18-13
Purpose	Provides information regarding age, gestational age at birth, and current weight ranges that are not currently represented in DRCM Neonatal and Adult Master table. In addition to providing missing ranges, the DRCM Age Exclusion table shall provide clinical reasons why ranges were intentionally excluded from the DRCM Neonatal and Adult Master table, any contraindication severity levels, and a narrative detailing the next age range and its associated dosage screening values (i.e. Low Dose Per Day, High Dose Per Day, Max Dose Per Day, Max Single Dose, and Not to Exceed Dose).

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation Identifier	N	6	9(6)
PF	DR2_RT	DRCM Route of Administration Indicator	AN	3	X(3)
P	EXCLUSION_LOAGED	Exclusion Low Age in Days	N	5	9(5)
P	EXCLUSION_HIAGED	Exclusion High Age in Days	N	5	9(5)
PF	FDBDX	First Databank Disease Code	AN	9	X(9)
PF	DR2_DOSTPI	DRCM Dosage Type Indicator	AN	2	X(2)
P	NEOM_LOW_GEST_BIRTH_AGE_WEEKS	Neonatal Low Gestational Age at Birth in Weeks	N	2	9(2)
P	NEOM_HIGH_GEST_BIRTH_AGE_WEEKS	Neonatal High Gestational Age at Birth in Weeks	N	2	9(2)
P	NEOM_LOW_CURRENT_WEIGHT_GRAMS	Neonatal Low Current Weight in Grams	N	5	9(5)
P	NEOM_HIGH_CURRENT_WEIGHT_GRAMS	Neonatal High Current Weight in Grams	N	5	9(5)

F	EXCLUSION_REASON_CD	Exclusion Reason Code	N	8	9(8)
F	DR2_SL	DRCM Severity Level	AN	1	X(1)
F	DXID	FML Disease Identifier	N	8	9(8)
	AVAILABLE_PRECAUTION_IND	Available Precaution Indicator	N	1	9(1)
	EXCLUSION_MESSAGE_TEXT	Exclusion Message Text	AN	750	X(750)
	NEXT_SCREENING_DOSE_TEXT	Next Screening Dose Text	AN	510	X(510)
	NEXT_SCREENING_DOSE_AGE_TEXT	Next Screening Dose Age Text	AN	255	X(255)

DRCM Calculation Required Type Code Description Table

Table Name	RDRCCD0_CALC_REQ_TYPE_DESC
Revision Activity	add.10-03-2002
Purpose	Relates the Units Required Calculation Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	UNITS_CTYP	DRCM Units Required Calculation Type Code	N	1	9(1)
	UNITS_CTYP_DESC	DRCM Units Required Calculation Type Code Description	AN	50	X(50)

DRCM Dose Calculation Code Description Table

Table Name	RDRCDD0_DOSE_CALC_DESC
Revision Activity	add.10-03-2002
Purpose	Relates the Units Dose Calculation Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	UNITS_DCC	DRCM Units Dose Calculation Code	AN	1	X(1)
	UNITS_DCC_DESC	DRCM Units Dose Calculation Code Description	AN	50	X(50)

DRCM Dose Type Description Table

Table Name	RDRCDTD0_DOSE_TYPE_DESC				
Revision Activity	add.08-11-2000				
Purpose	Relates the Dose Type Indicator to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	DR2_DOSTPI	DRCM Dose Type Indicator	AN	2	X(2)
	DOSTPI_des	DRCM Dose Type Indicator Description	AN	25	X(25)

DRCM Exclusion Reason Table

Table Name	RDRCAR0_EXCLUSION_REASON
Revision Activity	add.01-24-2013
Purpose	Provides a unique list of clinical reasons for why age, gestational age at birth, and current weight ranges have been intentionally excluded from the DRCM Neonatal and Adult Master table by FDB.

Key	Column Name	Column Description	Format	Length	Picture
P	EXCLUSION_REASON_CD	Exclusion Reason Code	N	8	9(8)
	EXCLUSION_REASON_TEXT_LONG	Exclusion Reason Text Long	AN	750	X(750)
	EXCLUSION_REASON_TEXT_SHORT	Exclusion Reason Text Short	AN	255	X(255)
F	EXCLUSION_STATUS_CD	Exclusion Status Code	N	8	9(8)

DRCM Exclusion Status Description Table

Table Name	RDRCS0_EXCLUSION_STATUS_DESC
Revision Activity	add.01-24-2013
Purpose	Relates the Exclusion Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	EXCLUSION_STATUS_CD	Exclusion Status Code	N	8	9(8)
	EXCLUSION_STATUS_CD_DESC	Exclusion Status Code Description	AN	30	X(30)

DRCM Exclusion Table

Table Name	RDRCEX0_EXCLUSIONS
Revision Activity	add.06-18-09
Purpose	Identifies Clinical Formulation IDs (GCN_SEQNO) excluded from DRCM and the reason for the exclusion.

Key	Column Name	Column Description	Format	Length	Picture
P	GCN_SEQNO	Clinical Formulation ID	N	6	9(6)
	EXCLUSION_CODE	Exclusion Code	N	1	9(1)

DRCM Master Table

Table Name		RDRCMA2_MSTR			
Revision Activity		rev.06-24-10			
Purpose		Associates a clinical formulation to its dosing information.			
Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	DR2_RT	DRCM Route of Administration Indicator	AN	3	X(3)
P	DR2_LOAGED	DRCM Low Age in days	N	5	9(5)
P	DR2_HIAGED	DRCM High Age in days	N	5	9(5)
PF	FDBDX	First Databank Disease Code	AN	9	X(9)
PF	DR2_DOSTPI	DRCM Dose Type Indicator	AN	2	X(2)
	DR2_LODOSD	DRCM Low Dose per day	N	9	9(5).9(3)
F	DR2_LODOSU	DRCM Low Dose Units Code	AN	2	X(2)
	DR2_HIDOSD	DRCM High Dose per day	N	9	9(5).9(3)
F	DR2_HIDOSU	DRCM High Dose Units Code	AN	2	X(2)
	DR2_MXDOSD	DRCM Maximum Dose per day	N	9	9(5).9(3)
F	DR2_MXDOSU	DRCM Maximum Dose Units Code	AN	2	X(2)
	DR2_LOFREQ	DRCM Low Frequency of Administration	N	5	9(2).9(2)
	DR2_HIFREQ	DRCM High Frequency of Administration	N	5	9(2).9(2)

	DR2_RENIMP	DRCM Renal Impairment Assessment Indicator	AN	1	X(1)
	DR2_CRCRTH	DRCM Creatinine Clearance Threshold	N	3	9(3)
	DR2_CRCLU	DRCM Creatinine Clearance Units Indicator	AN	2	X(2)
	DR2_LODOTX	DRCM Low Duration of Therapy	N	5	9(5)
	DR2_HIDOTX	DRCM High Duration of Therapy	N	5	9(5)
	DR2_MXDOTH	DRCM Maximum Duration of Therapy	N	5	9(5)
	DR2_HEPIMP	DRCM Hepatic Impairment Assessment Indicator	AN	1	X(1)
	DR2_THAFLO	DRCM Low Elimination Half-Life	N	6	9(3).9(2)
	DR2_THAFHI	DRCM High Elimination Half-Life	N	6	9(3).9(2)
	DR2_THAFU	DRCM Units of Time Half-Life Indicator	AN	2	X(2)
	DR2_MX1DOS	DRCM Maximum Amount per Single Dose	N	9	9(5).9(3)
F	DR2_MX1DSU	DRCM Maximum Single Dose Units Code	AN	2	X(2)
	DR2_MXLIFD	DRCM Maximum Lifetime Dose	N	9	9(5).9(3)
F	DR2_MXLIFU	DRCM Maximum Lifetime Dose Units Code	AN	2	X(2)

F	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)
	NTE_SINGLE_DOSE	Not-to-Exceed Amount Per Single Dose	N	9	9(5).9(3)
F	NTE_SINGLE_DOSE_UNIT_CODE	Not-to-Exceed Amount Per Single Dose Unit Code	AN	2	X(2)
	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)

DRCM Math Process Code Description Table

Table Name	RDRCMD0_MATH_PROCESS_DESC				
Revision Activity	add.10-03-2002				
Purpose	Relates the Units Math Indicator to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
P	DCNV_MTHI	DRCM Units Math Indicator	AN	1	X(1)
	DCNV_MTHI_DESC	DRCM Units Math Indicator Description	AN	50	X(50)

DRCM Neonatal and Adult Master Table

Table Name	RDRCNMA1_MSTR				
Revision Activity	rev.06-24-10				
Purpose	Associates a clinical formulation, clinical route, age range, reason for use, and dose type to related dosing information. For neonatal populations, the dosing information is also specific to a gestational birth age range and a weight range.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID	N	6	9(6)
PF	DR2_RT	DRCM Route of Administration Indicator	AN	3	X(3)
P	DR2_LOAGED	DRCM Low Age in Days	N	5	9(5)
P	DR2_HIAGED	DRCM High Age in Days	N	5	9(5)
PF	FDBDX	First Databank Disease Code	AN	9	X(9)
PF	DR2_DOSTPI	DRCM Dose Type Indicator	AN	2	X(2)
P	NEOM_LOW_GEST_BIRTH_AGE_WEEKS	Neonatal Low Gestational Age at Birth in Weeks	N	2	9(2)
P	NEOM_HIGH_GEST_BIRTH_AGE_WEEKS	Neonatal High Gestational Age at Birth in Weeks	N	2	9(2)
P	NEOM_LOW_CURRENT_WEIGHT_GRAMS	Neonatal Low Current Weight in Grams	N	5	9(5)
P	NEOM_HIGH_CURRENT_WEIGHT_GRAMS	Neonatal High Current Weight in Grams	N	5	9(5)
	NEOM_GEST_BIRTH_AGE_REQ_IND	Neonatal Gestational Birth Age Required Indicator	AN	1	X(1)
	NEOM_WEIGHT_REQ_IND	Neonatal Weight Required Indicator	AN	1	X(1)

	DR2_LODOSD	DRCM Low Dose Per Day	N	9	9(5).9(3)
F	DR2_LODOSU	DRCM Low Dose Units Code	AN	2	X(2)
	DR2_HIDOSD	DRCM High Dose Per Day	N	9	9(5).9(3)
F	DR2_HIDOSU	DRCM High Dose Units Code	AN	2	X(2)
	DR2_MXDOSD	DRCM Maximum Dose Per Day	N	9	9(5).9(3)
F	DR2_MXDOSU	DRCM Maximum Dose Units Code	AN	2	X(2)
	DR2_LOFREQ	DRCM Low Frequency of Administration	N	5	9(2).9(2)
	DR2_HIFREQ	DRCM High Frequency of Administration	N	5	9(2).9(2)
	DR2_RENIMP	DRCM Renal Impairment Assessment Indicator	AN	1	X(1)
	DR2_CRCLTH	DRCM Creatinine Clearance Threshold	N	3	9(3)
	DR2_CRCLU	DRCM Creatinine Clearance Units Indicator	AN	2	X(2)
	DR2_LODOTX	DRCM Low Duration of Therapy	N	5	9(5)
	DR2_HIDOTX	DRCM High Duration of Therapy	N	5	9(5)
	DR2_MXDOTX	DRCM Maximum Duration of Therapy	N	5	9(5)
	DR2_HEPIMP	DRCM Hepatic Impairment Assessment Indicator	AN	1	X(1)

	DR2_THAFLO	DRCM Low Elimination Half-Life	N	6	9(3).9(2)
	DR2_THAFHI	DRCM High Elimination Half-Life	N	6	9(3).9(2)
	DR2_THAFU	DRCM Units of Time Half-Life Indicator	AN	2	X(2)
	DR2_MX1DOS	DRCM Maximum Amount Per Single Dose	N	9	9(5).9(3)
F	DR2_MX1DSU	DRCM Maximum Single Dose Units Code	AN	2	X(2)
	DR2_MXLIFD	DRCM Maximum Lifetime Dose	N	9	9(5).9(3)
F	DR2_MXLIFU	DRCM Maximum Lifetime Dose Units Code	AN	2	X(2)
F	DXID	FML Disease Identifier	N	8	9(8)
	NTE_SINGLE_DOSE	Not-to-Exceed Amount Per Single Dose	N	9	9(5).9(3)
F	NTE_SINGLE_DOSE_UNIT_CODE	Not-to-Exceed Amount Per Single Dose Unit Code	AN	2	X(2)
	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)

DRCM Route Conversion Table

Table Name	RDRCXRT0_XREF				
Revision Activity	add.08-11-2000				
Purpose	Enables the conversion of general administration routes to more comprehensive dosage range check routes.				

Key	Column Name	Column Description	Format	Length	Picture
P	GCRT2	Route of Administration Code (2-character)	AN	2	X(2)
F	DR2_RT	DRCM Route of Administration Indicator	AN	3	X(3)

DRCM Route Description Table

Table Name	RDRCRTD0_ROUTE_DESC
Revision Activity	add.08-11-2000
Purpose	Relates the Routes of Administration Indicator to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DR2_RT	DRCM Route of Administration Indicator	AN	3	X(3)
	ROUTES.Des	DRCM Route of Administration Description	AN	22	X(22)

DRCM Severity Level Description Table

Table Name	RDRCSD0_SEVER_LEVEL_DESC				
Revision Activity	add.01-24-2013				
Purpose	Relates the DRCM Severity Level to its text description and to its corresponding geriatric and pediatric precaution severity levels.				
Key	Column Name	Column Description	Format	Length	Picture
P	DR2_SL	DRCM Severity Level	AN	1	X(1)
	DR2_SL_DESC	DRCM Severity Level Description	AN	255	X(255)
	DR2_SL_MESSAGE_TEXT	DRCM Severity Level Message Text	AN	255	X(255)
F	GERI_SL	Geriatric Precaution Severity Level	AN	1	X(1)
F	PEDI_SL	Pediatric Precaution Severity Level	AN	1	X(1)

DRCM Unit Conversion Table

Table Name	RDRCCVU0_UNITS_CONVERSION				
Revision Activity	add.08-11-2000				
Purpose	Enables the conversion of unit identifiers.				

Key	Column Name	Column Description	Format	Length	Picture
P	DCNV_PUI	DRCM Prescribed Unit Indicator	AN	2	X(2)
P	UNITS_RUI	DRCM Results Unit Code	AN	2	X(2)
F	DCNV_MTHI	DRCM Units Math Indicator	AN	1	X(1)
	DCNV_CNVF	DRCM Units Conversion Factor	N	16	9(10).9(5)

DRCM Unit Description Table

Table Name	RDRCUND0_UNITS_DESC				
Revision Activity	add.08-11-2000				
Purpose	Relates a Units Code to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
P	DR2_UNITS	DRCM Units Code	AN	2	X(2)
	UNITS_DESC	DRCM Dose Units Code Description	AN	12	X(12)
F	UNITS_CTYP	DRCM Units Required Calculation Type Code	N	1	9(1)
F	UNITS_DCC	DRCM Units Dose Calculation Code	AN	1	X(1)
	UNITS_RUI	DRCM Results Unit Code	AN	2	X(2)

DRCM Dosing Adjustment Type Table

Table Name	RDRCAT0_ADJ_TYPE
Revision Activity	add.11-03-2016
Purpose	Relates the Dosing Adjustment Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DOSING_ADJ_TY PE_CD	DRCM Adjustment Type Code	N	4	9(4)
	DOSING_ADJ_TY PE_DESC	DRCM Adjustment Type Description	AN	70	X(70)

DRCM Monograph Format Code Description Table

Table Name	RDRCMF0_MONO_FORMAT_DESC
Revision Activity	add.11-03-2016
Purpose	Relates the DRCM Monograph Format Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DRC_MONO_FO_RMAT_CD	DRCM Monograph Format Code	N	4	9(4)
	DRC_MONO_FO_RMAT_CD_DESC	DRCM Monograph Format Code Description	AN	50	X(50)

DRCM Monograph Section Code Description Table

Table Name	RDRCMS0_MONO_SECTION_DESC
Revision Activity	add.10-13-2016
Purpose	<p>Relates the DRCM Monograph Section Code to its text description.</p> <p>The DRCM Monograph Section Code identifies the types of text included in the monographs. This table provides you with the ability to group the monograph lines into sections, so that you can include or exclude some sections of a monograph depending upon your business's needs.</p>

Key	Column Name	Column Description	Format	Length	Picture
P	DRC_MONO_SECTION_CD	DRCM Monograph Section Code	N	4	9(4)
	DRC_MONO_SECTION_CD_DESC	DRCM Monograph Section Code Description	AN	50	X(50)

DRCM Renal Adjustment Monograph Line Table

Table Name	RDRCRL0_RENAL_MONO_LINE
Revision Activity	add.11-03-2016
Purpose	<p>Relates the Dosing Adjustment Type Code to its text description.</p> <p>Use the DRCM Renal Monograph ID (REN_MONO_ID) provided in the RDRCRM0_RENAL_MSTR table to access the related renal adjustment monograph, if available.</p>

Key	Column Name	Column Description	Format	Length	Picture
P	REN_MONO_ID	DRCM Renal Monograph ID	N	8	9(8)
P	REN_MONO_LINE_NUMBER	DRCM Renal Monograph Line Number	N	8	9(8)
F	REN_MONO_SECTION_CD	DRCM Renal Monograph Section Code	N	4	9(4)
F	REN_MONO_FORMAT_CD	DRCM Renal Monograph Format Code	N	4	9(4)
	REN_MONO_LINE_TEXT	DRCM Renal Monograph Line Text	AN	255	X(255)

DRCM Renal Master Table

Table Name	RDRCRM0_RENAL_MSTR
Revision Activity	add.11-03-2016
Purpose	<p>Provides adjusted dose amounts for renal impairment.</p> <p>When performing dosage range checking using the DRCM Master Table (RDRCMA2_MSTR), you have the option to check if a dose needs to be adjusted for the renally impaired patient. If that dose needs to be adjusted for renal impairment, you can now use the RDRCRM0_RENAL_MSTR table to find dosing information that is based upon a patient's age and creatinine clearance. Also, if you are screening drugs for a patient with known renal impairment and creatinine clearance information, you can begin screening using the RDRCRM0_RENAL_MSTR table.</p>

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID	N	6	9(6)
PF	DR2_RT	DRCM Route of Administration	AN	3	X(3)
P	REN_LOAGED	DRCM Renal Low Age in Days	N	5	9(5)
P	REN_HIAGED	DRCM Renal High Age in Days	N	5	9(5)
PF	FDBDX	First Databank Disease Code	AN	9	X(9)
PF	DR2_DOSTPI	DRCM Dose Type Indicator	AN	2	X(2)
P	REN_LOCRCL	DRCM Renal Low Creatinine Clearance mL/min	N	3	9(3)
P	REN_HICRCL	DRCM Renal High Creatinine Clearance mL/min	N	3	9(3)
P	REN_SORT_ORDER	DRCM Renal Sort Order	N	3	9(3)
F	DOSING_ADJ_TYPE_CD	DRCM Dosing Adjustment Type Code	N	4	9(4)

	REN_LODOSD	DRCM Renally Adjusted Low Dose Per Day	N	9	9(5).9(3)
F	REN_LODOSU	DRCM Renally Adjusted Low Dose Per Day Units Code	AN	2	X(2)
	REN_HIDOSD	DRCM Renally Adjusted High Dose Per Day	N	9	9(5).9(3)
F	REN_HIDOSU	DRCM Renally Adjusted High Dose Per Day Units Code	AN	2	X(2)
	REN_MXDOSD	DRCM Renally Adjusted Maximum Dose Per Day	N	9	9(5).9(3)
F	REN_MXDOSU	DRCM Renally Adjusted Maximum Dose Per Day Units Code	AN	2	X(2)
	REN_LOFREQ	DRCM Renally Adjusted Low Frequency of Administration	N	5	9(2).9(2)
	REN_HIFREQ	DRCM Renally Adjusted High Frequency of Administration	N	5	9(2).9(2)
	REN_MX1DOS	DRCM Renally Adjusted Maximum Amount Per Single Dose	N	9	9(5).9(3)
F	REN_MX1DSU	DRCM Renally Adjusted Maximum Single Dose Units Code	AN	2	X(2)
F	DXID	Disease Identifier	N	8	9(8)
	REN_NTE_SINGLE_DOSE	DRCM Renally Adjusted Not-to-Exceed Amount Per Single Dose	N	9	9(5).9(3)

F	REN_NTE_SING LE_DOSE_UNIT_ CODE	DRCM Renally Adjusted Not-to-Exceed Amount Per Single Dose Units Code	AN	2	X(2)
	REN_FOOTNOTE	DRCM Renal Adjustment Footnote Text	AN	255	X(255)
F	REN_MONO_ID	DRCM Renal Monograph ID	N	8	9(8)

MinMax ERD and Technical Specifications

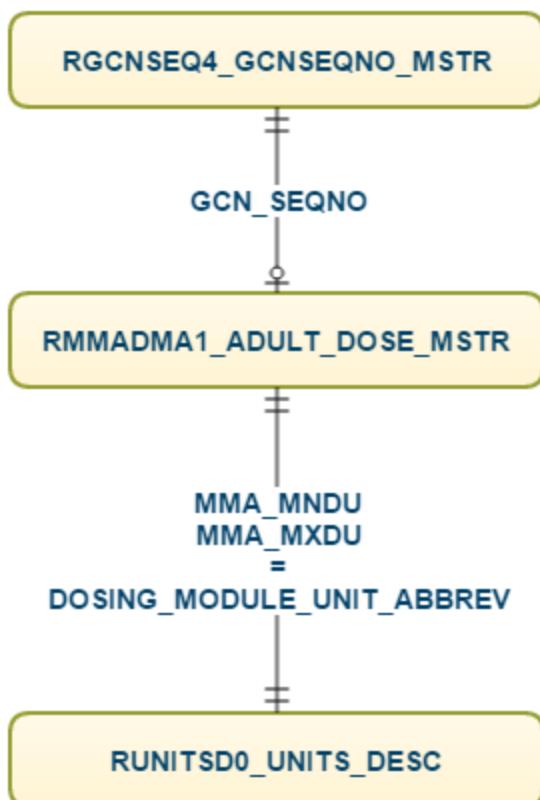
This section provides the technical specifications for each of the tables in the Min/Max Dose Modules. The table names are listed below.

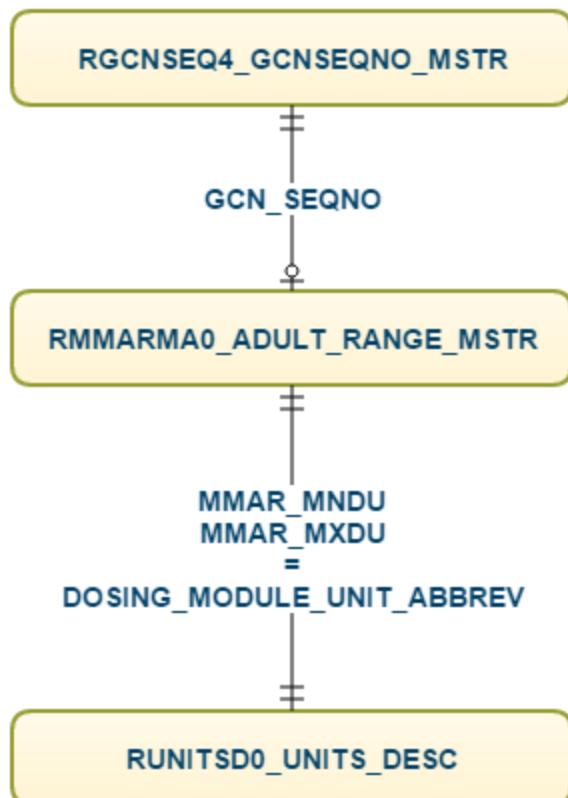
- Min/Max Tables
- Min/Max Adult Daily Dose Module ERD
- Min/Max Adult Daily Range Module ERD
- Min/Max Geriatric Daily Dose Module ERD
- Min/Max Geriatric Daily Range Module ERD
- Pediatric Dose Module ERD

MinMax Tables

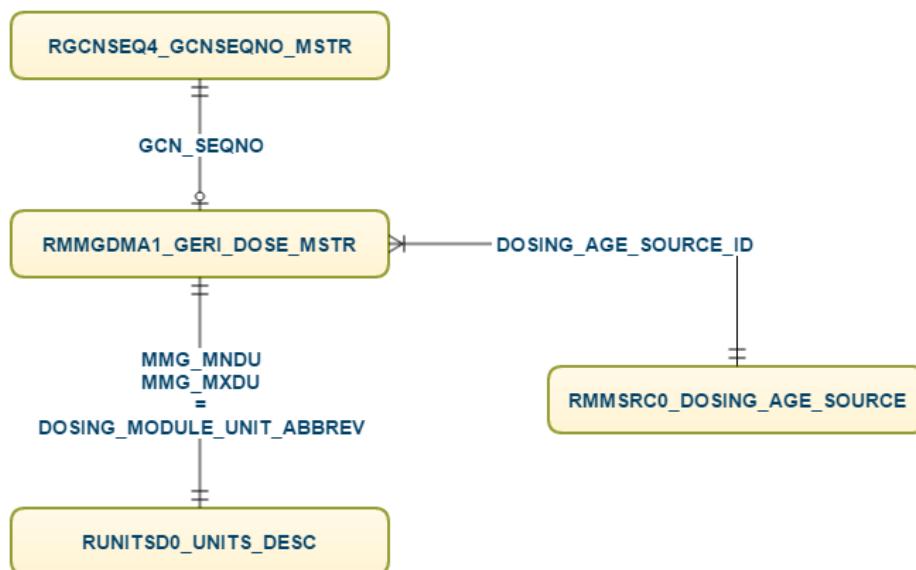
- Min/Max Dosing Age Source Description Table
- MMAD Master Table
- MMAR Master Table
- MMGD Master Table
- MMGR Master Table
- PDM Master Table
- PDM Unit Description Table
- PDM Weight/Age Table

MinMax Adult Daily Dose Module ERD

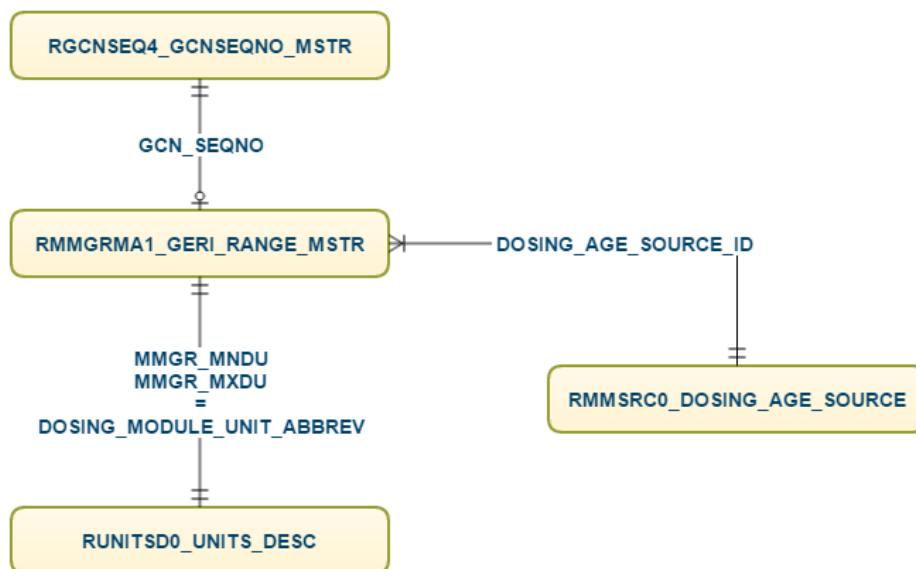
**Min/Max Adult Daily Range Module ERD**



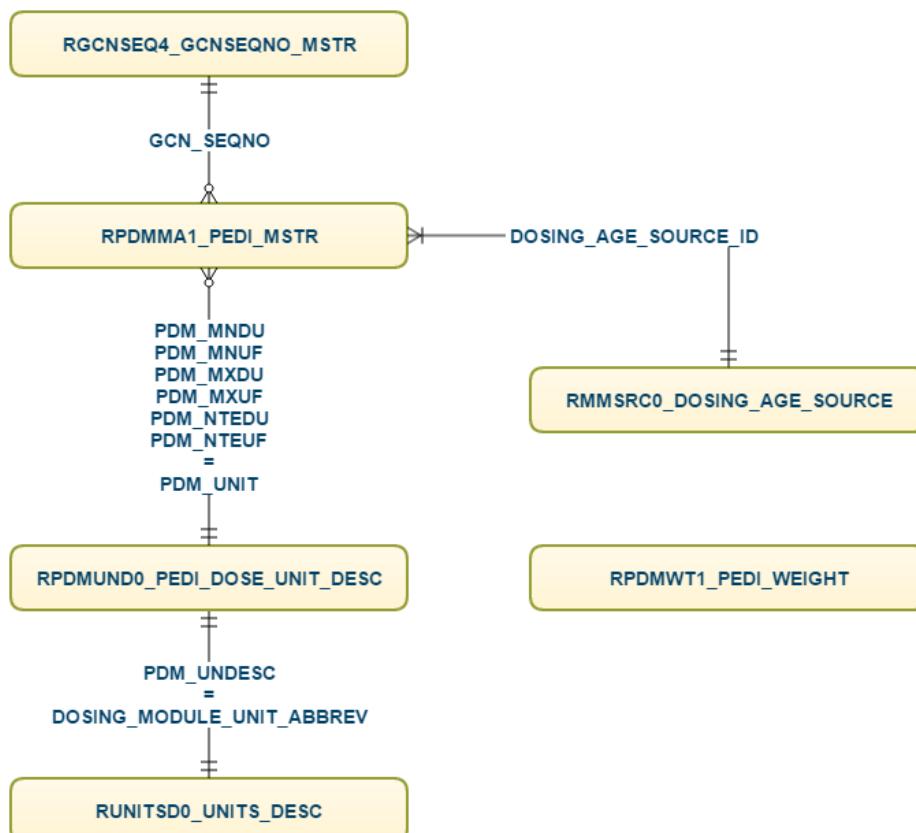
Min/Max Geriatric Daily Dose Module ERD



Min/Max Geriatric Daily Range Module ERD



Pediatric Dose Module ERD



MinMax Dosing Age Source Description Table

Table Name	RMMSRC0_DOSING_AGE_SOURCE				
Revision Activity	add.12-09-2010				
Purpose	Relates the Dosing Age Source Identifier to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)
	DOSING_AGE_SOURCE_DESC	Dosing Age Source Description	AN	50	X(50)

MMAD Master Table

Table Name	RMMADM1_ADULT_DOSE_MSTR				
Revision Activity	rev.03-09-1994				
Purpose	Associates a clinical formulation to minimum and maximum adult daily dosing information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
	MMA_MND	MMAD Minimum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMA_MNDU	MMAD Minimum Daily Dose Strength Units	AN	3	X(3)
	MMA_MNU	MMAD Minimum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMA_MNUF	MMAD Minimum Daily Dose Units Form	AN	2	X(2)
	MMA_MXD	MMAD Maximum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMA_MXDU	MMAD Maximum Daily Dose Strength Units	AN	3	X(3)
	MMA_MXU	MMAD Maximum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMA_MXUF	MMAD Maximum Daily Dose Units Form	AN	2	X(2)

MMAR Master Table

Table Name	RMMARMA0_ADULT_RANGE_MSTR
Revision Activity	add.11-01-1996
Purpose	Associates a clinical formulation to the minimum and maximum adult daily dosing information not specific to strength of product.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
	MMAR_MND	MMAR Minimum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMAR_MNDU	MMAR Minimum Daily Dose Strength Units	AN	3	X(3)
	MMAR_MNU	MMAR Minimum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMAR_MNUF	MMAR Minimum Daily Dose Units Form	AN	2	X(2)
	MMAR_MXD	MMAR Maximum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMAR_MXDU	MMAR Maximum Daily Dose Strength Units	AN	3	X(3)
	MMAR_MXU	MMAR Maximum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMAR_MXUF	MMAR Maximum Daily Dose Units Form	AN	2	X(2)

MMGD Master Table

Table Name	RMMGDMA1_GERI_DOSE_MSTR
Revision Activity	add.12-09-2010
Purpose	Associates a clinical formulation to minimum and maximum geriatric daily dosing information.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
	MMG_MND	MMGD Minimum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMG_MNDU	MMGD Minimum Daily Dose Strength Units	AN	3	X(3)
	MMG_MNU	MMGD Minimum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMG_MNUF	MMGD Minimum Daily Dose Units Form	AN	2	X(2)
	MMG_MXD	MMGD Maximum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMG_MXDU	MMGD Maximum Daily Dose Strength Units	AN	3	X(3)
	MMG_MXU	MMGD Maximum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMG_MXUF	MMGD Maximum Daily Dose Units Form	AN	2	X(2)
	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)

MMGR Master Table

Table Name	RMMGRMA1_GERI_RANGE_MSTR
Revision Activity	add.12-09-2010
Purpose	Associates a clinical formulation to the minimum and maximum geriatric daily dosing information not specific to the strength of the product.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
	MMGR_MND	MMGR Minimum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMGR_MNDU	MMGR Minimum Daily Dose Strength Units	AN	3	X(3)
	MMGR_MNU	MMGR Minimum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMGR_MNUF	MMGR Minimum Daily Dose Units Form	AN	2	X(2)
	MMGR_MXD	MMGR Maximum Daily Dose Strength Quantity	N	10	9(6).9(3)
	MMGR_MXDU	MMGR Maximum Daily Dose Strength Units	AN	3	X(3)
	MMGR_MXU	MMGR Maximum Daily Dose Units Quantity	N	8	9(4).9(3)
	MMGR_MXUF	MMGR Maximum Daily Dose Units Form	AN	2	X(2)
	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)

PDM Master Table

Table Name	RPDMMA1_PEDI_MSTR				
Revision Activity	rev.12-09-2010				
Purpose	Associates a clinical formulation to minimum and maximum daily dosing information based on age.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
P	PDM_MNAGE	PDM Minimum Dosing Age (Days)	N	4	9(4)
P	PDM_MXAGE	PDM Maximum Dosing Age (Days)	N	4	9(4)
	PDM_MND	PDM Minimum Daily Dose Strength Quantity	N	13	9(6).9(6)
F	PDM_MNDU	PDM Minimum Daily Dose Strength Units	AN	2	X(2)
	PDM_MNU	PDM Minimum Daily Dose Units Quantity	N	13	9(6).9(6)
F	PDM_MNUF	PDM Minimum Daily Dose Units Form	AN	2	X(2)
	PDM_MXD	PDM Maximum Daily Dose Strength Quantity	N	13	9(6).9(6)
F	PDM_MXDU	PDM Maximum Daily Dose Strength Units	AN	2	X(2)
	PDM_MXU	PDM_MXUPDM Maximum Daily Dose Units Quantity	N	13	9(6).9(6)
F	PDM_MXUF	PDM Maximum Daily Dose Units Form	AN	2	X(2)

	PDM_NTED	PDM Not-to-Exceed Daily Dose Strength Quantity	N	13	9(6).9(6)
F	PDM_NTEDU	PDM Not-to-Exceed Daily Dose Strength Units	AN	2	X(2)
	PDM_NTEU	PDM Not-to-Exceed Daily Dose Units Quantity	N	13	9(6).9(6)
F	PDM_NTEUF	PDM Not-to-Exceed Daily Dose Units Form	AN	2	X(2)
	DOSING_AGE_S OURCE_ID	Dosing Age Source Identifier	N	4	9(4)

PDM Unit Description Table

Table Name	RPDMUND0_PEDI_DOSE_UNIT_DESC
Revision Activity	add.01-10-1995
Purpose	Relates the Units Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	PDM_UNIT	PDM Units Code	AN	2	X(2)
	PDM_UNDESC	PDM Units Code Description	AN	30	X(30)

PDM Weight-Age Table

Table Name	RPDMWT1_PEDI_WEIGHT				
Revision Activity	rev.11-01-1996				
Purpose	Provides dosing information for a particular patient weight.				

Key	Column Name	Column Description	Format	Length	Picture
P	PDM_MNAGE	PDM Minimum Dosing Age (Days)	N	4	9(4)
P	PDM_MXAGE	PDM Maximum Dosing Age (Days)	N	4	9(4)
	PDM_AGEDSC	PDM Age Range Description	AN	30	X(30)
	PDM_M05WT	PDM 5th Percentile Weight for Males	N	6	9(3).9(2)
	PDM_M25WT	PDM 25th Percentile Weight for Males	N	6	9(3).9(2)
	PDM_M50WT	PDM 50th Percentile Weight for Males	N	6	9(3).9(2)
	PDM_M75WT	PDM 75th Percentile Weight for Males	N	6	9(3).9(2)
	PDM_M95WT	PDM 95th Percentile Weight for Males	N	6	9(3).9(2)
	PDM_F05WT	PDM 5th Percentile Weight for Females	N	6	9(3).9(2)
	PDM_F25WT	PDM 25th Percentile Weight for Females	N	6	9(3).9(2)
	PDM_F50WT	PDM 50th Percentile Weight for Females	N	6	9(3).9(2)
	PDM_F75WT	PDM 75th Percentile Weight for Females	N	6	9(3).9(2)

	PDM_F95WT	PDM 95th Percentile Weight for Females	N	6	9(3).9(2)
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NEOM ERD and Technical Specifications

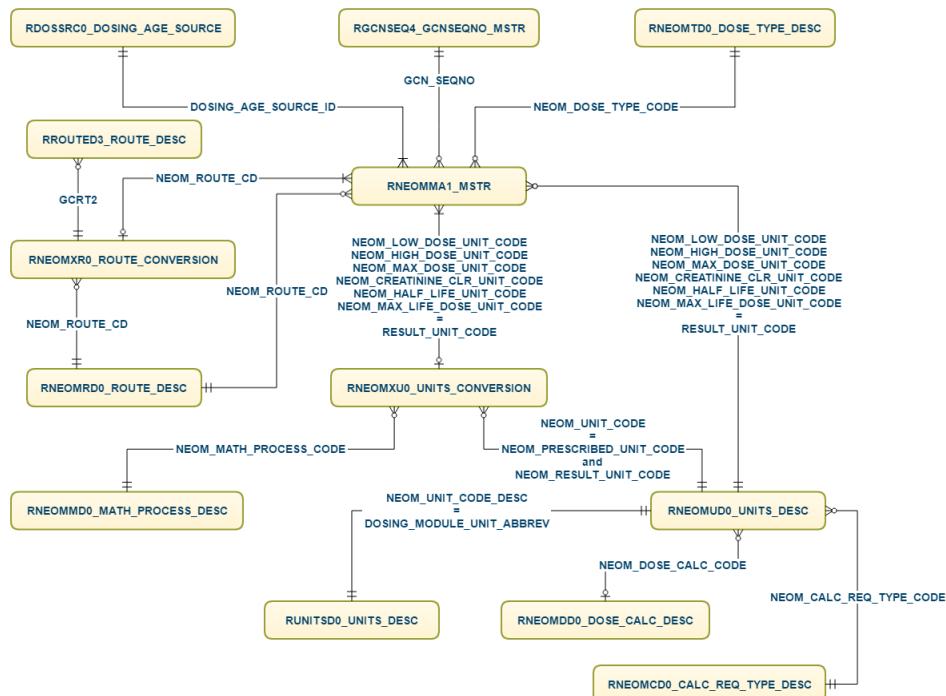
This section provides the technical specifications for each of the tables contained in this module. These table names are listed below.

- NEOM Tables
- Neonatal and Infant Dosage Range Check Module ERD

NEOM Tables

- NEOM Calculation Required Type Code Description Table
- NEOM Dose Calculation Code Description Table
- NEOM Dose Type Code Description Table
- NEOM Master Table
- NEOM Math Process Code Description Table
- NEOM Route Code Description Table
- NEOM Route Conversion Table
- NEOM Unit Code Description Table
- NEOM Unit Conversion Table

Neonatal and Infant Dosage Range Check Module ERD



NEOM Calculation Required Type Code Description Table

Table Name	RNEOMCD0_CALC_REQ_TYPE_DESC
Revision Activity	add.10-03-2002
Purpose	Relates the Calculation Required Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	NEOM_CALC REQ_TYPE_CODE	NEOM Calculation Required Type Code	N	1	9(1)
	NEOM_CALC REQ_TYPE_CODE_DESC	NEOM Calculation Required Type Code Description	AN	50	X(50)

NEOM Dose Calculation Code Description Table

Table Name	RNEOMDD0_DOSE_CALC_DESC
Revision Activity	add.10-03-2002
Purpose	Relates the Dose Calculation Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	NEOM_DOSE_C ALC_CODE	NEOM Dose Calculation Code	AN	1	X(1)
	NEOM_DOSE_C ODE_DESC	NEOM Dose Code Description	AN	50	X(50)

NEOM Dose Type Code Description Table

Table Name	RNEOMTD0_DOSE_TYPE_DESC
Revision Activity	add.10-03-2002
Purpose	Relates the Dose Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	NEOM_DOSE_TYPE_CODE	NEOM Dose Type Code	AN	2	X(2)
	NEOM_DOSE_TYPE_CODE_DESC	NEOM Dose Type Code Description	AN	25	X(25)

NEOM Master Table

Table Name		RNEOMMA1_MSTR			
Revision Activity		rev.06-24-10			
Purpose		Associates a clinical formulation to its dosing information.			
Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	NEOM_ROUTE_CODE	NEOM Route Code	AN	3	X(3)
P	NEOM_LOW_AGE_DAYS	NEOM Low Age in Days	N	5	9(5)
P	NEOM_HIGH_AGE_DAYS	NEOM High Age in Days	N	5	9(5)
PF	FDBDX	First Databank Disease Code	AN	9	X(9)
PF	NEOM_DOSE_TYPE_CODE	NEOM Dose Type Code	AN	2	X(2)
P	NEOM_LOW_GEST_BIRTH_AGE_WEEKS	NEOM Low Gestational Age at Birth in Weeks	N	2	9(2)
P	NEOM_HIGH_GEST_BIRTH_AGE_WEEKS	NEOM High Gestational Age at Birth in Weeks	N	2	9(2)
P	NEOM_LOW_CURRENT_WEIGHT_GRAMS	NEOM Low Current Weight in Grams	N	5	9(5)
P	NEOM_HIGH_CURRENT_WEIGHT_GRAMS	NEOM High Current Weight in Grams	N	5	9(5)
	NEOM_GEST_BIRTH_AGE_REQ_IND	NEOM Gestational Birth Age Required Indicator	AN	1	X(1)
	NEOM_WEIGHT_REQ_IND	NEOM Weight Required Indicator	AN	1	X(1)
	NEOM_LOW_DOSE_PER_DAY	NEOM Low Dose per Day	N	9	9(5).9(3)

F	NEOM_LOW_DOSE_UNIT_CODE	NEOM Low Dose Unit Code	AN	2	X(2)
	NEOM_HIGH_DOSE_PER_DAY	NEOM High Dose per Day	N	9	9(5).9(3)
F	NEOM_HIGH_DOSE_UNIT_CODE	NEOM High Dose Unit Code	AN	2	X(2)
	NEOM_MAX_DOSE_PER_DAY	NEOM Maximum Dose per Day	N	9	9(5).9(3)
f	NEOM_MAX_DOSE_UNIT_CODE	NEOM Maximum Dose Unit Code	AN	2	X(2)
	NEOM_LOW_FREQUENCY	NEOM Low Frequency	N	5	9(2).9(2)
	NEOM_HIGH_FREQUENCY	NEOM High Frequency	N	5	9(2).9(2)
	NEOM_RENAL_IMPAIRMENT_IND	NEOM Renal Impairment Indicator	AN	1	X(1)
	NEOM_CREATININE_CLR_THRESHOLD	NEOM Creatinine Clearance Threshold	N	3	9(3)
F	NEOM_CREATININE_CLR_UNIT_CODE	NEOM Creatinine Clearance Threshold Unit Code	AN	2	X(2)
	NEOM_LOW_DURATION_OF_TX	NEOM Low Duration of Therapy	N	5	9(5)
	NEOM_HIGH_DURATION_OF_TX	NEOM High Duration of Therapy	N	5	9(5)
	NEOM_MAX_DURATION_OF_TX	NEOM Maximum Duration of Therapy	N	5	9(5)
	NEOM_HEPATIC_IMPAIRMENT_IND	NEOM Hepatic Impairment Indicator	AN	1	X(1)
	NEOM_LOW_ELIMINATION_HALF_LIFE	NEOM Low Elimination Half Life	N	6	9(3).9(2)
	NEOM_HIGH_ELIMINATION_HALF_LIFE	NEOM High Elimination Half Life	N	6	9(3).9(2)

F	NEOM_HALF_LIFE_UNIT_CODE	NEOM Half Life Unit Code	AN	2	X(2)
	NEOM_MAX_SINGLE_DOSE	NEOM Maximum Single Dose	N	9	9(5).9(3)
F	NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NEOM Maximum Single Dose Unit Code	AN	2	X(2)
	NEOM_MAX_LIFETIME_DOSE	NEOM Maximum Lifetime Dose	N	9	9(5).9(3)
F	NEOM_MAX_LIFETIME_DOSE_UNIT_CODE	NEOM Maximum Lifetime Dose Unit Code	AN	2	X(2)
F	DXID	FML Disease Identifier (DxID)	N	8	9(8)
	NTE_SINGLE_DOSE	Not-to-Exceed Amount Per Single Dose	N	9	9(5).9(3)
F	NTE_SINGLE_DOSE_UNIT_CODE	Not-to-Exceed Amount Per Single Dose Unit Code	AN	2	X(2)
	DOSING_AGE_SOURCE_ID	Dosing Age Source Identifier	N	4	9(4)

NEOM Math Process Code Description Table

Table Name	RNEOMMD0_MATH_PROCESS_DESC
Revision Activity	add.10-03-2002
Purpose	Relates the Math Process Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	NEOM_MATH_P ROCESS_CODE	NEOM Math Process Code	AN	1	X(1)
	NEOM_MATH_P ROCESS_CODE _DESC	NEOM Math Process Code Description	AN	50	X(50)

NEOM Route Code Description Table

Table Name	RNEOMRD0_ROUTE_DESC				
Revision Activity	add.10-03-2002				
Purpose	Relates the Route Code to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
P	NEOM_ROUTE_CODE	NEOM Route Code	AN	3	X(3)
	NEOM_ROUTE_CODE_DESC	NEOM Route Code Description	AN	22	X(22)

NEOM Route Conversion Table

Table Name	RNEOMXR0_ROUTE_CONVERSION
Revision Activity	add.10-03-2002
Purpose	Enables the conversion of general administration routes to more comprehensive dosage range check routes.

Key	Column Name	Column Description	Format	Length	Picture
P	GCRT2	Route of Administration Code (2-character)	AN	2	X(2)
F	NEOM_ROUTE_CODE	NEOM Route Code	AN	3	X(3)

NEOM Unit Code Description Table

Table Name	RNEOMUD0_UNITS_DESC				
Revision Activity	add.10-03-2002				
Purpose	Relates the Unit Code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	NEOM_UNIT_CODE	NEOM Unit Code	AN	2	X(2)
	NEOM_UNIT_CODE_DESC	NEOM Unit Code Description	AN	12	X(12)
F	NEOM_CALC_REQUIRED_TYPE_CODE	NEOM Calculation Required Type Code	N	1	9(1)
F	NEOM_DOSE_CALC_CODE	NEOM Dose Calculation Code	AN	1	X(1)
F	NEOM_RESULT_UNIT_CODE	NEOM Result Unit Code	AN	2	X(2)

NEOM Unit Conversion Table

Table Name	RNEOMXU0_UNITS_CONVERSION
Revision Activity	add.10-03-2002
Purpose	Enables the conversion of unit identifiers.

Key	Column Name	Column Description	Format	Length	Picture
PF	NEOM_PRESCRIBED_UNIT_CODE	NEOM Prescribed Unit Code	AN	2	X(2)
PF	NEOM_RESULT_UNIT_CODE	NEOM Result Unit Code	AN	2	X(2)
F	NEOM_MATH_PROCESS_CODE	NEOM Math Process Code	AN	1	X(1)
	NEOM_CONVERSION_FACTOR	NEOM Conversion Factor	N	16	9(10).9(5)

Drug Allergy Module (DAM) 4.0

- Drug Allergy Module Editorial Policies
- Applications
- ERD and Technical Specifications

Drug Allergy Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in the creation of this module are provided in the following sections:

- Overview
- Definitions
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

Overview

Allergic reactions to drugs can result in serious and life-threatening consequences and should be carefully considered when prescribing drug therapy. The Drug Allergy Module™ (DAM™) identifies drugs that have been reported to cause an allergic reaction. DAM also identifies cross-sensitivities among related drugs that might cause reactions in patients allergic to similar compounds.

-  Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Allergen Pick List

Recording patient allergy data can be performed quickly and accurately using the Allergen Pick List. Patients communicate allergens in different ways (such as by brand name, combination product, single ingredient, or by a group name of allergens), and healthcare experts must be able to transcribe the information obtained from a patient into codified FDB allergy concepts used by the Drug Allergy Module (DAM). If patients indicate that they are allergic to “penicillins,” the information is easily transcribed into a Specific Allergen Group named ‘Penicillins’ (DAM_ALRGN_GRP value 000476). However, if patients indicate that they are allergic to Tylenol with Codeine, the allergy information must be recorded using the appropriate allergen concept, such as the brand Med Name concept (MED_NAME_ID value 91892), as well as the specific ingredient allergen concept. There are no abbreviations or synonyms available for concepts at this time.

FDB maintains two pick list tables—the [DAM Patient Profile Allergen Pick List Table](#) (RDAMAPM0_ALRGN_PICKLIST_MSTR) and the [Drug Allergy Concept Attributes Table](#) (RDAMCA0_CONCEPT). Both pick list tables use the three different drug concept identifiers: brand Medication concepts, ingredient base concepts, allergy group concepts; however, the Drug Allergy Concept Attributes Table spans food-based and environmental-based allergy attributes for further customer filtering.

The Allergen Pick List is created using a rule based knowledge tool. Rules can be added, modified, or deleted if new inclusion or exclusion policies are needed. The Allergen Pick List does not include every ingredient, medication name, or allergy group.

Each week any new or updated FDB concepts (medication names [MED_NAME_IDs], DAM_ALRGN_GRPs, and ingredients [HIC_SEQNs]) entered into FDB MedKnowledge are filtered through the rules to determine what will be included or excluded in the Allergen Pick List.

-  Not every ingredient included on the DAM Pick List participates in drug allergy screening.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also defined.

This section includes the following terms:

- Active Ingredient
- Adverse Side Effect
- Allergen Profile
- Allergic Reaction
- Base Ingredient
- Cross-Sensitive Allergen
- Cross-Sensitivity Episode
- Idiosyncratic Adverse Reaction
- Inactive Ingredient
- Medication Name Concepts
- Potentially Inactive Ingredient
- Primary Allergen
- Prospective Drug
- Severe Allergic Reaction

Active Ingredient

Patients can be allergic to the active ingredients or inactive ingredients of a drug. Active ingredients serve a therapeutic function; they make the product therapeutically effective. Inactive Ingredients usually serve non-therapeutic functions; for example, a dye added to make a tablet yellow.

Adverse Side Effect

A negative effect resulting from an administered drug product. Side effects are not generally patient-specific. They usually do not involve the immune system. They are usually more likely to occur at higher doses and are often preventable. The adverse effects experienced by an allergic patient are not normally dosage-strength dependent, and cannot be avoided by an allergic patient.

Additionally, while an idiosyncratic reaction (an unfavorable reaction to a drug that appears to be an allergic reaction, but where prior sensitization to the offending drug was not present) to a drug is unlikely to result in the drug's removal from the marketplace, a serious and documented side effect may result in the drug's removal from the marketplace as determined by the manufacturer or the Food and Drug Administration (FDA).

Allergen Profile

The area of a patient's record devoted to documenting the patient's allergens. The term "profile" is sometimes used as a verb meaning "to record on a patient's allergen profile."

Allergic Reaction

The adverse effect of an immune event where there is an interaction between an antigen and antibody or sensitized lymphocytes. Allergic reactions are considered synonymous with hypersensitivity episodes.

Base Ingredient

An ingredient that does not include a salt ester.

Cross-Sensitive Allergen

Drugs that have shown some degree of cross-allergenicity and are chemically related or structurally related to the primary allergen. In DAM, cross-sensitive allergen ingredients have the same DAM Cross-Sensitive Allergen Group Code value.

Cross-Sensitivity Episode

An allergic reaction to a drug that is structurally or chemically related to the primary allergen.

Idiosyncratic Adverse Reaction

A negative effect resulting from an administered drug product. This negative effect appears to be an allergy but occurs without prior sensitization to the offending drug. By definition, an idiosyncratic reaction is a unique instance. The method for storing an idiosyncratic episode via the Hierarchical Ingredient Code Sequence Number is the same as for an allergic episode.

Inactive Ingredient

Inactive Ingredients usually serve non-therapeutic functions, for example, a dye added to make a tablet yellow. Patients can be allergic to the active ingredients or inactive ingredients of a drug.

Medication Name Concepts

A series of four FDB medication identifiers that describe packaged products at varying degrees of specificity, from general (the medication's name) to specific (the medication's name and formulation information). See the [Medication Name Concepts \(MED\) Editorial Policies](#) for more information.

Potentially Inactive Ingredient

DAM utilizes the Potentially Inactive Indicator fields to determine whether an ingredient should be treated as an inactive ingredient. Ingredients with a Potentially Inactive Indicator value of 0 are always active ingredients. Ingredients with a Potentially Inactive Indicator value of 1 are sometimes active and sometimes inactive. These should be treated with greater caution in the context of allergen screening because they are not as strictly regulated as those ingredients that are considered "always active."

Primary Allergen

An offending allergen. For a given ingredient, each of the salt and ester variations of the ingredient that belong to the same chemical group and ingredients that have close structural similarities are considered primary allergens to an allergic patient. In DAM, primary allergens are assigned DAM Specific Allergen Group Codes. Some examples of primary allergens and drugs linked to them by the DAM Specific Allergen Group Codes include penicillin VK and penicillin G, penicillin V sodium and amoxicillin, imipramine and protriptyline, and codeine and morphine.

Prospective Drug

A drug that undergoes allergy screening either a) prior to being prescribed to a patient, or b) prior to being dispensed to a patient.

Severe Allergic Reaction

Defined as a life-threatening event or an event that might result in permanent damage.

Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

DAM establishes allergen code links to ingredients whenever biomedical literature shows one of the following:

- The effects of the allergic reaction are potentially clinically significant.
- A drug is pharmacologically and/or chemically related to ingredients that qualify. In this case, a DAM Specific Allergen Group Code is created to include the qualifying ingredients. For example, the specific allergen group Hydralazine (DAM Specific Allergen Group Code value 000144) includes both the congeners hydralazine and dihydralazine even though only hydralazine allergens may be documented in biomedical literature.

Allergen Pick List Rules for Inclusion/Exclusion

Rules for inclusion/exclusion may be created for each type of Pick List concept.

Ingredient (aka HIC Root)

Ingredients are candidates for inclusion in the Allergen Pick List file if they meet all of the following criteria:

- Status is Live

Ingredients may be excluded from the Allergen Pick List file if they meet any of the following criteria:

- Status is inactive, e.g., "obsolete" (e.g., HIC Description contains "DO NOT USE")
- Ingredient "salt" descriptions (e.g., erythromycin stearate)
- Medical devices, diagnostic tests, or medical supplies (e.g., condoms, diaphragms)
- Gases (e.g., oxygen, carbon monoxide, carbon dioxide)
- Ingredient names that use chemical nomenclature (e.g., 1,2-octanediol)
- ALL inactive ingredients are excluded on the Canadian pick list.
- Plants not known to be a significant allergen (e.g., acerola, amur corktree, lobelia seed)
- Bacterial species or Lactobacillus (e.g., Streptococcus thermophilus)
- Description contains "O.U.", meaning otherwise unspecified ingredient group concepts, (e.g., Antiamoebic drugs O.U.)
- Ingredients with nonspecific classification-like descriptions (e.g., Antiseptic solution)
- Ingredients classified as nutritional products and with "nutrition" in description (e.g., Nutritional therapy for phenylketonuria, nutritional supplements)
- Description contains "multivitamin"
- Duplicates of Ingredients with "kit" in the description (e.g., Kit for the preparation of Yttrium-90)
- Human or animal-derived extracts unless determined to be a significant allergy (e.g., Whale sperm, brain extract)
- Duplicates of ingredients where the only difference is the ingredient-embedded strength (e.g., Dextran 40, Dextran 60; the most common representative will be left on the Pick List and the others will be removed)

- Inert excipient ingredients not included on the official FDB NDC review inactives list

Med Names

Med Names are candidates for inclusion in the Allergen Pick List file if they meet all of the following criteria:

- Med Name is a brand
- Med Name status is either Active, Inactive, Replaced, or Unassociated

Med Names may be excluded from the Allergen Pick List file if they meet any of the following criteria:

- Status is Retired
- "Generically" named Brand concepts
- Single-ingredient, generically named Med Names
- Medical devices, diagnostic tests, or medical supplies
- Description has already been included as an Ingredient description
 - Med Names that have the same active ingredient list but have different strengths in the name
 - Only one strength, that is deemed the most common, will be included
 - Example: Aldoril-15 and Aldoril-25; Ambien and Ambien CR, Anaprox and Anaprox DS. Only one of the med names in the pair is included.
- Med Names that have the same active ingredient but have dose form or formulation details in description, e.g., XR, CR, XL, DS, Max, extra strength, etc.
 - Only one Med Name concept will be included
 - Example: Adderall and Adderall XR, Tylenol and Tylenol extra strength

Allergen Group (DAM_ALRGN_GRP)

Allergen groups are candidates for inclusion in the Allergen Pick List file if they meet all of the following criteria:

- Status is Live

Allergen Groups may be excluded from the Allergen Pick List file if they meet any of the following criteria:

- Description is an exact match or close to a match for an Ingredient description or a Med Name that is already included in the Allergen Pick List file
- Only includes plants not known to be a significant allergy
- Only includes bacteria species as ingredients

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

This section includes the following data elements:

- Hierarchical Ingredient Code Sequence Number
- DAM Specific Allergen Group Code
- DAM Cross-Sensitive Allergen Group Code
- Allergen Pick List

Hierarchical Ingredient Code Sequence Number

The Hierarchical Ingredient Code Sequence Number represents a patient's allergy to a specific ingredient.

DAM Specific Allergen Group Code

The DAM Specific Allergen Group Code represents the primary or offending allergen. It is a numeric identifier assigned to a group of chemically similar drugs known to have similar allergenic potential.

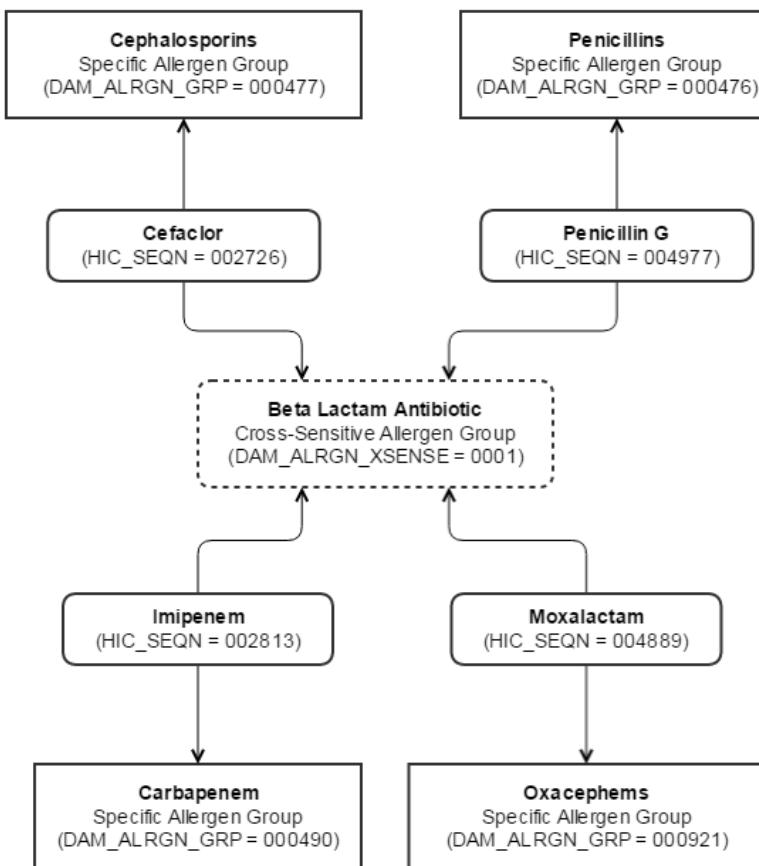
Example—Penicillin, amoxicillin, and piperacillin are chemically similar and therefore they have the same specific allergen group (Penicillins 000476). A patient who displays an allergy to penicillin has the potential to suffer an allergic reaction to any ingredients that have the same DAM Specific Allergen Group Code as penicillin.

DAM Cross-Sensitive Allergen Group Code

The DAM Cross-Sensitive Allergen Group Code is the "potential" allergen. It is a numeric identifier assigned to the drugs that show some degree of cross-sensitivity and are chemically or structurally related to the primary allergen.

Example—The ingredient penicillin G (Hierarchical Ingredient Code Sequence Number value 004977) has the DAM Cross-Sensitive Allergen Group Code value of 0001, which links it to roughly 160 other beta lactam antibiotics like penicillins, cephalosporins, and carbapenems. These 160 ingredients belong to a variety of different specific allergen groups, but the risk of a cross-sensitive allergic reaction exists among the different beta lactam antibiotics, so the ingredients all belong to the same cross-sensitive allergen group.

See the diagram below for an illustration of this relationship.



Allergen Pick List

The Allergen Pick List is a list of ingredients that represents allergens at various levels of abstraction (brand name, ingredient, allergy group).

FDB maintains two pick list tables:

- The [DAM Patient Profile Allergen Pick List Table](#) (RDAMAPM0_ALRGN_PICKLIST_MSTR)
- The [Drug Allergy Concept Attributes Table](#) (RDAMCA0_CONCEPT)

Both pick list tables use three different drug concept identifiers: brand Medication concepts, ingredient base concepts, allergy group concepts; however, the Drug Allergy Concept Attributes Table Pick List spans food-based and environmental-based allergy attributes for further customer filtering.

[DAM Patient Profile Allergen Pick List Table](#)

The [DAM Patient Profile Allergen Pick List Table](#) (RDAMAPM0_ALRGN_PICKLIST_MSTR) is created and maintained by FDB. It contains three different drug concept identifiers: brand Medication concepts, ingredient base concepts, and allergy group concepts.

- Brand Med Name Concepts: Medication Name ID ([MED_NAME_ID](#))
 - Example: Zoloft- 00000035

- Ingredient Concepts: Base Ingredient Code ([HIC4_SEQN](#))
 - Example: Erythromycin- 002755
- Allergy Group Concepts: DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#))
 - Example: Penicillins- 000476

`RDAMAPM0_ALRGN_PICKLIST_MSTR` has the following three columns:

- DAM Allergen Concept ID ([DAM_CONCEPT_ID](#))
- DAM Allergen Concept ID Type ([DAM_CONCEPT_ID_TYP](#))
- DAM Allergen Concept ID Description ([DAM_CONCEPT_ID_TYP_DESC](#))

[RDAMAPM0_ALRGN_PICKLIST_MSTR Table](#)

DAM_CONCEPT_ID	DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID_DESC
00000035	002	Zoloft
00000476	001	Penicillins
00002755	006	Erythromycin

The DAM Allergen Concept ID ([DAM_CONCEPT_ID](#)) represents one of these three concepts:

- A Med Name ID ([MED_NAME_ID](#))
- A DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#))
- An Ingredient ([HIC_SEQN](#))

The `DAM_CONCEPT_ID_TYP` indicates if the `DAM_CONCEPT_ID` is a `MED_NAME_ID`, allergy group, or an ingredient.

- 001 = Allergy Group ([DAM_ALRGN_GRP](#))
- 002 = `MED_NAME_ID`
- 006 = Ingredient ([HIC_SEQN](#))

[Drug Allergy Concept Attributes Table](#)

As an alternative, the [Drug Allergy Concept Attributes Table](#) (`RDAMCA0_CONCEPT`) can be used as the primary pick list. The Drug Allergy Concept Attributes Table is created and maintained by FDB, and contains a superset of the three different drug concept identifiers in the DAM Patient Profile Allergen Pick List: Med Name concepts, ingredient base concepts, allergy group concepts. In addition, it spans food-based and environmental-based allergy attributes for further customer filtering in patient profiles.

- Brand Med Name Concepts: Medication Name ID ([MED_NAME_ID](#))
 - Example: Zoloft- 00000035
- Ingredient Concepts: Base Ingredient Code ([HIC4_SEQN](#))
 - Example: Erythromycin- 002755
- Allergy Group Concepts: DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#))

- Example: Penicillins- 000476

RDAMCA0_CONCEPT has the following nine columns:

- DAM Allergen Concept ID (**DAM_CONCEPT_ID**)
- DAM Allergen Concept ID Type (**DAM_CONCEPT_ID_TYP**)
- DAM Allergen Concept ID Description (**DAM_CONCEPT_ID_DESC**)
- DAM Picklist Indicator (**DAM_PICKLIST_IND**)
- DAM Spans Medication Indicator (**DAM_MED_IND**)
- DAM Spans Food Indicator (**DAM_FOOD_IND**)
- DAM Spans Environment Agent Indicator (**DAM_ENVIRON_AGENT_IND**)
- DAM Non Allergen Indicator (**DAM_NON_ALRGN_IND**)
- DAM Concept Status Code (**DAM_CONCEPT_STATUS_CD**)

RDAMCA0_CONCEPT Table

DAM_CONCEPT_ID	00000035	00000476	00002755
DAM_CONCEPT_ID_TYP	002	001	006
DAM_CONCEPT_ID_DESC	Zoloft	Penicillins	Erythromycin
DAM_PICKLIST_IND	1	1	1
DAM_MED_IND	1	1	1
DAM_FOOD_IND	0	0	0
DAM_ENVIRON_AGENT_IND	0	0	0
DAM_NON_ALRGN_IND	0	0	0
DAM_CONCEPT_STATUS_CD	0	0	0

The DAM Allergen Concept ID (**DAM_CONCEPT_ID**) represents one of these three concepts:

- A Med Name ID (**MED_NAME_ID**)
- A DAM Specific Allergen Group Code (**DAM_ALRGN_GRP**)
- An Ingredient (**HIC_SEQN**)

The DAM_CONCEPT_ID_TYP indicates if the DAM_CONCEPT_ID is a MED_NAME_ID, allergy group, or an ingredient.

- 001 = Allergy Group (**DAM_ALRGN_GRP**)
- 002 = MED_NAME_ID
- 006 = Ingredient (**HIC_SEQN**)

DAM Applications

This section provides information about the practical use of the data contained in DAM.

FDB offers a variety of drug concepts and their identifiers to support drug-lab interference screening. These identifiers are referred to as **Multiple Access Points (MAPs)** and represent drug products, ingredients, and formulations. Familiarity with the MAPs section is recommended before attempting the applications contained in this section.

Drug Allergy Screening Overview

[Screening an IDC for Ingredient Allergens \(Scenario A\)](#)

[Screening an IDC for MED_NAME_ID Allergens \(Scenario B\)](#)

[Screening an IDC for a DAM_ALRGN_GRP Allergen \(Scenario C\)](#)

[Screening a MEDID for an Ingredient Allergen \(Illustration of Scenario D\)](#)

[Customizing the Allergen Pick List](#)

[Recording Patient Allergy Information](#)

[Retrieving a Replacement Specific Allergen Group](#)

Drug Allergy Screening Overview

This section illustrates the methodology of screening prospective drugs for profiled patient allergies.

FDB offers a variety of drug concepts and their identifiers to support DAM Allergy Screening. These identifiers are referred to as **Multiple Access Points (MAPs)** and represent drug products, ingredients, and formulations.

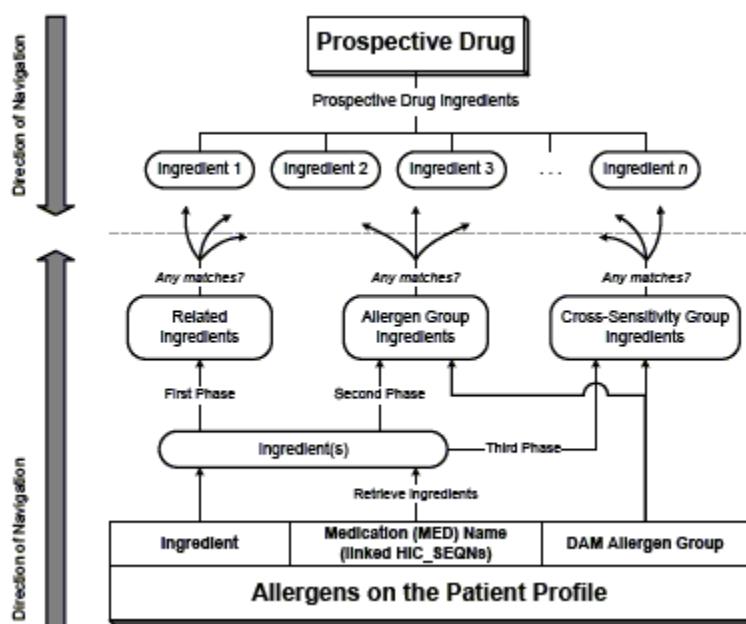
Familiarity with the MAPs section is recommended before attempting the applications contained in this section

The following topics are discussed in this section:

- Illustration of the Drug Allergy Screening Process
- The Six Different Allergy Screening Scenarios
- Inactive Ingredient Screening

Illustration of the Drug Allergy Screening Process

DAM facilitates drug allergy screening by comparing the ingredients of a prospective drug to collections of ingredients that pose a patient allergy risk. The following illustration shows a graphical diagram of this approach, and uses some sample data to illustrate the comparisons. The light-gray line represents the comparison interface between the two sets of gathered data, where the ingredients above the interface (the prospective ingredients) and the ingredients below the interface (those that put the patient at risk of suffering an allergic reaction) are compared for matching values. Matches signify an allergy risk to the patient.



- i** FDB does not recommend storing and screening only the MED_NAME_ID. If a MED_NAME_ID is chosen for profiling, you must also save/profile the associated HIC_SEQNs.

The area above the dotted line uses database table navigation to collect the ingredients of the prospective

drug(s). The area below the dotted line uses database table navigation to collect the ingredients related to each allergen listed on the patient's allergen profile. Different navigational paths are used for each of the three allergen concept types (ingredients, Medication Names, and DAM Specific Allergen Groups).

The Six Different Allergy Screening Scenarios

Your screening application must carry out a pre-defined sequence of steps to screen a prospective drug for patient allergens. The steps your application uses depend on the type of identifiers used to represent the prospective drug and patient allergen. For example, the process of screening a prospective IDC for a patient's *ingredient* allergen differs from the process of screening a prospective IDC for a *Medication Name ID* allergen. This process, in turn, differs from the process of screening a prospective Medication for a given allergen rather than screening a prospective *IDC*.

- i All allergen groups (**DAM_AGCSP**) and ingredients (**HIC_SEQN**) stored within a patient's profile should always be screened for allergy hits regardless of their status. See [Retired, Replaced, or Obsolete Status Codes](#) for more information.

Replaced ingredients should be screened using the replacement ingredient identifier value. See [Finding a Replacement Ingredient Identifier](#) for more information.

The following table defines the six possible screening scenarios:

Screening Scenario	Prospective Drug Type	Patient Allergen Type
A	IDC	Ingredient (HIC_SEQN)
B	IDC	Medication Name ID (MED_NAME_ID)
C	IDC	Specific Allergen Group (DAM_ALRGN_GRP)
D	Medication Concept	Ingredient (HIC_SEQN)
E	Medication Concept	Medication Name ID (MED_NAME_ID)
F	Medication Concept	Specific Allergen Group (DAM_ALRGN_GRP)

Scenarios A, B, and C tend to occur in the order fulfillment environment, where healthcare experts work with specificIDCs. Scenarios D, E, and F tend to occur in the order entry environment, where healthcare experts work with medication names and dosage strengths rather than packaged products.

Scenarios A, B, C, and D have illustrated example applications in this chapter. Scenarios E and F use similar steps to scenarios B and C respectively, but scenarios E and F follow the steps for retrieving ingredients related to Medication Concepts rather thanIDCs. See Scenario A to Scenario D below to review the example applications.

Inactive Ingredient Screening

The DAM module does not support screening of inactive ingredient allergens. At the time that an end-user records an allergen using the pick list, it may be beneficial to store the allergen's "potentially inactive" indicator.

Allergens with a potentially inactive indicator of 1 must be screened manually.

DAM Screening an IDC for Ingredient Allergens - Scenario A

This application illustrates how to screen an IDC for ingredient allergens. See the [The Six Different Allergy Screening Scenarios](#) section for more information.

For purposes of demonstrating this application, the following scenario is used: At the point of order fulfillment (dispensing), a pharmacist screens a prescribed product for a patient's profiled ingredient allergen:

Prescribed Product: Creo-Rectal Adult Suppository (IDC = 03000003542)

Profiled Allergen Concept: Guaiacol (HIC_SEQN = 003178)

Part 1: Retrieve the prescribed IDC's ingredient information.

1. Select the Clinical Formulation ID ([GCN_SEQNO](#)) value from the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the IDC value of the prescribed product to screen.

IDC	LN	GCN_SEQNO
03000003542	CREO-RECTAL ADULT SUPPOS	059158

2. Select the Ingredient List Identifier ([HICL_SEQNO](#)) value from the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR) where the GCN_SEQNO column equals the value from the previous step.

GCN_SEQNO	HICL_SEQNO
059158	032941

3. Select the DAM Allergen Hierarchical Ingredient Code Sequence Number ([DAM_ALRGN_HIC_SEQN](#)) values related to the HICL_SEQNO using the [Drug Allergy Screening HICL_SEQNO/HIC Relation Table](#) (RDAMHHA0_HIC_HICL_ALG_LINK).

HICL_SEQNO	DAM_ALRGN_HIC_SEQN
032941	001993
032941	003403
032941	006195

Some HICL_SEQNOs have more than one related HIC_SEQN.

Alternately, the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK) can be used to retrieve the Hierarchical Ingredient Code Sequence Number. It is important to note that the HICL_SEQNO/HIC Relation Table will return non-allergen ingredients.

4. Compare the Hierarchical Ingredient Parent HIC4 Sequence Number ([HIC_ROOT](#)) for each prospective

IDC and Profiled Allergen HIC_SEQN value using the [Hierarchical Ingredient Code Description Table](#) (RHICD5_HIC_DESC).

Retrieve the HIC_ROOT description values ([HIC4_DESC](#)) from the [Hierarchical Base Ingredient Code Table](#) (RHIC4D2_HIC_BASE_ING_DESC).

DAM_ALRGN_HIC_SEQN	HIC_SEQN	HIC_ROOT	HIC4_DESC
001993	001993	001993	camphor
003403	003403	004800	diphenylpyraline
006195	006195	005633	guaiacol
003178	003178	003178	guaiacol

Display an alert to the end-user and end screening if any ingredient-based allergy alerts exist. In this example, the HIC_ROOT values do not match and screening continues.

- Select the Related Hierarchical Ingredient Code Sequence Numbers ([RELATED_HIC_SEQN](#)) values from the [HIC_SEQN/HIC_SEQN Link Table](#) (RHICHCR0_HIC_HIC_LINK) where the HIC_SEQN column equals the values from the previous step.

HIC_SEQN	RELATED_HIC_SEQN	HIC_DESC
001993	001385	camphor
001993	001993	camphor
001993	005580	camphor monobromide
001993	006494	camphor alcohol
001993	007205	camphor oil
003403	003403	diphenylpyraline HCl
003403	004800	diphenylpyraline
006195	003178	guaiacol
006195	005633	guaiacol
006195	005634	guaiacol ethylglycolate
006195	006195	guaiacol carbonate

Replaced HIC_SEQN values are never removed from the database. However the application can optionally determine if the ingredients stored on a patient's profile are replaced and retrieve any replacement ingredient identifier values to store on the patient's profile. See [Finding a Replacement Ingredient Identifier](#) for more information

Part 2: Screen the prescribed IDC for profiled ingredient allergens.

1. Compare each profiled allergen HIC_SEQN value to the list of prospective HIC_SEQN values. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prescribed drug, an ingredient-level allergy exists.

RELATED_HIC_SEQN Values	Zytec's HIC_SEQN Values
002629	002272
	002432
	002436
	002438
	002629
	003803
	003804
	007131
	007613
	008419
	010138
	010141

2. Display an alert to the end-user if any ingredient-based allergy alerts exist.

In this scenario, Creo-Rectal Adult Suppository shares an ingredient with the profiled allergen's HIC_SEQN value. Notify the end-user that this IDC poses an ingredient-based allergy risk to this patient.

Part 3: Check the patient allergen profile for the presence of any potentially inactive concepts.

1. Select the Hierarchical Ingredient Code Sequence Number Potentially Inactive Indicator ([HIC_POTENTIALLY_INACTV_IND](#)) value from the [Hierarchical Ingredient Code Description Table](#) (RHICD5_HIC_DESC) where the HIC_SEQN column equals the HIC_SEQN value of the profiled allergen.

HIC_SEQN	HIC_DESC	HIC_POTENTIALLY_INACTV_IND
003178	guaiacol	0

2. If an allergen code has a potentially inactive indicator of 1, alert the end-user to manually check the package insert of each prescribed product.

For example:

Sample output

Check the package insert of the prescribed product, Creo-Rectal Adult Suppository. This patient's profile indicates Guaiacol as an allergen, and some Guaiacol ingredients could appear on the prescribed product's list of inactive ingredients.

In this scenario, Guaiacol does not contain a potentially inactive concept, therefore no alert is needed.

In this scenario, an ingredient-based allergy alert exists for Guaiacol (HIC_SEQN 003178). Notify the

end-user of the following:

Sample output for the example data:

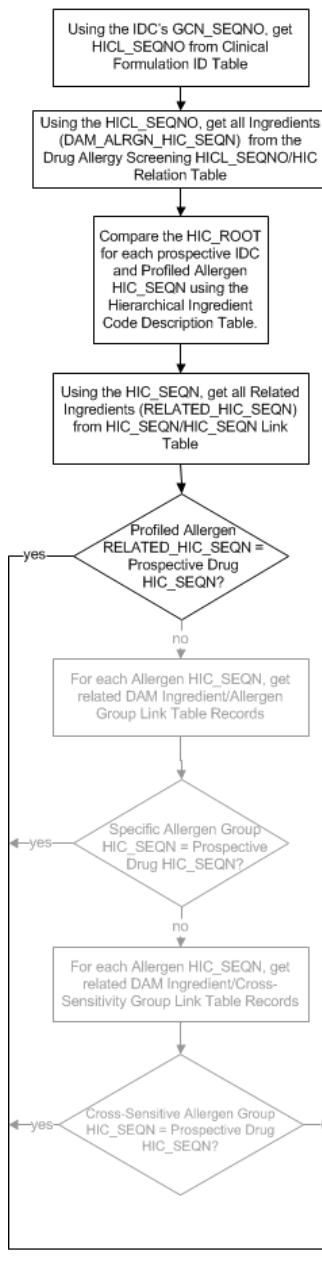
Creo-Rectal Adult Suppository contains Guaiacol. This patient's profile indicates Guaiacol as an allergen. Creo-Rectal Adult Suppository poses the risk of causing an ingredient-based allergic reaction in this patient.

-  Continue drug allergy screening if there are no ingredient allergen alerts.

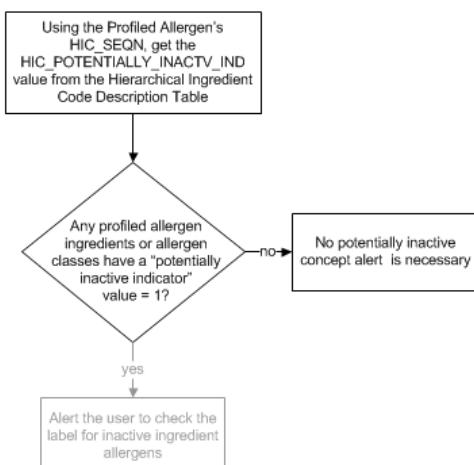
Steps Performed During this Process

The following flowchart illustrates the process involved in screening prospective IDCs for an ingredient allergen. This application carried out the darker lines:

Prospective IDC Ingredients



Potentially Inactive Concepts



Screening an IDC for MED_NAME_ID Allergens - Scenario B

This application illustrates how to screen an IDC for MED_NAME_ID allergens. See the [The Six Different Allergy Screening Scenarios](#) section for more information.

For purposes of demonstrating this application, the following scenario is used: At the point of order fulfillment (dispensing), a pharmacist screens a prescribed IDC for a patient's profiled MED_NAME_ID allergen:

Prospective Prescribed Product: Ceclor 250mg Pulvule (IDC = 03000006344)

Profiled Allergen Concept: Ceftin (MED_NAME_ID = 00088866)

Part 1: Retrieve Prospective IDC Ingredient Information.

1. Select the Clinical Formulation ID ([GCN_SEQNO](#)) value from the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the IDC value of the prescribed product to screen.

IDC	LN	GCN_SEQNO
03000006344	CECLOR PULVULE 250 MG CAP	009104

2. Select the Ingredient List Identifier ([HICL_SEQNO](#)) value from the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR) where the GCN_SEQNO column equals the value from the previous step.

GCN_SEQNO	HICL_SEQNO
009104	003983

3. Select the DAM Allergen Hierarchical Ingredient Code Sequence Number ([DAM_ALRGN_HIC_SEQN](#)) values related to the HICL_SEQNO using the [Drug Allergy Screening HICL_SEQNO/HIC Relation Table](#) (RDAMHHA0_HIC_HICL_ALG_LINK).

HICL_SEQNO	DAM_ALRGN_HIC_SEQN
003983	002726

Some HICL_SEQNOs have more than one related HIC_SEQN.

Alternately, the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK) can be used to retrieve the Hierarchical Ingredient Code Sequence Number. It is important to note that the HICL_SEQNO/HIC Relation Table will return non-allergen ingredients.

4. Select the Related Hierarchical Ingredient Code Sequence Numbers ([RELATED_HIC_SEQN](#)) value from the [HIC_SEQN/HIC_SEQN Link Table](#) (RHICHCR0_HIC_HIC_LINK) where the HIC_SEQN column equals the value from the previous step.

DAM_ALRGN_HIC_SEQN	HIC_SEQN	RELATED_HIC_SEQN	HIC_DESC
002726	002726	002726	cefaclor

Part 2: Screen the Prospective IDC for Profiled MED_NAME_ID Allergens.

- Select the HICL_SEQNO value and the MED_CONCEPT_ID_TYPE value of 1 from the MED Concept/HICL_SEQNO Relation Table (RMEDMHL1_MED_HICLSEQNO_LINK) where the MED_CONCEPT_ID column equals the MED_NAME_ID value of the profiled allergen.

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	HICL_SEQNO	MED_CONCEPT_HICL_SRC_CD
00088866	1	003991	1

The MED Concept HICL_SEQNO Source Code ([MED_CONCEPT_HICL_SRC_CD](#)) may cause otherwise identical entries during this step. Read more about the MED_CONCEPT_HICL_SRC_CD to determine if utilizing this concept in drug allergy screening would benefit your application.

- Select the Hierarchical Ingredient Code Sequence Number ([HIC_SEQN](#)) value from the HICL_SEQNO using the Drug Allergy Screening HICL_SEQNO/HIC Relation Table (RDAMHHA0_HIC_HICL_ALG_LINK) where the HICL_SEQNO column equals the value from the previous step.

HICL_SEQNO	DAM_ALRGN_HIC_SEQN	HIC_SEQN
003991	002730	002730

Some HICL_SEQNOs have more than one related HIC_SEQN.

- Compare the Hierarchical Ingredient Parent HIC4 Sequence Number ([HIC_ROOT](#)) for each prospective IDC and Profiled Allergen HIC_SEQN value using the Hierarchical Ingredient Code Description Table (RHICD5_HIC_DESC).
- Retrieve the HIC_ROOT description values ([HIC4_DESC](#)) from the Hierarchical Base Ingredient Code Table (RHIC4D2_HIC_BASE_ING_DESC).

HIC_SEQN	HIC_ROOT	HIC4_DESC
002726	002726	cefaclor
002730	003590	cefuroxime

Display an alert to the end-user and end screening if any ingredient-based allergy alerts exist. In this example, the HIC_ROOT values do not match, no alert is displayed and screening continues.

- Compare each HIC_SEQN value from the previous step to the list of prospective HIC_SEQN values. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prospective drug,

an ingredient allergy exists.

HIC_SEQN Values	Ceclor's HIC_SEQN Values
002730	002726

5. Display an alert to the end-user if any ingredient-based allergy alerts exist.

In this scenario, Ceclor has no ingredient matches with the profiled allergen and does not pose an ingredient-level allergy risk to this patient.

6. Select the DAM Specific Allergen Group Code (**DAM_ALRGN_GRP**) value from the **DAM Ingredient/Allergen Group Link Table** (RDAMGHC0_HIC_ALRGN_GRP_LINK) where the HIC_SEQN column equals the HIC_SEQN value from step 2.

HIC_SEQN	DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC
002730	000477	cephalosporins

7. Select the HIC_SEQN values from the RDAMGHC0_HIC_ALRGN_GRP_LINK table where the DAM_ALRGN_GRP column equals the value from the previous step.

Only a subset of values is displayed in the table below:

DAM_ALRGN_GRP	HIC_SEQN	HIC_DESC
000477	002712	cephalothin sodium
000477	002713	cephaloridine
000477	002714	cephaloglycin
000477	002716	cephalexin
000477	002717	cephalexin HCl
000477	002718	cephradine
000477	002720	cefazolin sodium
000477	002721	cephapirin sodium
000477	002722	cefoxitin sodium
000477	002723	cefadroxil monohydrate
000477	002725	cefamandole nafate
000477	002726	cefaclor
000477	002727	cefotaxime sodium
000477	002728	cefoperazone sodium

...
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8. Compare each HIC_SEQN value from the previous step to the list of prospective HIC_SEQN values. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prospective drug, a Specific Allergen Group level allergy exists.

HIC_SEQN Values	Ceclor's HIC_SEQN Values
002712	
002713	
002714	
002716	
002717	
002718	
002720	
002721	
002722	
002723	
002725	
002726	002726
002727	
002728	
...	

9. Display an alert to the end-user if any Specific Allergen Group level allergy alerts exist.

In this scenario, Ceclor shares one ingredient with the profiled allergen's HIC_SEQN values. Notify the end-user that this IDC poses a Specific Allergen Group level allergy risk to this patient.

One Specific Allergen Group based allergy alert exists for Ceftin (MED_NAME_ID 00088866). Notify the end-user of the following:

Sample output for the example data:

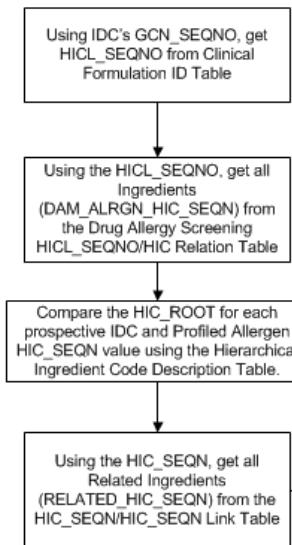
Ceclor contains Cefaclor, which is closely related to the ingredient Cefuroxime Axetil. This patient's profile indicates Ceftin as an allergen, and Cefuroxime Axetil appears as an ingredient in Ceftin's formulation. Therefore, Ceclor poses the risk of causing a Specific Allergen Group based allergic reaction in this patient.

Continue drug allergy screening if there are no Allergy Group Level alerts.

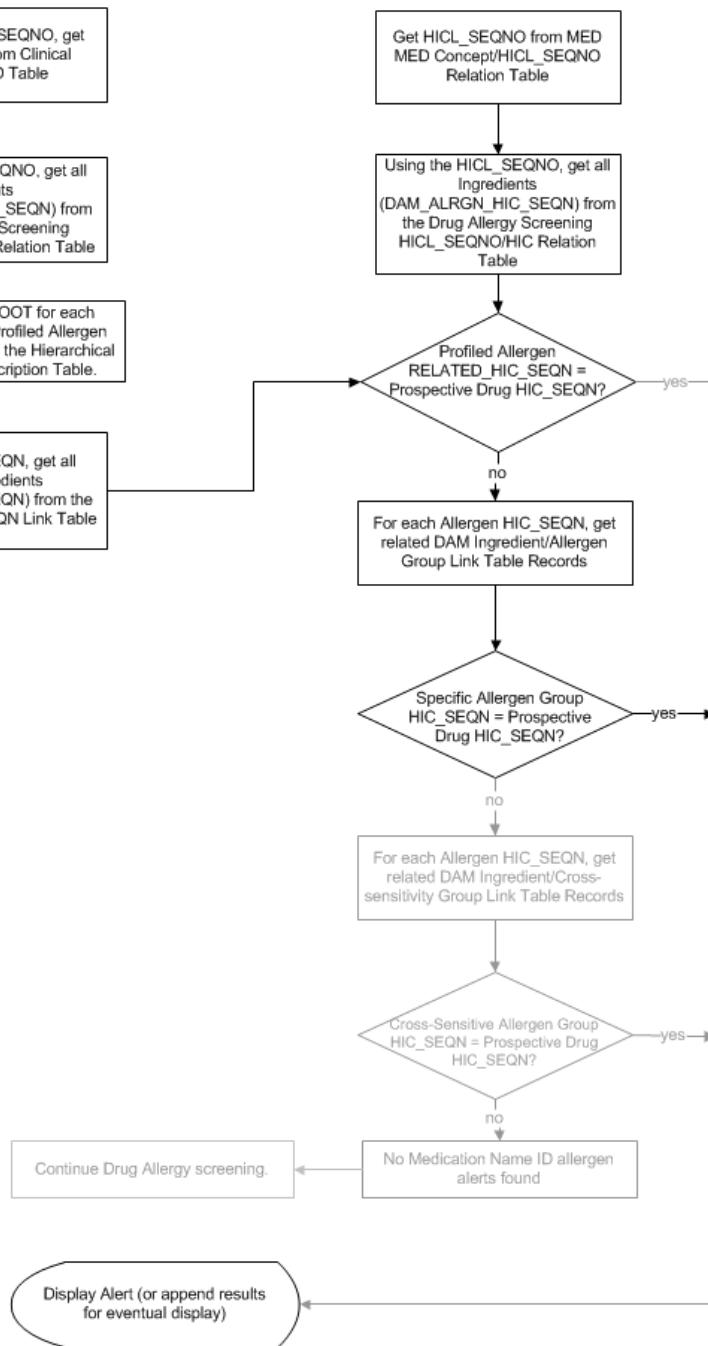
Steps Performed During this Process

The following flowchart outlines the process involved in screening prospective IDCs for a MED_NAME_ID allergen. This application carried out only the darker steps.

Prospective IDC Information



Profiled Medication Name ID Allergens



Screening an IDC for a DAM_ALRGN_GRP Allergen - Scenario C

This application illustrates how to screen a prescribed product for DAM Specific Allergen Group Code allergens. See the [The Six Different Allergy Screening Scenarios](#) section for more information.

For purposes of demonstrating this application, the following scenario is used: At the point of order fulfillment (dispensing), a clinician wishes to screen a prescribed product for a patient's profiled DAM_ALRGN_GRP allergen:

Prescribed Product: Suprax 400mg Tablet (IDC = 03000017696)

Profiled Allergen Concept: Penicillamine (DAM_ALRGN_GRP = 900028)

Part 1: Retrieve Prospective IDC Ingredient Information

- Select the Clinical Formulation ID ([GCN_SEQNO](#)) value from the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) where the IDC column equals the IDC value of the prescribed product.

IDC	LN	GCN_SEQNO
03000017696	SUPRAX 400 MG TABLET	009183

- Select the Ingredient List Identifier ([HICL_SEQNO](#)) value from the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR) where the Clinical Formulation ID (GCN_SEQNO) column equals the value from the previous step.

GCN_SEQNO	HICL_SEQNO
009183	003999

- Retrieve the DAM Allergen Hierarchical Ingredient Code Sequence Number ([DAM_ALRGN_HIC_SEQN](#)) values related to the HICL_SEQNO using the [Drug Allergy Screening HICL_SEQNO/HIC Relation Table](#) (RDAMHHA0_HIC_HICL_ALG_LINK).

HICL_SEQNO	DAM_ALRGN_HIC_SEQN
003999	002737

Some HICL_SEQNOs have more than one related HIC_SEQN.

Alternately, the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK) can be used to retrieve the Hierarchical Ingredient Code Sequence Number. It is important to note that the HICL_SEQNO/HIC Relation Table will return non-allergen ingredients.

Part 2: Screen the Prospective IDC for Profiled DAM_ALRGN_GRP Allergens

- Select the HIC_SEQN values from the [DAM Ingredient/Allergen Group Link Table](#) (RDAMGHC0_HIC_ALRGN_GRP_LINK) table where the DAM_ALRGN_GRP column equals the DAM_ALRGN_GRP value from the profiled allergen.

DAM_ALRGN_GRP	HIC_SEQN	HIC_DESC
900028	001088	penicillamine
900028	003510	cysteamine
900028	004750	bitartrate

i The following DAM_ALRGN_GRP values indicate when allergy information is unknown, unavailable, or undiscovered and should be ignored when one of these values appears on the patient's allergen profile while screening:

- 900388 NO KNOWN ALLERGIES
- 900590 NO KNOWN DRUG ALLERGIES
- 000143 NO ALLERGY INFORMATION AVAILABLE
- 000795 UNABLE TO ASSESS
- 000815 NO KNOWN DRUG INTOLERANCES
- 000816 NO KNOWN INTOLERANCES

i It is advisable to replace any retired or replaced allergen groups in the patient profile because using the new group(s) provides a more focused and pertinent set of results. See [Retired, Replaced, or Obsolete Status Codes](#) for more information.

2. Compare each HIC_SEQN value from the previous step to the prospective HIC_SEQN values. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prospective drug, a Specific Allergen Group level allergy exists.

Profiled Allergen's HIC_SEQN Values
001088
003510
004750

Suprax's HIC_SEQN Values
002737

3. Display an alert to the end-user if any Specific Allergen Group level allergy alerts exist.
In this scenario, Suprax had no ingredient matches, and does not pose a Specific Allergen Group level allergy risk to this patient.
4. Select the DAM Cross-Sensitive Allergen Group Code ([DAM_ALRGN_XSENSE](#)) values from the [DAM Allergen Group Cross/Sensitivity Link Table](#) (RDAMGX0_ALRGN_GRP_XSENSE_LINK) where the DAM_ALRGN_GRP column equals the DAM_ALRGN_GRP value of the profiled allergen.

DAM_ALRGN_GRP	DAM_ALRGN_XSENSE	DAM_ALRGN_XSENSE_DESC
9000028	0001	Beta Lactam Antibiotic

9000028	0304	Penicillamine Analogues
9000028	0713	Penicillamine

5. Select the HIC_SEQN values from the **DAM Ingredient/Cross-Sensitivity Link Table** (RDAMXHC0_HIC_ALRGN_XSENSE_LINK) where the DAM_ALRGN_XSENSE column equals the values from the previous step. Track which DAM_ALRGN_XSENSE group each ingredient relates to, and deliver this information when you alert the end-user of an allergen risk.

Only a subset of values are displayed in the table below:

DAM_ALRGN_XSENSE	HIC_SEQN	HIC_DESC
0001	001088	penicillamine
0001	002679	penicillin G sodium
0001	002680	penicillin G potassium
...
0001	002690	oxacillin sodium
0001	002691	cloxacillin sodium
0001	002692	ampicillin
...
0304	003510	cysteamine
0713	003510	cysteamine
...

6. Compare each HIC_SEQN value from the previous step to the list of prospective HIC_SEQN values. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prospective drug, a Cross-sensitive Allergen Group level allergy exists.

HIC_SEQN Values								Suprax's HIC_SEQN Values	
001086	002704	002733	003601	004638	005103	006822			
002679	002705	002734	003602	004639	005104	006830			
002680	002706	002735	003697	004640	005166	007195			
002681	002707	002736	003927	004641	005181	007586			
002682	002708	002737	003928	004642	005393	007832	002737		
002683	002709	002606	003946	004643	005394	007869			
002684	002710	002607	003947	004644	005765	008157			
002685	002711	002611	003966	004645	005766	008158			
002686	002712	002612	004046	004646	005845	009348			
002687	002713	002613	004047	004647	005846	009507			
002688	002714	002684	004048	004648	005966	009506			
002689	002716	002685	004049	004649	005969	009554			
002690	002717	002686	004050	004650	005976	009555			
002691	002718	003470	004162	004651	005977				
002692	002720	003510	004164	004652	006034				
002693	002721	003510	004202	004653	006131				
002694	002722	003516	004396	004654	006179				
002695	002723	003517	004399	004655	006234				
002696	002725	003540	004750	004656	006235				
002697	002726	003590	004750	004688	006447				
002698	002727	003623	004632	004689	006448				
002699	002728	003667	004633	004958	006723				
002700	002729	003675	004634	004959	006724				
002701	002730	003718	004635	004974	006619				
002702	002731	003727	004636	004975	006620				
002703	002732	003728	004637	004977	006621				

7. Display an alert to the end-user if any Cross-sensitive Allergen Group level allergy alerts exist.

In this scenario, Suprax shares one ingredient with the profiled allergen's list of HIC_SEQN values. Notify the end-user that this IDC poses a Cross-sensitive Allergen Group level allergy risk to this patient.

Part 3: Check the Patient Allergen Profile for the Presence of Any Potentially Inactive Concepts

1. Check the patient allergen profile for the presence of any potentially inactive concepts. See the [Potentially Inactive Ingredient](#) for more information on these indicators.

Select the DAM Specific Allergen Group Potentially Inactive Indicator value ([DAM_GRP_POTENTIALLY_INACTV_IND](#)) from the [DAM Specific Allergen Group Code Description Table \(RDAMAGD1_ALRGN_GRP_DESC\)](#) where the DAM_ALRGN_GRP column equals the DAM_ALRGN_GRP value of the profiled allergen.

DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC	DAM_GRP_POTENTIALLY_INACTV_IND
900028	Penicillamine	0

2. If an allergen code has a potentially inactive indicator of 1, alert the end-user to manually check the package insert of each prescribed product.

For example:

Sample Output

Check the package insert of the prescribed product, Suprax. This patient's profile indicates Penicillamine as an allergen, and some Penicillamine ingredients could appear on the prescribed product's list of inactive ingredients.

In this scenario, Penicillamine is not a potentially inactive allergen group and does not require a potentially inactive concept alert.

One DAM Specific Allergen Group based allergy alert exists for Cefixime (HIC_SEQN 002737). Notify the end-user of the following:

Sample output for the example data:

Suprax contains Cefixime, which belongs to the Beta Lactam Antibiotic Cross-sensitive Allergen Group. This patient's profile indicates Penicillamines as an allergen, and Penicillamines also belong to the Beta Lactam Antibiotic Cross-sensitive Allergen Group. Therefore, Suprax poses the risk of causing a Cross-sensitive Allergen Group based allergic reaction in this patient.

If this message is too complex or too long, a simplified version may read:

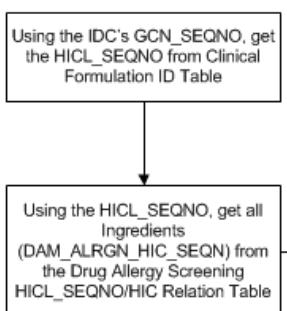
Simplified output for the example data:

The product Suprax poses the risk of causing a Cross-sensitive Allergen Group based allergic reaction in this patient because it contains the ingredient Cefixime.

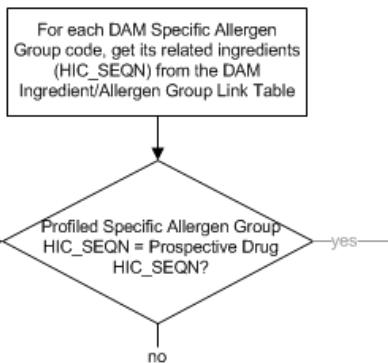
Steps Performed During this Process

The following flowchart illustrates the process involved in screening prospective IDCs for a DAM_ALRGN_GRP allergen. This application carried out only the darker steps.

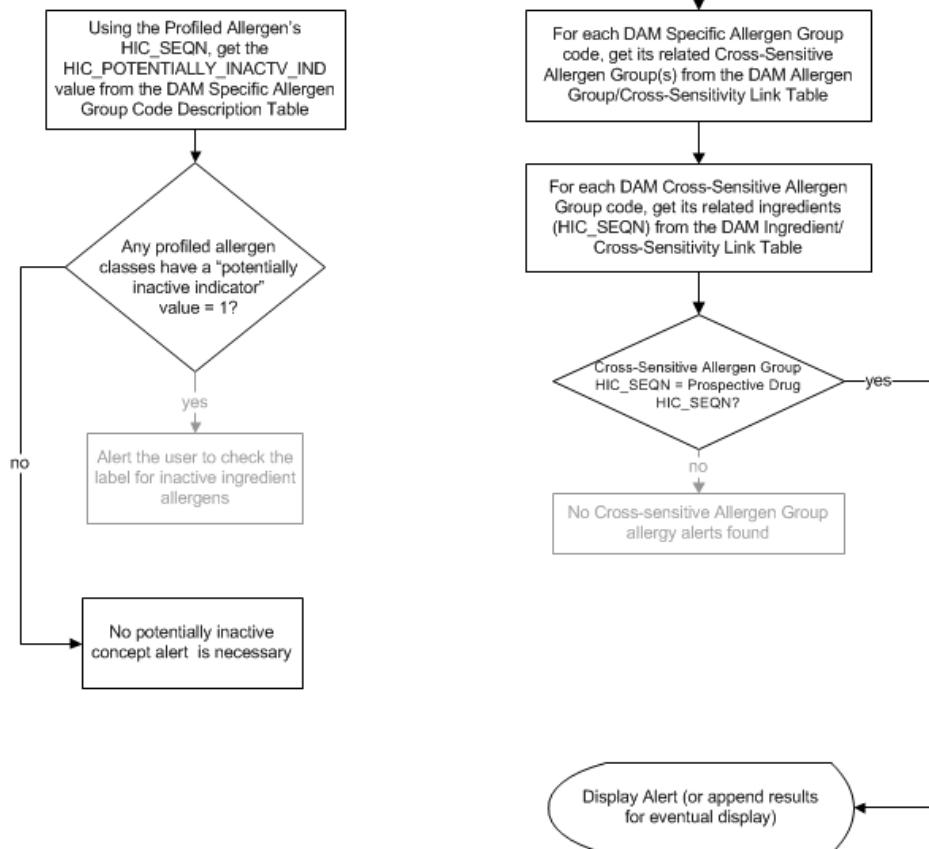
Prospective IDC Information



Profiled Specific Allergen Group Allergens



Potentially Inactive Concepts



Screening a MEDID for an Ingredient Allergen - Illustration of Scenario D

This application illustrates how to screen for ingredient allergens using the MEDID of a prescribed product. See the [The Six Different Allergy Screening Scenarios](#) section for more information.

For purposes of demonstrating this application, the following scenario is used: At the point of order entry (prescribing), a physician wishes to screen a prospective MED Concept for a patient's profiled ingredient allergen:

Prescribed Product: Miconazole Nitrate 2% Vaginal Cream (MEDID = 00504867)

Profiled Allergen Concept: Ketoconazole (HIC_SEQN = 002903)

Part 1: Retrieve Prospective MED Concept's Ingredient Information

- Identify the prospective MED Concept's MED Concept ID Type ([MED_CONCEPT_ID_TYP](#)) using the [MED MED Concept ID Type Description Table](#) (RMEDCD0_MED_CONCEPT_TYP_DESC). According to this table, MEDIDs have a MED_CONCEPT_ID_TYP value of 3.

MED_CONCEPT_ID_TYP	MED_CONCEPT_ID_TYP_DESC
1	Medication Name
2	Routed Medication
3	Medication
7	Routed Dosage Form Medication

- Select the Ingredient List Identifier ([HICL_SEQNO](#)) value from the [MED MED Concept/HICL_SEQNO Relation Table](#) (RMEDMHL1_MED_HICLSEQNO_LINK) where the MED_CONCEPT_ID_TYP column equals 3 and the MED_CONCEPT_ID column equals the MEDID value of the prescribed product to screen.

The RMEDMHL0_MED_HICLSEQNO_LINK table does not include medication concepts with a retired status. Therefore, medication concepts with a retired status are excluded from this example.

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	HICL_SEQNO
00504867	3	003031

- Select the DAM Allergen Hierarchical Ingredient Code Sequence Number ([DAM_ALRGN_HIC_SEQN](#)) value related to the HICL_SEQNO using the [Drug Allergy Screening HICL_SEQNO/HIC Relation Table](#) (RDAMHHA0_HIC_HICL_ALG_LINK).

HICL_SEQNO	DAM_ALRGN_HIC_SEQN
003031	002919

Some HICL_SEQNOs have more than one related HIC_SEQN.

Alternately, the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK) can be

used to retrieve the Hierarchical Ingredient Code Sequence Number. It is important to note that the HICL_SEQNO/HIC Relation Table will return non-allergen ingredients.

- Select the Related Hierarchical Ingredient Code Sequence Numbers (**RELATED_HIC_SEQN**) values from the **HIC_SEQN/HIC_SEQN Link Table** (RHICHCR0_HIC_HIC_LINK) where the HIC_SEQN column equals the value from the previous step.

DAM_ALRGN_HIC_SEQN	HIC_SEQN	RELATED_HIC_SEQN	HIC_DESC
002919	002919	002918	miconazole
002919	002919	002919	miconazole nitrate

Part 2: Screen the Prospective MEDID for Profiled Ingredient Allergens

- Compare each profiled allergen HIC_SEQN value to the prospective MEDID's list of HIC_SEQN values from the previous step. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prospective drug, an ingredient-based allergy exists.

Profiled Allergen's HIC_SEQN Value	Miconazole Nitrate 2% Cream's HIC_SEQN Values
002903	002918 002919

- Display an alert to the end-user if any ingredient-based allergy alerts exist.

In this scenario, Miconazole Nitrate 2% Cream had no ingredient matches with the profiled allergen's HIC_SEQN values, and therefore does not pose an ingredient-level allergy risk to this patient.

- Select the DAM Specific Allergen Group Code (**DAM_ALRGN_GRP**) value using the **DAM Ingredient/Allergen Group Link Table** (RDAMGHC0_HIC_ALRGN_GRP_LINK) where the HIC_SEQN column equals the HIC_SEQN value of the profiled allergen.

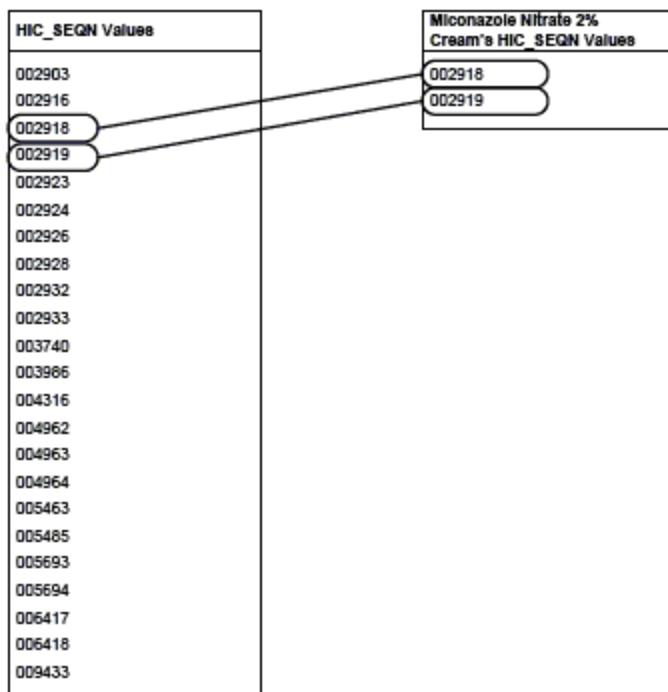
HIC_SEQN	DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC
002903	900074	Imidazole Antifungal

- Select the HIC_SEQN values from the RDAMGHC0_HIC_ALRGN_GRP_LINK table where the DAM_ALRGN_GRP column equals the value from the previous step.

DAM_ALRGN_GRP	HIC_SEQN	HIC_DESC
900074	002903	ketoconazole
900074	002916	clotrimazole
900074	002918	miconazole

900074	002919	miconazole nitrate
900074	002923	econazole
900074	002924	econazole nitrate
900074	002926	tioconazole
900074	002928	butoconazole nitrate
900074	002932	xiconazole nitrate
900074	002933	sulconazole nitrate
900074	003740	isoconazole
900074	003986	soconazole nitrate
900074	004316	bifonazole
900074	004962	butoconazole
900074	004963	oxiconazole
900074	004964	sulconazole
900074	005463	fenticonazole nitrate
900074	005485	fenticonazole
900074	005693	omoconazole
900074	005694	omoconazole nitrate
900074	006417	sertaconazole
900074	006418	sertaconazole nitrate
900074	009433	flutrimazole

5. Compare each HIC_SEQN value from the previous step to the list of the prospective medication's HIC_SEQN values. If a HIC_SEQN value in the patient's allergen profile matches a HIC_SEQN value in the prospective drug, a Specific Allergen Group level allergy exists.



6. Display an alert to the end-user if any Specific Allergen Group level allergy alerts exist.

In this scenario, Miconazole Nitrate 2% Cream has ingredient matches and poses a Specific Allergen Group level allergy risk to this patient.

7. Select the DAM Cross-Sensitive Allergen Group Code ([DAM_ALRGN_XSENSE](#)) value using the [DAM Ingredient/Cross-Sensitivity Link Table](#) (RDAMXHC0_HIC_ALRGN_XSENSE_LINK) where the HIC_SEQN column equals the HIC_SEQN value of the profiled allergen.

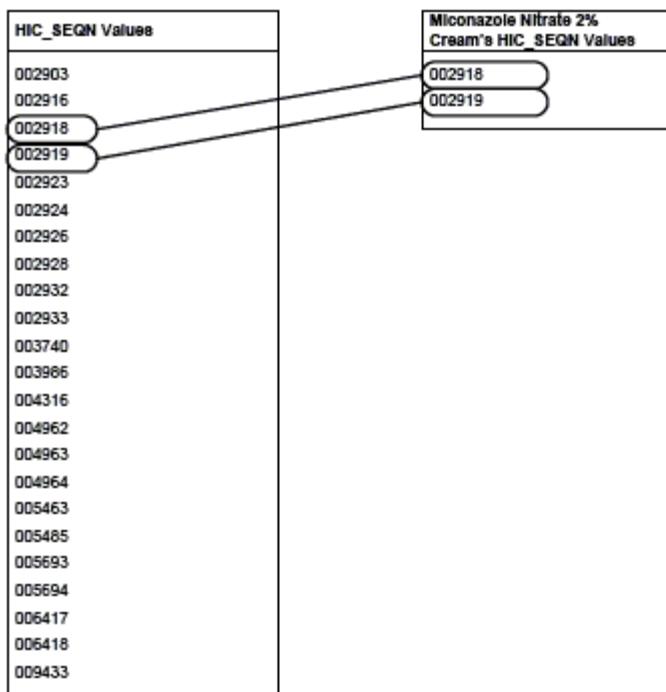
HIC_SEQN	DAM_ALRGN_XSENSE	DAM_ALRGN_XSENSE_DESC
002903	112	Imidazole Antifungals

8. Select the HIC_SEQN values from the RDAMXHC0_HIC_ALRGN_XSENSE_LINK table where the DAM_ALRGN_XSENSE column equals the value from the previous step.

DAM_ALRGN_XSENSE	HIC_SEQN	HIC_DESC
0112	002903	ketoconazole
0112	002916	clotrimazole
0112	002918	miconazole
0112	002919	miconazole nitrate
0112	002923	econazole

0112	002924	econazole nitrate
0112	002926	tioconazole
0112	002928	butoconazole nitrate
0112	002932	oxiconazole nitrate
0112	002933	sulconazole nitrate
0112	003740	isoconazole
0112	003986	isoconazole nitrate
0112	004316	bifonazole
0112	004962	butoconazole
0112	004963	oxiconazole
0112	004964	sulconazole
0112	005463	fenticonazole nitrate
0112	005485	fenticonazole
0112	005693	omoconazole
0112	005694	omoconazole nitrate
0112	006417	sertaconazole
0112	006418	sertaconazole nitrate
0112	009433	flutrimazole

9. Compare each HIC_SEQN value from the previous step to the list of prospective medication's HIC_SEQN values. If a HIC_SEQN value from the patient's allergen profile matches a HIC_SEQN value in the prospective drug, a Cross-sensitive Allergen Group level allergy exists.



- Display an alert to the end-user if any Cross-sensitive Allergen Group level allergy alerts exist. In this scenario, Miconazole Nitrate 2% Cream has ingredient matches and poses a Cross-sensitive Allergen Group level allergy risk to this patient.

Part 3: Check the Patient Allergen Profile for the Presence of Any Potentially Inactive Concepts

- Check the patient allergen profile for the presence of any potentially inactive concepts. See the **Potentially Inactive Ingredient** for more information on these indicators.
Select the Hierarchical Ingredient Code Sequence Number Potentially Inactive Indicator (**HIC_POTENTIALLY_INACTV_IND**) value from the **Hierarchical Ingredient Code Description Table** (RHICD5_HIC_DESC) where the HIC_SEQN column equals the HIC_SEQN value of the profiled allergen.

HIC_SEQN	HIC_DESC	HIC_POTENTIALLY_INACTV_IND
002903	ketoconazole	0

- If an allergen group code has a potentially inactive indicator of 1, alert the end-user to manually check the package insert of each prescribed product.

For example:

Check the package insert of the prescribed product, miconazole nitrate 2% Vaginal Cream. This patient's profile indicates Ketoconazole as an allergen, and some Ketoconazole ingredients could appear on the prescribed product's list of inactive ingredients.

- In this scenario, ketoconazole is not a potentially inactive ingredient (as indicated by the return of 0 for the

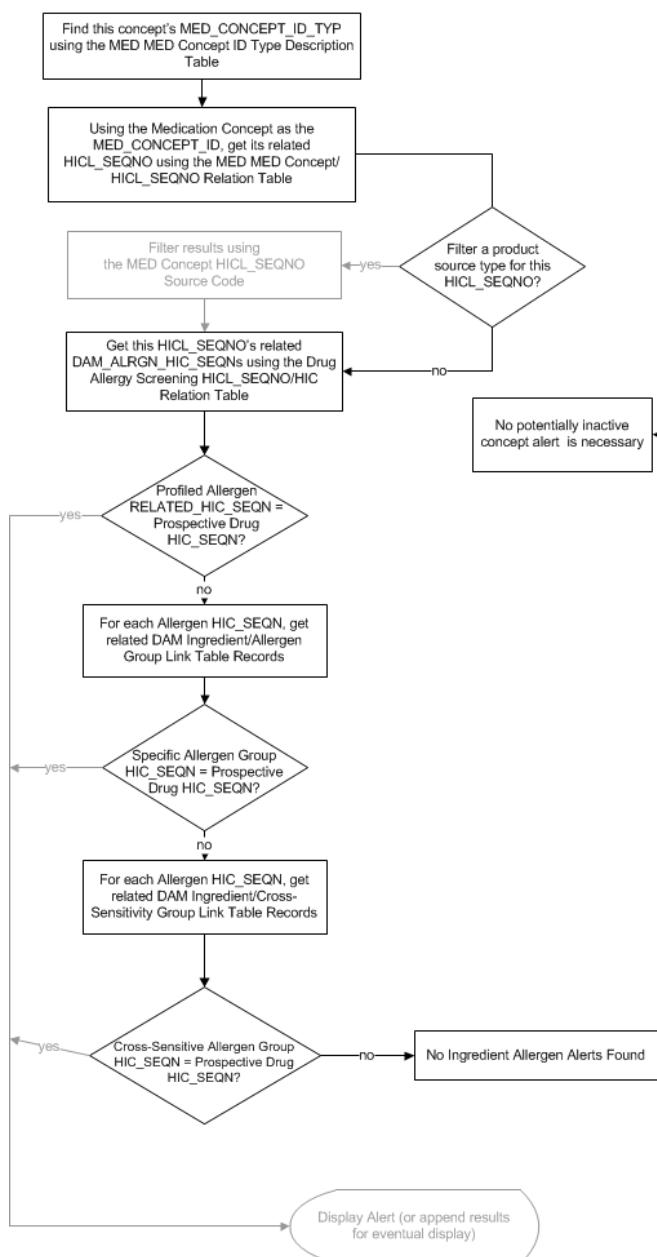
HIC_POTENTIALLY_INACTV_IND in the previous step) and does not require a potentially inactive concept alert.

No active ingredient allergy alerts were identified for this patient's allergy to ketoconazole.

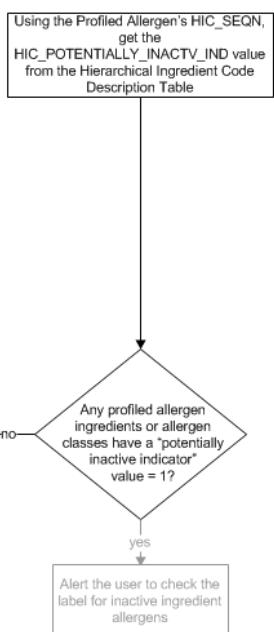
Steps Performed During this Process

The following flowchart illustrates the process involved in screening prospective Medication Concepts (either Medication Names, Routed Medications, Routed Dosage Forms, or Medication IDs) for ingredient allergens. This application carried out only the darker steps.

Prospective MED Concept Information



Potentially Inactive Concepts



Customizing the Allergen Pick List

FDB provides the **DAM Patient Profile Allergen Pick List Table** (RDAMAPM0_ALRGN_PICKLIST_MSTR) to serve as a default Allergen Pick List. In addition, the **Drug Allergy Concept Attributes Table** (RDAMCA0_CONCEPT) can be utilized as an alternate Pick List. The Drug Allergy Concept Attributes Table incorporates the same three drug concept identifies in the DAM Allergy Concept Attributes Table along with additional food-based and environmental-based allergy attributes for further customer filtering.

It is important to note that neither Pick List accommodates specific customer concerns such as inventory, obsolete ingredient lists, nor detailed information about MED_NAME_ID ingredient lists. In addition, the Pick List does not include every ingredient or allergen group. Please contact FDB customer implementation specialists for more detailed information about customizing the Allergen Pick List.

The Allergen Pick List compacts Medication Name information for the sake of brevity. Some MED_NAME_IDS are associated with more than one formulation, but these names only appear once in the pick list. If you wish to provide more context for these types of MED_NAME_IDS you can customize the pick list to include extra information.

For purposes of demonstrating this application, the following scenario is used: A clinician wishes to customize the following pick list entry:

Utilizing the RDAMAPM0_ALRGN_PICKLIST_MSTR table

DAM_CONCEPT_ID	DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID_DESC
00089226	002	Dermagran II

Utilizing the RDAMCA0_CONCEPT table

DAM_CONCEPT_ID	00089226
DAM_CONCEPT_ID_TYP	002
DAM_CONCEPT_ID_DESC	Dermagran II
DAM_PICKLIST_IND	1
DAM_MED_IND	0
DAM_FOOD_IND	0
DAM_ENVIRON_AGENT_IND	0
DAM_NON_ALRGN_IND	0
DAM_CONCEPT_STATUS_CD	0

1. Select the Ingredient List Identifier (**HICL_SEQNO**) values from the **MED MED Concept/HICL_SEQNO Relation Table** (RMEDMHL1_MED_HICLSEQNO_LINK) where the MED Concept ID Type (

MED_CONCEPT_ID_TYP) column equals 001 and the MED_CONCEPT_ID column equals the DAM_CONCEPT_ID of the pick list entry to customize.

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	HICL_SEQNO
00089226	001	003790
00089226	001	018512

2. Select the Generic Name - Short Version (**GNN**) values from the **Ingredient List Identifier Description Table** (RHICLSQ1_HICLSEQNO_MSTR) where the HICL_SEQNO column equals the value from the previous step.

HICL_SEQNO	GNN
003790	HYDROPHILIC OINTMENT
018512	ZINC CHLORIDE

3. Customize the allergen pick list.

For example, an entry might appear multiple times in a customized Allergen Pick List when it is linked to multiple formulations. You can replace the existing record with the new records and customize their DAM_CONCEPT_ID_DESC column values. For example:

Customizing the RDAMAPM0_ALRGN_PICKLIST_MSTR table

DAM_CONCEPT_ID	DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID_DESC
00089226	002	Dermagran - HYDROPHILIC OINTMENT
00089226	002	Dermagran - ZINC CHLORIDE

Customizing the RDAMCA0_CONCEPT table

DAM_CONCEPT_ID	00089226	00089226
DAM_CONCEPT_ID_TYP	002	002
DAM_CONCEPT_ID_DESC	Dermagran - HYDROPHILIC OINTMENT	Dermagran - ZINC CHLORIDE
DAM_PICKLIST_IND	1	1
DAM_MED_IND	0	0
DAM_FOOD_IND	0	0
DAM_ENVIRON_AGENT_IND	0	0
DAM_NON_ALRGN_IND	0	0

DAM_CONCEPT_STATUS_CD	0	0
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Recording Patient Allergy Information

This application illustrates how to use the [DAM Patient Profile Allergen Pick List Table](#) (RDAMAPMO_ALRGN_PICKLIST_MSTR) or the alternate [Drug Allergy Concept Attributes Table](#) (RDAMCA0_CONCEPT) to assist end-users in profiling patient allergens. Please read the [Allergen Pick List](#) section of this chapter prior to reading this application.

- i** If a duplicate pick list concept description exists at both the Specific Allergen Group level *and* the ingredient level, *only the ingredient description and its corresponding ingredient code appear in the table*. This constraint is consistent with FDB's recommendation to profile ingredients whenever possible.

This application consists of the following examples:

- Example 1—Profiling a Specific Allergen Group
- Example 2—Profiling a Medication Name ID
- Example 3—Profiling an ingredient or base ingredient

Example 1—Profiling a Specific Allergen Group

If a patient reports an allergy to a general group of chemically related ingredients, the end-user should record the appropriate Specific Allergen Group ([DAM_ALRGN_GRP](#)) as an allergen on the patient's allergen profile.

- i** FDB does not recommend allowing users to choose an allergen group with a retired status for storage on a patient's allergen profile. Screening conducted with a retired allergen group code may not be as accurate as using an active code.

For the purposes of demonstrating this application, the following scenario is used: A patient reports an allergy to carbamates.

1. Select the DAM Allergen Concept ID ([DAM_CONCEPT_ID](#)) value from the [DAM Patient Profile Allergen Pick List Table](#) (RDAMAPMO_ALRGN_PICKLIST_MSTR) or the [Drug Allergy Concept Attributes Table](#) (RDAMCA0_CONCEPT) where the DAM Allergen Concept ID Type ([DAM_CONCEPT_ID_TYP](#)) column equals 1 and the DAM Allergen Concept ID Description ([DAM_CONCEPT_ID_DESC](#)) column equals the description of the allergy to profile.

For example:

RDAMAPMO_ALRGN_PICKLIST_MSTR table records with the description Carbamates

DAM_CONCEPT_ID	DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID_DESC
00000281	001	Carbamates

RDAMCA0_CONCEPT table records with the description Carbamates

DAM_CONCEPT_ID	00000281
DAM_CONCEPT_ID_TYP	001

DAM_CONCEPT_ID_DESC	Carbamates
DAM_PICKLIST_IND	1
DAM_MED_IND	0
DAM_FOOD_IND	0
DAM_ENVIRON_AGENT_IND	0
DAM_NON_ALRGN_IND	0
DAM_CONCEPT_STATUS_CD	0

- i** FDB recommends recording the DAM_CONCEPT_ID value, the DAM_CONCEPT_ID_TYP value, and the current date (the date that the allergy was reported) for each of these products on the patient's allergen profile. Recording these identifiers assists in future allergy screening, and gives healthcare experts an idea of the time this allergy was reported.
- FDB also recommends recording the Potentially Inactive Indicator to alert healthcare experts of the need to manually check the package insert for potentially inactive concepts.

Example 2—Profiling a Medication Name ID

If a patient reports an allergy to a branded Medication Name, the end-user should record the appropriate Medication Name ID (**MED_NAME_ID**) as an allergen on the patient's allergen profile.

- i** If a MED_NAME_ID is chosen for profiling, you must also save/profile the associated HIC_SEQNs.

For the purposes of demonstrating this application, the following scenario is used: A patient reports an allergy to Tylenol plus Codeine.

1. Select the DAM_CONCEPT_ID values from the RDAMAPM0_ALRGN_PICKLIST_MSTR table or the RDAMCA0_CONCEPT table where the DAM_CONCEPT_ID_TYP column equals 2 and the DAM_CONCEPT_ID_DESC column includes the description of the medication name to profile. Sorted by description, the results may be:

RDAMAPM0_ALRGN_PICKLIST_MSTR table records that include Tylenol and Codeine

DAM_CONCEPT_ID_DESC	DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID
Tylenol-Codeine #2	002	00091892
Tylenol-Codeine #3	002	00091893
Tylenol-Codeine #4	002	00091894

RDAMCA0_CONCEPT table records that include Tylenol and Codeine

DAM_CONCEPT_ID	00091892	00091893	00091894
DAM_CONCEPT_ID_TYP	002	002	002
DAM_CONCEPT_ID_DESC	Tylenol-Codeine #2	Tylenol-Codeine #3	Tylenol-Codeine #4
DAM_PICKLIST_IND	1	1	1
DAM_MED_IND	1	1	1
DAM_FOOD_IND	0	0	0
DAM_ENVIRON_AGENT_IND	0	0	0
DAM_NON_ALRGN_IND	0	0	0
DAM_CONCEPT_STATUS_CD	0	0	0

2. The healthcare expert should chose the record or records that properly reflect the medication. In this case all three candidates are likely, so the healthcare expert may highlight/select all three from the list.

FDB recommends recording the DAM_CONCEPT_ID value, the DAM_CONCEPT_ID_TYP value, and the current date (the date that the allergy was reported) for each of these products on the patient's allergen profile. Recording these identifiers assists in future allergy screening, and gives healthcare experts an idea of the time this allergy was reported.

3. Retrieve the HICL_SEQNO value and the MED_CONCEPT_ID_TYPE value of 1 from the [MED Concept/HICL_SEQNO Relation Table](#) (RMEDMHL1_MED_HICLSEQNO_LINK), where the MED_CONCEPT_ID column equals the MED_NAME_ID value of the profiled allergen:

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	HICL_SEQNO	MED_CONCEPT_HICL_SRC_CD
00091892	1	5283	1
00091892	1	5283	1
00091892	1	1717	1

The MED Concept HICL_SEQNO Source Code ([MED_CONCEPT_HICL_SRC_CD](#)) may cause identical entries during this step. Read more about the MED_CONCEPT_HICL_SRC_CD to determine if utilizing this concept in drug allergy screening benefits your application.

4. Retrieve the DAM Allergen Hierarchical Ingredient Code Sequence Number ([DAM_ALRGN_HIC_SEQN](#)) values related to the HICL_SEQNO using the [Drug Allergy Screening HICL_SEQNO/HIC Relation Table](#) (RDAMHHA0_HIC_HICL_ALG_LINK):

HICL_SEQNO	DAM_ALRGN_HIC_SEQN
5283	600
5283	1551
5283	1605
1717	1551
1717	1605

Some HICL_SEQNOs have more than one related HIC_SEQN.

Alternately, the [HICL_SEQNO/HIC Relation Table](#) (RHICL1_HIC_HICLSEQNO_LINK) can be used to retrieve the Hierarchical Ingredient Code Sequence Number. It is important to note that the HICL_SEQNO/HIC Relation Table will return non-allergen ingredients.

- Select the Related Hierarchical Ingredient Code Sequence Numbers ([RELATED_HIC_SEQN](#),) values from the [HIC_SEQN/HIC_SEQN Link Table](#) (RHICHCR0_HIC_HIC_LINK) where the HIC_SEQN column equals the value from the previous step:

DAM_ALRGN_HIC_SEQN	HIC_SEQN	RELATED_HIC_SEQN	HIC_DESC
600	600	600	caffeine
600	600	601	caffeine citrate
600	600	5130	caffeine monohydrate
1551	1551	1550	codeine
1551	1551	1551	codeine phosphate
1551	1551	1552	codeine polistirex
1551	1551	1553	codeine sulfate
1551	1551	4126	codeine hydrochloride
1551	1551	5189	codeine anhydrous
1551	1551	5391	codeine hydrobromide
1551	1551	5478	codeine camsylate
1605	1602	1605	acetaminophen

- Refer to [Example 3—Profiling an ingredient or base ingredient](#).

Example 3—Profiling an ingredient or base ingredient

If a patient reports an allergy to a specific ingredient ([HIC_SEQN](#)) or base ingredient [HIC4_SEQN](#)), the end-user

should record the appropriate ingredient identifier as an allergen on the patient's allergen profile.

For the purposes of demonstrating this application, the following scenario is used: A patient reports an allergy to Quinidine.

1. Select the DAM_CONCEPT_ID value and the DAM_CONCEPT_ID_TYP value of 006 from the RDAMAPM0_ALRGN_PICKLIST_MSTR table or the RDAMCA0_CONCEPT table where the DAM_CONCEPT_ID_DESC column equals the description of the ingredient to profile.

For example:

RDAMAPM0_ALRGN_PICKLIST_MSTR table records with the description Quinidine

DAM_CONCEPT_ID_DESC	DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID
Quinidine	006	00000618

RDAMCA0_CONCEPT table records with the description Quinidine

DAM_CONCEPT_ID	00000618
DAM_CONCEPT_ID_TYP	006
DAM_CONCEPT_ID_DESC	Quinidine
DAM_PICKLIST_IND	1
DAM_MED_IND	0
DAM_FOOD_IND	0
DAM_ENVIRON_AGENT_IND	0
DAM_NON_ALRGN_IND	0
DAM_CONCEPT_STATUS_CD	0

FDB recommends recording the DAM_CONCEPT_ID value, the DAM_CONCEPT_ID_TYP value, and the current date (the date that the allergy was reported) on the patient's allergen profile. Recording these identifiers assists in future allergy screening, and gives healthcare experts an idea of the time this allergy was reported.

FDB also recommends recording the Potentially Inactive Indicator to alert healthcare experts for the need to manually check the package insert for potentially inactive concepts.

Retrieving a Replacement Specific Allergen Group

This application illustrates how to retrieve a replacement value for a replaced Specific Allergen Group. This application will be added to the Drug Allergy Module (DAM) in the FDB MedKnowledge Documentation.

1. Select the DAM Specific Allergen Group Status Code ([DAM_ALRGN_GRP_STATUS_CD](#)) values from the [DAM Specific Allergen Group Code Description Table](#) (RDAMAGD1_ALRGN_GRP_DESC) where the DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#)) column equals the DAM_ALRGN_GRP value of a given specific allergen group.
2. If the DAM_ALRGN_GRP_STATUS_CD value equals 1 (replaced), select the following columns from the [DAM Specific Allergen Group Code History Table](#) (RDAMGRH0_ALRGN_GRP_HIST) where the Previous DAM Specific Allergen Group Code ([PREV_DAM_ALRGN_GRP](#)) column equals the replaced DAM_ALRGN_GRP value from the previous step:
 - Replacement DAM Specific Allergen Group Code ([REPL_DAM_ALRGN_GRP](#))
 - Specific Allergen Group Code Replacement Effective Date ([DAM_ALRGN_GRP REPL_EFF_DT](#))
3. Repeat steps 1 and 2 using the replacement DAM_ALRGN_GRP values retrieved in the previous step until the DAM_ALRGN_GRP_STATUS_CD value is 0 (active) or 2 (retired).

Example—Retrieving a Replacement Specific Allergen Group

For purposes of demonstrating this application, the following scenario is used: Upon selection of the specific allergen group Camella Sinensis (DAM_ALRGN_GRP 658), a healthcare system first checks its status to determine whether it has been replaced.

1. Select the DAM Specific Allergen Group Status Code ([DAM_ALRGN_GRP_STATUS_CD](#)) values from the [DAM Specific Allergen Group Code Description Table](#) (RDAMAGD1_ALRGN_GRP_DESC) where the DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#)) column equals the DAM_ALRGN_GRP value of a given Allergen Group.
In this example, DAM_ALRGN_GRP 658 has a DAM_ALRGN_GRP_STATUS_CD of 1, meaning it has been replaced.

DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC	DAM_ALRGN_GRP_STATUS_CD
658	Camella Sinensis	1

2. Select the following columns from the [DAM Specific Allergen Group Code History Table](#) (RDAMGRH0_ALRGN_GRP_HIST) where the Previous DAM Specific Allergen Group Code ([PREV_DAM_ALRGN_GRP](#)) column equals the replaced DAM_ALRGN_GRP value from Step 1:
 - Replacement DAM Specific Allergen Group Code ([REPL_DAM_ALRGN_GRP](#))
 - Specific Allergen Group Code Replacement Effective Date ([DAM_ALRGN_GRP REPL_EFF_DT](#))

In this example, DAM_ALRGN_GRP 658 (Camella Sinensis) was replaced by DAM_ALRGN_GRP 71 (Green Tea [Camellia Sinensis]) on November 2, 2010.

PREV_DAM_ALRG_N_GRP	DAM_ALRGN_GRP_DESC	REPL_DAM_ALRG_N_GRP	DAM_ALRGN_GRP_DESC	DAM_ALRGN_GRP_REPLACE_EFF_DT
658	Camella Sinensis	71	Green Tea (Camellia Sinensis)	20101102

You can retrieve the descriptions from the DAM Specific Allergen Group Code Table (RDAMAGD1_ALRGN_GRP_DESC).

3. Repeat steps 1 and 2 using the replacement DAM_ALRGN_GRP values retrieved in the previous step until the DAM Specific Allergen Group Status Code (**DAM_ALRGN_GRP_STATUS_CD**) value is 0 (active) or 2 (retired).

In this example, DAM_ALRGN_GRP 71 has a DAM_ALRGN_GRP_STATUS_CD value of 0 (active) and is returned to the user as the replacement specific allergen group value.

DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC	DAM_ALRGN_GRP_STATUS_CD
71	Green Tea (Camella Sinensis)	0

Drug Allergy Module ERD and Technical Specifications

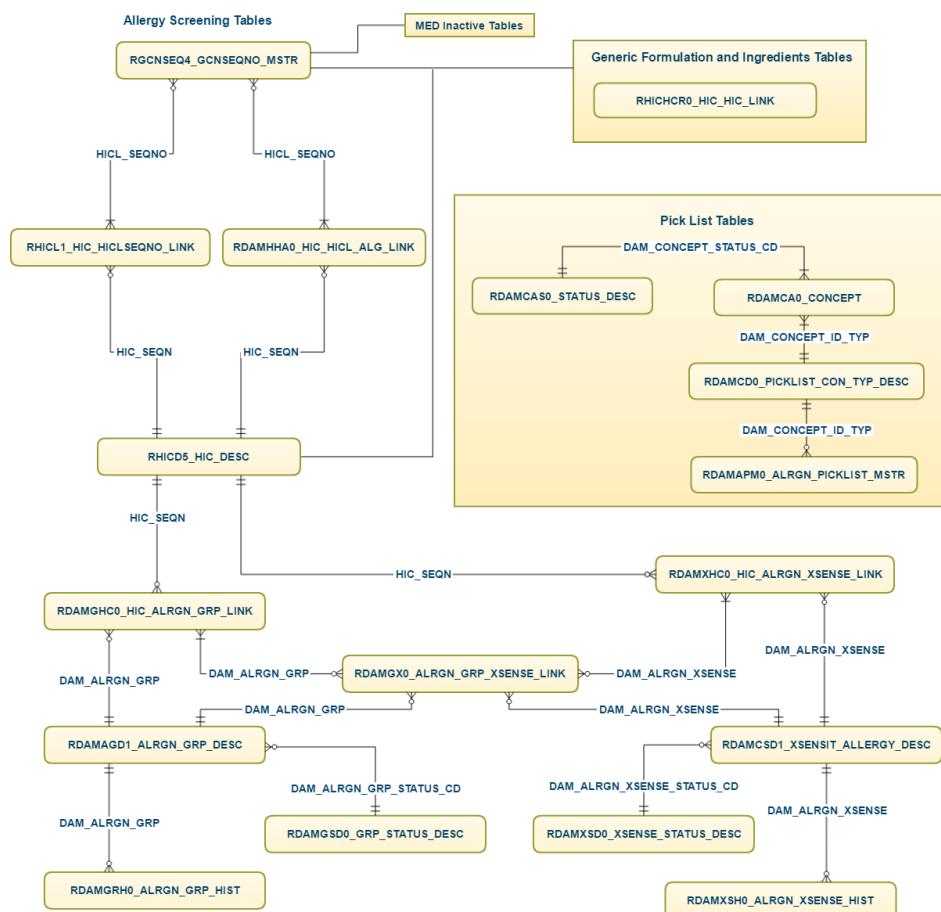
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Drug Allergy Module Tables
- Drug Allergy Module ERD

Drug Allergy Module Tables

- DAM Allergen Group Cross/Sensitivity Link Table
- DAM Concept Description Table
- DAM Cross-Sensitive Allergen Group Code Description Table
- DAM Cross-Sensitive Allergen Group Code History Table
- DAM Cross-Sensitive Allergen Group Code Status Code Description Table
- DAM Ingredient/Allergen Group Link Table
- DAM Ingredient/Cross-Sensitivity Link Table
- DAM Patient Profile Allergen Pick List Table
- DAM Pick List Concept ID Description Table
- DAM Specific Allergen Group Code Description Table
- DAM Specific Allergen Group Code History Table
- DAM Specific Allergen Group Code Status Code Description Table
- Drug Allergy Concept Attributes Table
- Drug Allergy Screening HICL_SEQNO/HIC Relation Table

Drug Allergy Module ERD



DAM Allergen Group Cross-Sensitivity Link Table

Table Name	RDAMGX0_ALRGN_GRP_XSENSE_LINK				
Revision Activity	add. 07-29-2004				
Purpose	Links the Specific Allergen Group Code to the Cross-Sensitive Allergen Group Code.				

Key	Column Name	Column Description	Format	Length	Picture
PF	DAM_ALRGN_GRP	DAM Specific Allergen Group Code (Stable ID)	N	6	9(6)
PF	DAM_ALRGN_XSENSE	DAM Cross-Sensitive Allergen Group Code (Stable ID)	N	4	9(4)

DAM Concept Description Table

Table Name	RDAMCAS0_STATUS_DESC				
Revision Activity	add.06-25-2015				
Purpose	Relates the DAM concept status code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	DAM_CONCEPT_STATUS_CD	DAM Concept Status Code	AN	1	X(1)
	DAM_CONCEPT_STATUS_CD_DESC	DAM Concept Status Code Description	AN	50	X(50)

DAM Cross-Sensitive Allergen Group Code Description Table

Table Name		RDAMCSD1_XSENSIT_ALLERGY_DESC			
Revision Activity		rev.07-29-2004			
Purpose		Provides the Cross-Sensitive Allergen Group Code's text description, Possibly Inactive Indicator, and Status code.			
Key	Column Name	Column Description	Format	Length	Picture
P	DAM_ALRGN_XSENSE	DAM Cross-Sensitive Allergen Group Code (Stable ID)	N	4	9(4)
	DAM_ALRGN_XSENSE_DESC	DAM Cross-Sensitive Allergen Group Code Description	AN	50	X(50)
	DAM_XSENSE_POTENTIAL_INCTV_IND	DAM Cross-Sensitive Allergen Group Potentially Inactive Indicator	N	1	9(1)
F	DAM_ALRGN_XSENSE_STATUS_CD	DAM Cross-Sensitive Allergen Group Status Code	N	1	9(1)

DAM Cross-Sensitive Allergen Group Code History Table

Table Name	RDAMXSH0_ALRGN_XSENSE_HIST				
Revision Activity	add. 07-29-2004				
Purpose	Tracks the replacement history of the Cross-Sensitive Allergen Group Code.				
Key	Column Name	Column Description	Format	Length	Picture
PF	REPL_DAM_ALRGN_XSENSE	Replacement DAM Cross-Sensitive Allergen Group Code	N	4	9(4)
PF	PREV_DAM_ALRGN_XSENSE	Previous DAM Cross-Sensitive Allergen Group Code	N	4	9(4)
	DAM_ALRGN_XSENSE_REPLACE_EFFECTIVE_DT	DAM Cross-Sensitive Allergen Group Code Replacement Effective Date	N	8	9(8)

DAM Cross-Sensitive Allergen Group Code Status Code Description Table

Table Name	RDAMXSD0_XSENSE_STATUS_DESC
Revision Activity	add. 07-29-2004
Purpose	Provides the description of the Cross-Sensitive Allergen Group Status Code.

Key	Column Name	Column Description	Format	Length	Picture
P	DAM_ALRGN_XSENSE_STATUS_CD	DAM Cross-Sensitive Allergen Group Status Code	N	1	9(1)
	DAM_ALRGN_XSENSE_STATUS_CD_DSC	DAM Cross-Sensitive Allergen Group Status Code Description	AN	50	X(50)

DAM Ingredient Allergen Group Link Table

Table Name	RDAM GHC0_HIC_ALRGN_GRP_LINK				
Revision Activity	add.07-29-2004				
Purpose	Links an ingredient to one or more Specific Allergen Group Codes.				

Key	Column Name	Column Description	Format	Length	Picture
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number	N	6	9(6)
PF	DAM_ALRGN_GRP	DAM Specific Allergen Group Code (Stable ID)	N	6	9(6)

DAM Ingredient Cross-Sensitivity Link Table

Table Name	RDAMXHC0_HIC_ALRGN_XSENSE_LINK
Revision Activity	add.07-29-2004
Purpose	Links an ingredient to one or more Cross-Sensitive Allergen Group Codes.

Key	Column Name	Column Description	Format	Length	Picture
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number	N	6	9(6)
PF	DAM_ALRGN_XSENSE	DAM Cross-Sensitive Allergen Group Code	N	4	9(4)

DAM Patient Profile Allergen Pick List Table

Table Name	RDAMAPM0_ALRGN_PICKLIST_MSTR				
Revision Activity	add.07-29-2004				
Purpose	Provides a selection of MED Names, Base Ingredients, and Specific Allergen Group codes for use in patient profiles.				

Key	Column Name	Column Description	Format	Length	Picture
P	DAM_CONCEPT_ID	DAM Allergen Concept ID	N	8	9(8)
PF	DAM_CONCEPT_ID_TYP	DAM Allergen Concept ID Type	N	3	9(3)
	DAM_CONCEPT_ID_DESC	DAM Allergen Concept ID Description	AN	50	X(50)

DAM Pick List Concept ID Description Table

Table Name	RDAMCD0_PICKLIST_CON_TYP_DESC				
Revision Activity	add.07-29-2004				
Purpose	Provides the description of the DAM Concept ID.				

Key	Column Name	Column Description	Format	Length	Picture
P	DAM_CONCEPT_ID_TYP	DAM Allergen Concept ID Type	N	3	9(3)
	DAM_CONCEPT_ID_TYP_DESC	DAM Allergen Concept ID Type Description	AN	50	X(50)

DAM Specific Allergen Group Code Description Table

Table Name		RDAMAGD1_ALRGN_GRP_DESC			
Revision Activity		rev.07-29-2004			
Purpose		Provides the Specific Allergen Group Code's text description, Possibly Inactive Indicator, and Status code.			
Key	Column Name	Column Description	Format	Length	Picture
P	DAM_ALRGN_GRP	DAM Specific Allergen Group Code (Stable ID)	N	6	9(6)
	DAM_ALRGN_GRP_DESC	DAM Specific Allergen Group Code Description	AN	50	X(50)
	DAM_GRP_POTENTIALLY_INACTIVE_IND	DAM Specific Allergen Group Potentially Inactive Indicator	N	1	9(1)
F	DAM_ALRGN_GRP_STATUS_CD	DAM Specific Allergen Group Status Code	N	1	9(1)

DAM Specific Allergen Group Code History Table

Table Name	RDAMGRH0_ALRGN_GRP_HIST				
Revision Activity	add.07-29-2004				
Purpose	Tracks the replacement history of the Specific Allergen Group Code.				

Key	Column Name	Column Description	Format	Length	Picture
PF	REPL_DAM_ALRGN_GRP	Replacement DAM Specific Allergen Group Code	N	6	9(6)
PF	PREV_DAM_ALRGN_GRP	Previous DAM Specific Allergen Group Code	N	6	9(6)
	DAM_ALRGN_GRP_REPLACE_EFF_DT	DAM Specific Allergen Group Code Replacement Effective Date	N	8	9(8)

DAM Specific Allergen Group Code Status Code Description Table

Table Name	RDAMGSD0_GRP_STATUS_DESC				
Revision Activity	add.07-29-2004				
Purpose	Provides the description of the Allergen Group Status Code.				

Key	Column Name	Column Description	Format	Length	Picture
P	DAM_ALRGN_GRP_STATUS_CD	DAM Specific Allergen Group Status Code	N	1	9(1)
	DAM_ALRGN_GRP_STATUS_CD_DESC	DAM Specific Allergen Group Status Code Description	AN	50	X(50)

Drug Allergy Concept Attributes Table

Table Name	RDAMCA0_CONCEPT				
Revision Activity	add.06-25-2015				
Purpose	Provides the DAM Concept ID which represents a selection of Medication Names, Base Ingredients, Specific Allergen Group codes, and spans food-based and environmental-based allergy attributes for use in patient profiles.				

Key	Column Name	Column Description	Format	Length	Picture
P	DAM_CONCEPT_ID	DAM Concept ID	N	8	9(8)
PF	DAM_CONCEPT_ID_TYP	DAM Concept Type ID	N	3	9(3)
	DAM_CONCEPT_ID_DESC	DAM Concept Type Description	AN	50	X(50)
	DAM_PICKLIST_IND	DAM Picklist Indicator	AN	1	X(1)
	DAM_MED_IND	DAM Spans Medication Indicator	AN	1	X(1)
	DAM_FOOD_IND	DAM Spans Food Indicator	AN	1	X(1)
	DAM_ENVIRON_AGENT_IND	DAM Spans Environment Agent Indicator	AN	1	X(1)
	DAM_NON_ALRGN_IND	DAM Non Allergen Indicator	AN	1	X(1)
F	DAM_CONCEPT_STATUS_CD	DAM Concept Status Code	AN	1	X(1)

Drug Allergy Screening HICL_SEQNO HIC Relation Table

Table Name	RDAMHHA0_HIC_HICL_ALG_LINK				
Revision Activity	add.06-25-2015				
Purpose	Links individual ingredients to an ingredient list for the purpose of allergy screening.				

Key	Column Name	Column Description	Format	Length	Picture
PF	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
PF	DAM_ALRGN_HI C_SEQN	DAM Allergen Hierarchical Ingredient Code Sequence Number (Stable ID)	N	6	9(6)

Drug-Disease Contraindications Module (DDCM) 2.0

- Drug-Disease Contraindications Module Editorial Policies
- Applications
- ERD and Technical Specifications

Drug-Disease Contraindications Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the module are provided in the following sections:

- [Overview](#)
- [Inclusion Criteria](#)
- [Data Elements](#)
- [Rule Sets](#)
- [Maintenance](#)
- [References](#)

Overview

The Drug-Disease Contraindications Module (DDCM) is designed to create warnings concerning the use of certain drugs in patients with specific health-related conditions and diseases, or patients who have had certain procedures or diagnostic tests. Healthcare professionals can use these warnings to make informed decisions about altering a patient's drug therapy when these conditions exist. This information can be incorporated into Drug Utilization Review by identifying potentially hazardous prescribing practices.

Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

Inclusion - Drug Scope

- U.S. FDA-approved prescription (Rx) product ingredients with NDA, ANDA, BLA
- U.S. over-the-counter (OTC) products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbal products enumerated in the FDB [Herbal Products Inclusion List](#)

Inclusion - Warnings Content Scope

Included are:

- Diseases, conditions or procedures that are contraindications.
- Precautions or warnings including those that may be monitored by laboratory tests, physical examination, or radiology.
- Conditions that affect drug metabolism to the point of requiring dose adjustment or complete drug avoidance (for example, liver or renal disease, drug metabolizing enzyme genotype variant).
- Risk factor conditions that increase adverse reaction rates.
- Drug ingredients in the Pregnancy Module assigned SL=1 (*Contraindicated*) or FDA X will be represented in DDCM with DXID 3446-Pregnancy SL=1 (*Contraindicated*).
- Drug ingredients in the Pregnancy Module assigned SL=3 (*Generally not recommended*) or FDA D will be

represented in DDCM with DXID 3446-Pregnancy SL=2 (*Severe Warning*).

- Drug ingredients in the Lactation Module assigned SL=1 (*Contraindicated*) will be represented in DDCM with DXID 3452-Lactating Mother SL=1.
- DDCM contraindications, warnings, and precautions are not country-specific.



The Pregnancy Precautions Module and the Lactation Precautions Module are also available from First Databank.

Exclusion - Drug Scope

- Self-proclaimed Rx products without ANDA/NDA/BLA
- Rx drug products with 510K device approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products except those enumerated in the FDB [Herbal Products Inclusion List](#)
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers
- Cosmetics
- Veterinary drugs
- Inactive ingredients

Exclusion - Warning Content

- Warning statements describing prior allergies or hypersensitivity to drug product ingredients are NOT included within DDCM. Prior allergies or hypersensitivity reactions are always assumed to be a contraindication to future use of a drug. Even though allergies may be ICD encoded, DDCM is not designed to generate alert messages for any hypersensitivity reactions including latex allergy and animal protein allergy.
- Condition statements describing indication exclusion or treatment failure statements. These are conditions related to the indications for use, but have not been explicitly approved as part of the indication labeling. (*For example, Diabeta is contraindicated in patients: With type I diabetes mellitus, diabetic ketoacidosis. This condition should be treated with insulin.*)
- Warning statements that relate to contraindicated routes or methods of drug administration.
- Condition statements describing specific symptoms of included contraindicated diseases.
- Rare side effect conditions as stated or described by the manufacturer.
- Warning statements regarding toxic overdose conditions or symptoms.

- Condition statements regarding "at risk" patient characteristics, such as gender, age or race, or concomitant drug use.



Age-related precautions can be found in the Geriatric and Pediatrics Precautions modules.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

DDCM Drug-Disease Contraindications Code

The DDCM Drug-Disease Contraindications Code (**DDXCN**) is a system-assigned dumb number for each drug group.

- Each ingredient in a multi-ingredient product may have its own Drug-Disease Contraindications Code (**DDXCN** code) and description.

DDXCN codes are linked to the following First Databank drug identifiers within specific linking tables:

- Routed Medication ID (**ROUTED_MED_ID**)
- Routed Generic Identifier (**ROUTED_GEN_ID**)
- Clinical Formulation ID (**GCN_SEQNO**)

Example—**RDDCMGC0_CONTRA_GCNSEQNO_LINK**

GCN_SEQNO	DDXCN
45131	51081
45132	51081
45133	51081
45134	51081
47821	51081

DDCM Drug-Disease Contraindications Description

The description is assigned to the Drug-Disease Contraindications Code (**DDXCN**). This drug group description is usually ingredient-based but can be broader and include a collection of ingredients (e.g., "Bulk Laxatives") or may be narrower and include only certain dose forms or routes, etc. (e.g., "Potassium Cl (Oral, Non-Solid).")

Example—**RDDCMDD0_CONTRA_DRUG_DESC**

DDXCN	DDXCN_DRUG_DESC
51081	LINEZOLID

Disease Identifiers

Each DDCM contraindicated disease, condition or procedure is encoded utilizing concepts that are maintained in the First Databank Medical Lexicon (FML). The concepts are called Disease Identifiers (**DXIDs**) and their numeric identifier is a system assigned dumb number. First Databank Disease Codes (**FDBDX**) are legacy disease codes that are also published and have a one-to-one relationship with DxIDs. FDBDX codes are created and include embedded ICD Codes.

DDCM Severity Level

There are three possible severity level messages in DDCM that can be assigned to each DxID record.

DDXCN_SL Value Description

Value	Description
1	Contraindication
2	Severe Warning
3	Moderate Warning

DDCM Sequence Number

Sequencing of DxIDs is represented by DDCM Sequence Number (**DDXCN_SN**) values and is generated by the system. It is not a priority sequence, but it is a numeric sort of FDBDX codes. This is not a stable code.

DDCM Reference

Field values are short, 26-character length reference citation descriptions assigned to each DxID.

Example—RDDCMMA1_CONTRA_MSTR

DDXCN	DDXCN_SN	FDBDX	DDXCN_SL	DDXCN_REF	DXID
51081	0	01.008450	2	ZYVOX PI, 12/09	26
51081	1	03.259200	2	ZYVOX PI, 12/09	654
51081	2	03.276203	2	ZYVOX PI, 12/09	740
51081	3	04.284800	2	ZYVOX PI, 12/09	829
51081	4	04.284807	2	ZYVOX PI, 12/09	836
51081	5	04.285900	2	ZYVOX PI, 12/09	842
51081	6	04.284500	2	ZYVOX PI, 12/09	878
51081	7	04.288004	2	ZYVOX PI, 12/09	886
51081	8	06.333991	1	MEDWATCH 11/05	1072
51081	9	06.356901	3	ZYVOX PI, 12/09	1146
51081	10	06.377490	2	ZYVOX PI, 12/09	1334

51081	11	16.780300	3	MEDWATCH 04/07	3053
51081	12	07.401909	2	ZYVOX PI, 12/09	13999
51081	13	02.227900	2	ZYVOX PI, 12/09	505
51081	14	03.242800	2	ZYVOX PI, 12/09	579
51081	15	06.368900	2	ZYVOX PI, 12/09	1241

Rule Sets

This section provides rules that the clinical team uses in regards to creating the module's data, both general rules and rules specific to data elements.

Trigger content text (for example, Sporadic MedWatch alert text) is reviewed and concepts applicable to DDCM are identified. Disease terminology concepts within FML are searched and codes/descriptions selected. New concepts or synonyms are added to FML as needed through a vetting request process. Associated attributes of severity level and reference citation are included. Trigger content drug(s) are identified and contraindications coding is applied to all applicable DDXCN drug groups.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

Drug knowledge is aggregated at the drug grouper level and then linked to Clinical Formulation IDs, Routed Medication IDs, and the Routed Generic IDs in the First Databank knowledge base. Linkage or assignment of DDCM information to drugs is therefore not manufacturer-specific.

Non-U.S. drug Clinical Formulations may inherit U.S.-based DDCM clinical data.

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

DDCM Severity Level

There are three possible severity level messages in DDCM that can be assigned to each DxID record.

The following are detailed descriptions utilized for making severity level assignments:

- **Contraindication** is reserved for warnings that are most significant, where harm is likely to occur to the patient. The drug should generally not be given to a patient for severity level 1 assignments. In many cases, these are "boxed warnings" for newer prescription products.
- **Severe Warning** is a tempered contraindication assigned to those diagnoses (DxIDs) that are clinically significant, where the condition can be managed or treated before the drug may be given safely. "Boxed warning" information may also be included that requires medical specialist assessment for risk versus benefit.

- **Moderate Warning** is assigned to those DxIDs where adequate patient monitoring is recommended for safer drug use.

Maintenance

The following section describes the processes and criteria the clinical editors use to add or review database elements.

External Triggers for Clinical Review

The First Databank Knowledge Base Services Department utilizes a robust methodology for capture, documentation, triage and tracking of the most important sources for drug knowledge changes. The external triggers that are triaged to the clinical editors for review are the following:

- MedEffects Alerts from Health Canada (except non-U.S. product alerts exclusive to Canada)
- FDA MedWatch Medical Product Safety Information Alerts
- FDA CDER NEW
- FDA CBER What's New
- MedWatch Safety Alerts from FDA
- FDA Division of Drug Information (DDI)
- FDA Hematology/Oncology (Cancer) Approvals and Safety Notifications
- What's New at FDA in HIV/AIDS
- FDA Table of Pharmacogenomic Biomarkers in Drug Labels
- FDA Press Announcements
- Briggs Pregnancy and Lactation Newsletter

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review DDCM drug groups or DxID content is a new Clinical Formulation (**GCN_SEQNO**) added to MedKnowledge along with its U.S. product labeling.

References

This section lists sources used by First Databank to compile the information contained in the module.

First Databank utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. First Databank uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Briggs GG, Freeman RK, Yaffe SJ, eds. *Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk*.
- Drugs in Pregnancy and Breastfeeding. Available at: <http://www.perinatology.com>.
- Friedman JM, Polifka JE. *Teratogenic Effects of Drugs (TERIS): A Resource for Clinicians*.
- *AHFS Drug Information*. Published by American Society of Health System Pharmacists.

DDCM Applications

This section provides information about the practical application of data contained in this module. The applications utilize tables in the First Databank Medical Lexicon Module, and successful use of these applications depends upon the following:

- Familiarity with the First Databank Medical Lexicon Module and the Disease Identifier (**DxID**). Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) for more information.
- Familiarity with drug concepts and their identifiers. Refer to the [Multiple Access Points \(MAPs\)](#) for more information.
- Ability to navigate to a Clinical Formulation ID (**GCN_SEQNO**) from a concept such as the DIN or MEDID. Refer to [MedKnowledge Identifiers and Attributes](#) for more information.
- Assignment of a DxID or ICD Code to a given disease state. Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) for more information.

[Retrieving a List of Drug Contraindications](#)

[Comparing Patient ICD Codes to Prospective Drug Therapy—Using the Exclusion Table to Reduce Alerts](#)

[Comparing Patient DxIDs to Prospective Drug Therapy](#)

[Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy](#)

Retrieving a List of Drug Contraindications

This application illustrates how to use DDCM to retrieve a list of drug contraindications based on its Clinical Formulation ID ([GCN_SEQNO](#)).

This example uses Clinical Formulation ID ([GCN_SEQNO](#)) 000561 representing the drug verapamil Oral.

1. Retrieve the DDCM Drug-Disease Contraindications Code ([DDXCN](#)) related to Clinical Formulation ID ([GCN_SEQNO](#)) 000561 using the [DDCM GCN_SEQNO/Drug-Disease Code Relation Table](#) (RDDCMGC0_CONTRA_GCNSEQNO_LINK). The DDXCN's text description ([DDXCN_DRUG_DESC](#)) from the [DDCM Drug Description Table](#) (RDDCMDD0_CONTRA_DRUG_DESC) is shown for illustrative purposes.

GCN_SEQNO	DDXCN	DDXCN_DRUG_DESC
000561	50225	VERAPAMIL

Multi-ingredient drugs may have different contraindications (DDXCNs) for each ingredient.

2. Retrieve the FML Disease Identifier ([DXID](#)) values associated with DDXCN 50225 from the [DDCM Master Table](#) (RDDCMMA1_CONTRA_MSTR).

DDXCN	DXID
50225	00001154
50225	00001157
50225	00001447
50225	00001451
50225	00001502
50225	00001512
50225	00001517
50225	00001521
50225	00001528
50225	00001543
50225	00001562
50225	00001563
50225	00001579
50225	00001588
50225	00001709

50225	00001713
50225	00002202
50225	00002292
50225	00003184
50225	00013479

3. Retrieve the FML 100-Character Description ([DXID_DESC100](#)) for each DXID value using the [FML Disease Identifier \(DxID\) Table](#) (RFMLDX0_DXID).

DXID	DXID_DESC100
00001154	Neuromuscular Transmission Deficiency
00001157	Duchenne Dystrophy
00001447	Acute ST Elevation Myocardial Infarction
00001451	Acute Myocardial Infarct with Pulmonary Congestion
00001502	Severe Aortic Valve Stenosis
00001512	Idiopathic Hypertrophic Subaortic Stenosis
00001517	Complete Atrioventricular Block
00001521	Incomplete AV Heart Block
00001528	Wolff-Parkinson-White Pattern
00001543	Ventricular Tachycardia
00001562	Sick Sinus Syndrome
00001563	Bradycardia
00001579	Severe Chronic Heart Failure
00001588	Heart Failure
00001709	Hypotension
00001713	Severe Hypotension
00002202	Disease of Liver
00002292	Renal Disease
00003184	Cardiogenic Shock
00013479	Lown-Ganong-Levine Syndrome

4. You may now display the results to the end-user. Multiple sorting and filtering options can be used at this point depending on your requirements. The following illustration sorts based on the DDCM Severity Level (

DDXCN_SL) and the DDCM Severity Level Description (DDXCN_SL_DESC). See the DDXCN_SL data dictionary entry for important information about each severity level's precise meaning.

Verapmil Contraindications

(grouped by severity level)

Contraindication

- Acute Myocardial Infarct with Pulmonary Congestion
- Bradycardia
- Cardiogenic Shock
- Complete Atrioventricular Block
- Incomplete AV Heart Block
- Lown-Ganong-Levine Syndrome
- Severe Chronic Heart Failure
- Severe Hypotension
- Sick Sinus Syndrome
- Wolff-Parkinson-White Pattern

Severe Warning

- Acute ST Elevation Myocardial Infarction
- Duchenne Dystrophy
- Heart Failure
- Hypotension
- Idiopathic Hypertrophic Subaortic Stenosis
- Neuromuscular Transmission Deficiency
- Ventricular Tachycardia

Moderate Warning

- Disease of Liver
- Renal Disease
- Severe Aortic Valve Stenosis

Comparing Patient ICD Codes to Prospective Drug Therapy - Using the Exclusion Table to Reduce Alerts

This application illustrates how to prospectively identify possible contraindications to prescribed therapy by comparing a collection of patient ICD codes (both ICD-9-CM and ICD-10-CM/PCS codes).

- Example—Comparing a Patient’s ICD Codes to Prospective Drug Therapy—Using the Exclusion Table to Reduce Alerts

The following steps assume you have a formulary that identifies medications with Clinical Formulation ID ([GCN_SEQNO](#)) values. In this procedure, you retrieve all single-route Orderable Meds and discretionary-route Orderable Meds related to drugs on your formulary.

1. Query the [FML ICD Search Exclusion Table](#) (RFMLISR1_ICD_SEARCH) for the FML Related DxID ([RELATED_RXID](#)) and the FML Navigation Code ([FML_NAV_CODE](#)) where:

- the Search ICD Code ([SEARCH_ICD_CD](#)) equals the code you are checking,
- the ICD Code Type ([ICD_CD_TYPE](#)) column equals the value of the type of ICD code you are checking, and
- the FML Clinical Module Code ([FML_CLIN_CODE](#)) equals **03**.

The FML Navigation Code describes the relationship between the DxID and the ICD Code. You will use it later in this process when you compile information and construct the DDCM alert message.

2. Find the Clinical Formulation ID ([GCN_SEQNO](#)) of the prescribed drug.
3. Find the drug’s DDCM Drug-Disease Contraindications Code ([DDXCN](#)) using the [DDCM GCN_SEQNO/Drug-Disease Code Relation Table](#) (RDDCMGC0_CONTRA_GCNSEQNO_LINK). See the note below about multi-ingredient products.

Multi-ingredient drugs may have more than one DDXCN. In these cases, the DDXCN’s associated DDCM Drug-Disease Contraindications Drug Description ([DDXCN_DRUG_DESC](#)), found in the [DDCM Drug Description Table](#) (RDDCMDD0_CONTRA_DRUG_DESC), can be helpful when displaying alerts by specifying which drug group(s) in the product cause a problem.

For example, if both DDXCN 50001 (acetaminophen) and DDXCN 50003 (caffeine) appear during this step you might say simply that the entire drug poses potential problems to the patient. However, using the [DDXCN_DRUG_DESC](#), you can qualify the results and indicate to the end-user which ingredients cause the alert (in this example acetaminophen and caffeine).

4. Retrieve each DDXCN’s FML Disease Identifiers ([DXID](#)) and their DDCM Severity Level ([DDXCN_SL_DESC](#)) codes using the [DDCM Master Table](#) (RDDCMMA1_CONTRA_MSTR). At this point, you also have the following option:
- Filter or sort based upon DDCM Severity Level ([DDXCN_SL_DESC](#)).

5.

5. Construct a list of the *matching* DXID values between the set of FML Related DXID ([RELATED_RXID](#)) values found in Step 1 (signifying DDCM contraindications for the patient's ICD codes), and the set of DXID values found in Step 4 (signifying DDCM contraindications for sumatriptan). In addition to the DXIDs, include the following values:
 - Search ICD Codes ([SEARCH_ICD_CD](#))
 - FML Navigation Code ([FML_NAV_CODE](#)) values found in step 1
 - DDCM Drug-Disease Contraindications Code ([DDXCN](#)) value found in Step 3
 - DDCM Severity Level ([DDXCN_SL_DESC](#)) values found in Step 4
 - FML Clinical Module Code ([FML_CLIN_CODE](#))
6. Query the [FML ICD Search Exclusion Table](#) (RFMLISX0_ICD_SEARCH_EXCLUSION) with the following fields from Step 5:
 - FML Search ICD Code ([SEARCH_ICD_CD](#))
 - ICD Code Type ([ICD_CD_TYPE](#))
 - FML Related DXIDs ([RELATED_RXID](#)) (DXID match results from Step 5)
 - FML Clinical Module Code ([FML_CLIN_CODE_DESC](#))
 - Clinical Drug Group ([CLIN_DRUG_GROUP](#)) (In this example, the DDXCN populates this field.)
7. Remove matching query records (if found) that appear in Step 6 from records in Step 5.
8. Sort the results of the previous step.
 - If you wish to sort by top-priority contraindications, sort by the DDCM Severity Level ([DDXCN_SL_DESC](#)).
 - If you wish to prioritize patient-context condition matching, sort by the FML Navigation Code ([FML_NAV_CODE](#)).
9. Retrieve the drug's MED Medication Description ([MED_MEDID_DESC](#)) using the [MED Medication Table](#) (RMIID2_MED) table.
10. Retrieve the FML ICD Code Description ([ICD_DESC](#)) for each ICD Code identified in Step 7 using the [FML ICD Code Type Description Table](#) (RFMLINM1_ICD_DESC).
11. Retrieve the DxID description for each DxID value identified in Step 7 using the [FML Disease Identifier \(DxID\) Table](#) (RFMLDX0_RXID).
 - To retrieve a primary professional description for each DxID value, use either the FML 56-character Description ([DXID_DESC56](#)) or the FML 100-character Description ([DXID_DESC100](#)).
 - To retrieve a primary layman description, refer to the [Finding DXID Description and Synonyms](#) application in the FDB MedKnowledge manual.
12. Construct each of the following messages that applies to the results of step 7 using the information found above:
 - **If FML_NAV_CODE = 01 and**
 - DDXCN_SL = 1 **then** display, "Your patient was found to have [[ICD_DESC](#)] on their problem list. The drug [[MED_MEDID_DESC](#)] is contraindicated in patients with [[DXID_DESC100](#)]."

- DDXCN_SL = 2 **then** display, “Your patient was found to have [ICD_DESC] on their problem list. Patients with [DXID_DESC100] should be carefully evaluated before initiating therapy and monitored closely while taking [MED_MEDID_DESC].”
- DDXCN_SL = 3 **then** display, “Your patient was found to have [ICD_DESC] on their problem list. Patients with [DXID_DESC100] should be carefully monitored during therapy with [MED_MEDID_DESC].”
- **If FML_NAV_CODE = 02 or FML_NAV_CODE = 03 and**
 - DDXCN_SL = 1 **then** display, “Your patient was found to have [ICD_DESC] on their problem list, a condition similar to [DXID_DESC100] which is a contraindication for the use of [MED_MEDID_DESC].”
 - DDXCN_SL = 2 **then** display, “Your patient was found to have [ICD_DESC] on their problem list, a condition similar to [DXID_DESC100], and therefore should be carefully evaluated before initiating therapy and monitored closely while taking [MED_MEDID_DESC].”
 - DDXCN_SL = 3 **then** display, “Your patient was found to have [ICD_DESC] on their problem list, a condition similar to [DXID_DESC100], and therefore should be carefully monitored during therapy with [MED_MEDID_DESC].”

The sample message templates above are suggestions based on interpretations of the DDXCN_SL descriptions. Customers can modify these warnings as they see fit. See the DDCM Severity Level section within your FDB MedKnowledge manual for more information.

13. Display the results to the end user.

Example—Comparing a Patient’s ICD Codes to Prospective Drug Therapy—Using the Exclusion Table to Reduce Alerts

This example prospectively identifies possible drug-disease contraindications (DDCM) to the patient’s prescribed therapy of *sumatriptan 100 mg Tab* (MEDID 00177730), using the patient’s ICD Codes of 346 (ICD-9-CM code for Migraine) and G43.909 (ICD-10-CM code for Migraine).

1. Query the **FML ICD Search Table** (RFMLISR1_ICD_SEARCH) for the FML Related DxID (**RELATED_RXID**) and the FML Navigation Code (**FML_NAV_CODE**) where
 - the Search ICD Code(s) (**SEARCH_ICD_CD**) equals the **346** and **G43.909**,
 - the ICD Code Type (**ICD_CD_TYPE**) column equals **01** and **05**, respectively, and
 - the FML Clinical Module Code (**FML_CLIN_CODE**) equals **03**.

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
346	01	00001114	03	02
346	01	00001116	03	01
346	01	00003154	03	02
346	01	00003157	03	03

346	01	00013524	03	02
346	01	00013885	03	02
G43.909	05	00001114	03	03

The FML Navigation Code describes the relationship between the DxID and the ICD Code. You will use it later in this process when you compile information and construct the DDCM alert message.

2. Find the Clinical Formulation ID (GCN_SEQNO) of the prescribed drug.

MEDID	GCN_SEQNO
00177730	017129

In this example, the Medication ID (**MEDID**) is used to find the **GCN_SEQNO** in the **MED Medication Table (RMIID2_MED)**.

3. Find the drug's DDCM Drug-Disease Contraindications Code (**DDXCN**) using the **DDCM GCN_SEQNO/Drug-Disease Code Relation Table (RDDCMGC0_CONTRA_GCNSEQNO_LINK)**. See the note below about multi-ingredient products.

Multi-ingredient drugs may have more than one DDXCN. In these cases, the DDXCN's associated DDCM Drug-Disease Contraindications Drug Description (**DDXCN_DRUG_DESC**), found in the **DDCM Drug Description Table (RDDCMDD0_CONTRA_DRUG_DESC)**, can be helpful when displaying alerts by specifying which drug group(s) in the product cause a problem.

GCN_SEQNO	DDXCN
017129	50530

4. Retrieve each DDXCN's FML Disease Identifiers (**DXID**) and their DDCM Severity Level (**DDXCN_SL_DESC**) codes using the **DDCM Master Table (RDDCMMA1_CONTRA_MSTR)**. At this point, you also have the following option:

- Filter or sort based upon DDCM Severity Level (**DDXCN_SL_DESC**).

DDXCN	DXID	DDXCN_SL
50530	00002202	3
50530	00002203	1
50530	00003176	2
50530	00001072	1
50530	00000701	3

50530	00001114	1
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The example above shows a partial list of the results of this step.

5. Construct a list of the *matching* DXID values between the set of FML Related DXID (**RELATED_DXID**) values found in Step 1 (signifying DDCM contraindications for the patient's ICD codes), and the set of DXID values found in Step 4 (signifying DDCM contraindications for sumatriptan). In addition to the DXIDs, include the following values:

- Search ICD Codes (**SEARCH_ICD_CD**)
- FML Navigation Code (**FML_NAV_CODE**) values found in step 1
- DDCM Drug-Disease Contraindications Code (**DDXCN**) value found in Step 3
- DDCM Severity Level (**DDXCN_SL_DESC**) values found in Step 4
- FML Clinical Module Code (**FML_CLIN_CODE**)

This compiled list summarizes the possible contraindications that exist based on a combination of the prescribed medication(s) and the patient's ICD code condition(s).

SEARCH_ICD_CODE	ICD_CD_TYPE	RELATED_DXID (Matching DXIDs)	DDXCN	FML_CLIN_CODE	FML_NAV_CODE	DDXCN_SL
346	01	00001114	50530	03	02	1
G43.909	05	00001114	50530	03	03	1

6. Query the **FML ICD Search Exclusion Table** (RFMLISX0_ICD_SEARCH_EXCLUSION) with the following fields from Step 5:

- FML Search ICD Code (**SEARCH_ICD_CD**)
- ICD Code Type (**ICD_CD_TYPE**)
- FML Related DXIDs (**RELATED_DXID**) (DXID match results from Step 5)
- FML Clinical Module Code (**FML_CLIN_CODE_DESC**)
- Clinical Drug Group (**CLIN_DRUG_GROUP**) (In this example, the DDXCN populates this field.)

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXID	FML_CLIN_CODE	CLIN_DRUG_GROUP
346	01	00001114	03	50530
346	01	00001114	03	50883
346	01	00001114	03	50885
346	01	00001114	03	50911
346	01	00001114	03	51148
346	01	00001114	03	51164
346	01	00001114	03	51244

G43.909	05	00001114	03	50530
G43.909	05	00001114	03	50883
G43.909	05	00001114	03	50885
G43.909	05	00001114	03	50911
G43.909	05	00001114	03	51148
G43.909	05	00001114	03	51164
G43.909	05	00001114	03	51244

7. Remove matching query records (if found) that appear in Step 6 from records in Step 5. In this example, the related DXID 00001114 (Hemiplegic Migraine) appears as an exclusion. The application stops because there are no remaining records after this step. No alert is generated.

Comparing Patient DxIDs to Prospective Drug Therapy

This application illustrates how to prospectively identify possible contraindications to prescribed therapy by comparing a collection of DxIDs (representative of the patient's diagnoses or medical problems) to the prescribed drug's associated Disease Identifiers (DxID).

This example prospectively identifies possible DDCM contraindications to the patient's prescribed therapy of minocycline 50 mg capsule (Clinical Formulation ID [GCN_SEQNO] 009227), using the patient's profiled DxID codes of 594 (Type 2 Diabetes Mellitus), 3446 (Pregnancy), and 1742 (Acute Maxillary Moraxella Catarrhalis Sinusitis) and 1993 (Erosive Esophagitis).

1. Find the patient's profiled DxID codes in the FML Search DxID column (**SEARCH_RXID**) and retrieve each FML Related DxID (**RELATED_RXID**) and FML Navigation Code (**FML_NAV_CODE**) using the **FML Disease Identifier (DxID) Search Table** (RFMLDSR0_RXID_SEARCH). Furthermore, filter the results based on FML Clinical Module Code (**FML_CLIN_CODE**) value **03** for the DDCM module.

SEARCH_RXID	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
00000594	00000594	03	01
00000594	00000599	03	02
00000594	00000600	03	02
00000594	00000604	03	03
00000594	00000606	03	02
00000594	00003275	03	03
00000594	00003278	03	03
00000594	00003284	03	02
00000594	00007662	03	02
00000594	00013399	03	02
00000594	00013484	03	03
00000594	00013526	03	02
00001742	00000154	03	03
00001742	00000155	02	02
00001742	00000412	03	03
00001742	00000413	03	03
00001742	00001757	03	03
00001742	00006276	03	02
00001993	00001991	03	03
00001993	00001992	03	02

00001993	00001993	03	03
00001993	00001995	03	01
00001993	00001999	03	03
00001993	00002035	03	02
00001993	00002048	03	03
00001993	00002048	03	03
00001993	00005181	03	02
00003446	00002538	03	02
00003446	00002539	03	02
00003446	00002540	03	02
00003446	00002541	03	02
00003446	00002542	03	02
00003446	00002543	03	02
00003446	00002544	03	02
00003446	00002553	03	02
00003446	00002557	03	02
00003446	00002560	03	02
00003446	00002562	03	02
00003446	00003086	03	02
00003446	00003446	03	01
00003446	00003452	03	02
00003446	00007836	03	02
00003446	00013550	03	02
00003446	00013555	03	02
00003446	00013568	03	02
00003446	00013582	03	02
00003446	00013603	03	02
00003446	00013689	03	02
00003446	00013758	03	02

 The FML Navigation Code describes the relationship between the two DxID values. You will use it later in this process when you compile information and construct the DDCM alert message.

2. Find Minocycline's DDCM Drug-Disease Contraindications Code ([DDXCN](#)) using the [DDCM GCN_SEQNO/Drug-Disease Code Relation Table](#) (RDDCMGC0_CONTRA_GCNSEQNO_LINK). See the note below about multi-ingredient products.

GCN_SEQNO	DDXCN
009227	51227

 Multi-ingredient drugs may have more than one DDXCN. In these cases, the DDXCN's associated DDCM Drug-Disease Contraindications Drug Description ([DDXCN_DRUG_DESC](#)), found in the [DDCM Drug Description Table](#) (RDDCMDD0_CONTRA_DRUG_DESC), can be helpful while displaying alerts by specifying which drug group(s) in the product cause a problem.

For example, if both DDXCN 50001 (acetaminophen) and DDXCN 50003 (caffeine) appear during this step you might say simply that the entire drug poses potential problems to the patient. However, using the [DDXCN_DRUG_DESC](#), you can qualify the results and indicate to the end-user which ingredients cause the alert (in this example acetaminophen and caffeine).

3. Retrieve each DDXCN's related FML Disease Identifier ([DXID](#)) and DDCM Severity Level ([DDXCN_SL_DESC](#)) codes using the [DDCM Master Table](#) (RDDCMMA1_CONTRA_MSTR). At this point you may optionally retrieve either of the following:

- The DDCM Sequence Number ([DDXCN_SN](#))
- The DDCM Reference ([DDXCN_REF](#))

The following results are sorted by DDXCN_SN:

DDXCN	DXID	DDXCN_SL	DDXCN_SN	DDXCN_REF
51227	00000026	2	00	MINOCIN PI, 08/10
51227	00005181	2	01	THE ESOPHAGUS 1999:527-37
51227	00002202	2	02	MINOCIN PI, 08/10
51227	00002292	3	03	MINOCIN PI, 08/10
51227	00003446	1	04	MINOCIN PI, 08/10
51227	00003277	3	05	MINOCIN PI, 08/10
51227	00001121	2	06	MINOCIN PI, 08/10

4. Construct a list of the *matching* DXID values between the set of RELATED_DXID values found in step 1 (signifying DDCM contraindications for the patient's profiled DxID codes), and the set of DXID values found in step 3 (signifying DDCM contraindications for Minocycline). Take note of the SEARCH_DXID and

related FML_NAV_CODE values (found in step 1), and the related DDXCN_SL values (found in step 3). This compiled list summarizes the possible contraindications that exist based on a combination of the prescribed medication(s) and the patient's profiled condition(s).

Search DXID (from step 1)	Matching DXID (from step 1 and step 4)	Navigation Code (from step 1)	Severity Level (from step 4)
00001996	00005181	02	2
00003446	00003446	01	1

The SEARCH_DXID values indicate which of the patient's conditions may cause problems with the prescribed therapy. This step has revealed that neither the patient's Type 2 Diabetes Mellitus (DxID 594) nor his or her Acute Maxillary Moraxella Catarrhalis Sinusitis (DxID 1742) have any contraindications for Minocycline.

5. Sort the results of the previous step. Top priority contraindications are those with an FML_NAV_CODE value of **01**. Sort the remaining contraindications by their severity level (DDXCN_SL value 01 is the *most* severe, so sort in *ascending* order).

SEARCH_DXID	DXID	FML_NAV_CODE	DDXCN_SL
00003446	00003446	01	1
00001993	00005181	02	2

6. Retrieve Minocycline's Generic Name - Long Version (**GNN60**) using its Ingredient List Identifier (**HCL_SEQNO**) and the **Ingredient List Identifier Description Table** (RHICLSQ1_HCLSEQNO_MSTR).

GCN_SEQNO	HCL_SEQNO	GNN60
009227	004015	MINOCYCLINE HCL

If you have access to a description that is more specific than the **GNN60** (for example a DIN-level description such as the Label Name), you may certainly use it instead of the GNN60.

7. Retrieve the FML 100-character Description (**DXID_DESC100**) for each SEARCH_DXID and DXID code identified in step 5 using the **FML Disease Identifier (DxID) Table** (RFMLDX0_DXID).

DXID	DXID_DESC100
00001993	Erosive Esophagitis
00003446	Pregnancy

8. Construct each of the following messages that applies to the results of step 5 using the information found above. When the FML_NAV_CODE does not equal 01, you must display two DxID descriptions. The *Search DXID_DESC100* denotes a patient problem DxID, and the *Related DXID_DESC100* denotes a

DxID present in the prescribed therapy.

- **If FML_NAV_CODE = 01 and**
 - DDXCN_SL = 1 **then** display, “Your patient was found to have [Search DXID_DESC100] on their problem list. The drug [GNN60] is contraindicated in patients with [Search DXID_DESC100].”
 - DDXCN_SL = 2 **then** display, “Your patient was found to have [Search DXID_DESC100] on their problem list. Patients with [Search DXID_DESC100] should be carefully evaluated before initiating therapy and monitored closely while taking [GNN60].”
 - DDXCN_SL = 3 **then** display, “Your patient was found to have [Search DXID_DESC100] on their problem list. Patients with [Search DXID_DESC100] should be carefully monitored during therapy with [GNN60].”
- **If FML_NAV_CODE = 02 or FML_NAV_CODE = 03 and**
 - DDXCN_SL = 1 **then** display, “Your patient was found to have [Search DXID_DESC100] on their problem list, a condition similar to [Related DXID_DESC100] which is a contraindication for the use of [GNN60].”
 - DDXCN_SL = 2 **then** display, “Your patient was found to have [Search DXID_DESC100] on their problem list, a condition similar to [Related DXID_DESC100], and therefore should be carefully evaluated before initiating therapy and monitored closely while taking [GNN60].”
 - DDXCN_SL = 3 **then** display, “Your patient was found to have [Search DXID_DESC100] on their problem list, a condition similar to [Related DXID_DESC100], and therefore should be carefully monitored during therapy with [GNN60].”

i If you have access to a description that is more specific than the GNN60 (for example a DIN-level description such as the Label Name), use it instead of the GNN60.

i The sample message templates above are suggestions based on interpretations of the DDXCN_SL descriptions. Customers can modify these warnings as they see fit. See the DDCM Severity Level (DDXCN_SL) section for more information.

9. Display the results to the end-user.

Your patient was found to have *Pregnancy* on their problem list. The drug **MINOCYCLINE HCL** is contraindicated in patients with *Pregnancy*.

Your patient was found to have *Erosive Esophagitis* on their problem list, a condition similar to *Esophageal Dismobility*, and should therefore be carefully evaluated before initiating therapy, and monitored closely while taking **MINOCYCLINE HCL**.

Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy

This application illustrates how to use the Indications Module (INDM) along with the Drug-Disease Contraindications Module (DDCM) to populate inferred patient diagnoses when patient problem list information is not available, specifically for the purpose of screening a prescribed drug for drug-disease contraindications.

This example screens prescribed Adderall XR 5 mg 24 hour capsules (Clinical Formulation ID [GCN_SEQNO] 050428) for drug-disease contraindications. No diagnosis information exists for the patient, so indications will be inferred based on the patient's current medication of Timoptic 0.25% Eye Drops (Clinical Formulation ID [GCN_SEQNO] 007855).

- Find the INDM Indications Code (**INDCTS**) related to Timoptic's Clinical Formulation ID (GCN_SEQNO) of 007855 using the **INDM GCN_SEQNO/Indications Code Relation Table** (RINDMG0_INDCTS_GCNSEQNO_LINK).

GCN_SEQNO	INDCTS
007855	00929

- Retrieve each INDCTS code's set of INDM Predictor Code (**PRED_CODE**) and FML Disease Identifier (**DXID**) using the **INDM Master Table** (RINDMMA2_INDCTS_MSTR). Those DXID codes that have a PRED_CODE of 1 or 2 (*certain* or *somewhat certain*, respectively) represent likely indications based on the patient's current medication(s).

INDCTS	DXID	PRED_CODE
00929	00001205	1

i DXIDs with a PRED_CODE of 3 represent conditions that may exist based on current medication, but they have less predictive value than PRED_CODE 1 or 2. You may take this into account when your application displays end-user messages.

- For each DXID retrieved in the previous step, query the **FML Disease Identifier (DxID) Search Table** (RFMLDSR0_RXID_SEARCH) and retrieve the Related DxID (**RELATED_RXID**) and FML Navigation Code (**FML_NAV_CODE**) values. Use the DXID from the previous step as the Search DxID (**SEARCH_RXID**). Retrieve only those RELATED_RXID values which have an FML Clinical Module Code (**FML_CLIN_CODE**) value of **03** (Drug-Disease Contraindications Module).

SEARCH_RXID	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
00001205	00001205	03	01
00001205	00001211	03	03

i The FML Navigation Code describes the relationship between the two RxID values. You will use it later in this process when you compile information and construct the DDCM alert message.

Not every DxID appears as a SEARCH_DXID.

- Follow the steps detailed in the [Retrieving a List of Drug Contraindications](#) application earlier in this chapter to find DDCM information about the new medication being prescribed. The results of this process when carried out for Adderall are summarized below.

DDXCN	DDXCN_SL	DXID	DXID_DESC100
50023	1	00000580	Hyperthyroidism
50023	2	00000962	Psychotic Disorder
50023	2	00001001	Drug Dependence
50023	1	00001005	Drug Abuse
50023	2	00001012	Gilles De La Tourette Syndrome
50023	1	00001018	Feeling Agitated
50023	1	00001211	Glaucoma
50023	3	00001432	Hypertension
50023	1	00001594	Disease of Cardiovascular System
50023	1	00001641	Severe Arteriosclerotic Vascular Disease
50023	2	00003145	Anorexia
50023	1	00003452	Lactating Mother
50023	1	00004739	Moderate Hypertension
50023	1	00013488	Structural Disorder of Heart

- Construct a list of the *matching* DXID values between the set of RELATED_DXID values found in step 3 (signifying proxy indications inferred from the patient's active medications, in this case Timoptic), and the set of DXID values found in step 4 (signifying DDCM contraindications for Adderall). Also take note of the SEARCH_DXID and related FML_NAV_CODE values (found in step 3), and the related DDXCN_SL values (found in step 4). The compiled list below (in this case a single DxID) summarizes the DxID matches for this example.

Search DXID (from step 3)	Matching DXID (from step 3 and step 4)	Navigation Code (from step 3)	Severity Level (from step 4)
00001205	00001211	03	1

- Retrieve the FML 100-character Description ([DXID_DESC100](#)) for each SEARCH_DXID and DXID in the

previous step using the [FML Disease Identifier \(DxID\) Table \(RFMLDX0_DXID\)](#).

DXID	DXID_DESC100
00001205	Open Angle Glaucoma
00001211	Glaucoma

7. Retrieve the Generic Name - Long Version ([GNN60](#)) for both Adderall and Timoptic using their Ingredient List Identifiers ([HICL_SEQNO](#)) and the [Ingredient List Identifier Description Table \(RHICLSQ1_HICLSEQNO_MSTR\)](#).

GCN_SEQNO	HICL_SEQNO	GNN60
007855	002105	TIMOLOL MALEATE
050428	013449	AMPHETAMINE ASPARTATE/AMPHETAMINE SULFATE/DEXTROAMPHETAMINE

If you have access to a description that is more specific than the GNN60 (for example a DIN-level description such as the Label Name), you may certainly use it instead of the GNN60.

8. Construct each of the following messages that applies to the results of step 6 using the information found above. When the FML_NAV_CODE does not equal 01, you must display two DxID descriptions. The Inferred DXID_DESC100 denotes an inferred indication, and the Matched Related DXID_DESC100 denotes an indication related to prescribed therapy.

- **If FML_NAV_CODE = 01 and**
 - DDXCN_SL = 1 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. The drug [*Prescribed Medication GNN60*] is contraindicated in patients with [*Inferred DXID_DESC100*].”
 - DDXCN_SL = 2 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. Patients with [*Inferred DXID_DESC100*] should be carefully evaluated before initiating therapy and monitored closely while taking [*Prescribed GNN60*].”
 - DDXCN_SL = 3 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. Patients with [*Inferred DXID_DESC100*] should be carefully monitored during therapy with [*Prescribed GNN60*].”
- **If FML_NAV_CODE = 02 or FML_NAV_CODE = 03 and**
 - DDXCN_SL = 1 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. This condition is similar to [*Matched Related DXID_DESC100*] which is a contraindication for the

use of [*Prescribed GNN60*].”

- DDXCN_SL = 2 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. This condition is similar to [*Matched Related DXID_DESC100*] which should be carefully evaluated before initiating therapy, and patients should be monitored closely while taking [*Prescribed GNN60*].”
- DDXCN_SL = 3 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. This condition is similar to [*Matched Related DXID_DESC100*], and patients should be carefully monitored during therapy with [*Prescribed GNN60*].”

 The sample message templates above are suggestions based on interpretations of the DDXCN_SL descriptions. Customers can modify these warnings as they see fit.

9. Display the results to the end-user.

Your patient has an inferred diagnosis of *Open Angle Glaucoma* based on your patient's current use of **TIMOLOL MALEATE**. This condition is similar to *Glaucoma* which is a contraindication for the use of **AMPHETAMINE ASPARTATE/AMPHETAMINE SULFATE/DEXTROAMPHETAMINE**.

DDCM ERD and Technical Specifications

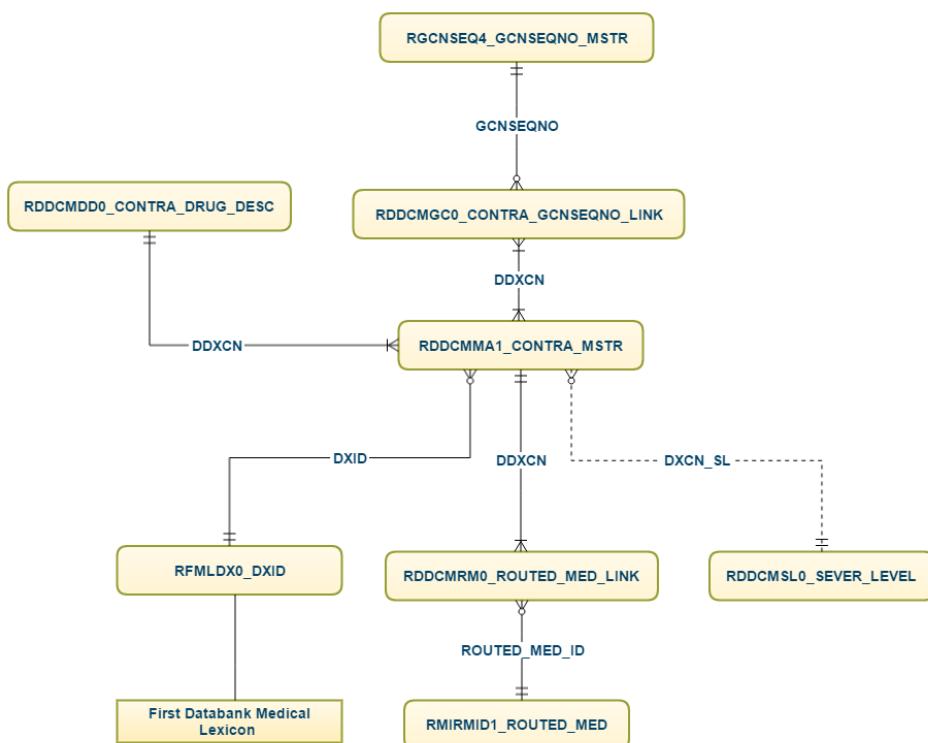
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Drug-Disease Contraindications Module Tables
- Drug-Disease Contraindications Module ERD

Drug-Disease Contraindications Module Tables

- DDCM Drug Description Table
- DDCM GCN_SEQNO/Drug-Disease Code Relation Table
- DDCM Master Table
- DDCM Routed Medication Table
- DDCM Severity Level Table

Drug-Disease Contraindications Module ERD



DDCM Drug Description Table

Table Name	RDDCMDD0_CONTRA_DRUG_DESC
Revision Activity	add. 03-14-2002
Purpose	Relates the Drug-Disease Contraindications Code to the text description of the drug associated with it.

Key	Column Name	Column Description	Format	Length	Picture
p	DDXCN	DDCM Drug-Disease Contraindications Code	N	5	9(5)
	DDXCN_DRUG_DESC	DDCM Drug-Disease Contraindications Drug Description	AN	100	X(100)

DDCM GCN_SEQNO - Drug-Disease Code Relation Table

Table Name	RDDCMGC0_CONTRA_GCNSEQNO_LINK
Revision Activity	original
Purpose	Links a drug to its contraindicated disease state.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	DDXCN	DDCM Drug-Disease Contraindications Code	N	5	9(5)

DDCM Master Table

Table Name	RDDCMMA1_CONTRA_MSTR
Revision Activity	rev. 10-30-2014
Purpose	Associates a drug or class of drugs to a contraindicated disease state and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	DDXCN	DDCM Drug-Disease Contraindications Code	N	5	9(5)
P	DDXCN_SN	DDCM Sequence Number	N	2	9(2)
F	FDBDX	First Databank Disease Code	AN	9	X(9)
F	DDXCN_SL_DESC	DDCM Severity Level	AN	1	X(1)
	DDXCN_REF	DDCM Reference	AN	26	X(26)
F	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)

DDCM Routed Medication Table

Table Name	RDDCMRM0_ROUTEDED_MED_LINK
Revision Activity	add. 07-01-2002
Purpose	Links a routed medication to a list of contraindications.

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	DDXCN	DDCM Drug-Disease Contraindications Code	N	5	9(5)

DDCM Severity Level Table

Table Name	RDDCML0_SEVER_LEVEL
Revision Activity	add. 10-30-2014
Purpose	Relates the Drug-Disease Contraindications severity level numerical code to the text description of the level.

Key	Column Name	Column Description	Format	Length	Picture
P	DDXCN_SL	DDCM Severity Level	AN	1	X(1)
	DDXCN_SL_DESC	DDCM Severity Level Description	AN	255	X(255)

Drug-Lab Interference Module (DLIM) 2.0

- Drug-Lab Interference Module Editorial Policies
- Applications
- ERD and Technical Specifications

Drug-Lab Interference Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the Drug-Lab Interference Module (DLIM) module are provided in the following sections:

- Overview
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

DLIM Overview

The Drug-Lab Interference Module (DLIM) is used by hospitals, hospital pharmacies, physicians and other healthcare professionals, and clinical laboratories to identify drugs that may falsely alter laboratory test results. DLIM provides the following types of information:

- the drug group description associated with the interference that can cause the potential false test result
- the specific laboratory test that may have the false result (described in terms of the analyte, specimen, and laboratory test method)
- monographs providing discussion text, statements on potential impact on clinical care, and related reference citations for a given drug-lab
- strength of the literature-based evidence supporting analytic drug-lab interferences

A drug can falsely alter a laboratory test result by causing an analytic interference in a laboratory test. For example, cefoxitin is an antibiotic used to treat various systemic infections. Patients with these serious infections often have their kidney function monitored by a serum creatinine test. Depending on the serum creatinine test method employed, cefoxitin has been shown to falsely increase serum creatinine test results. In this way, the results of the laboratory test for serum creatinine are falsely altered by the presence of the drug cefoxitin.

The use of DLIM, both as a screening tool and reference, may be part of systems solutions that reduce medical errors caused by inappropriate treatment or follow-up tests based on erroneous laboratory test results. In addition, the use of DLIM may help reduce wasted laboratory testing and healthcare resources and may save time for everyone involved. As a result, patient comfort is increased because there is no need for multiple specimen collection.

DLIM Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

This section includes the following topics:

- Inclusion—Analyte Scope
- Inclusion—Laboratory Test Method
- Inclusion—Drug Scope
- Inclusion—Warnings Content Scope
- Exclusion—Analyte
- Exclusion—Test Method
- Exclusion—Drug Scope
- Exclusion—Warnings Content Scope

Inclusion—Analyte Scope

- Centers for Medicare & Medicaid Services (CMS) and Clinical Laboratory Improvement Amendments (CLIA) regulated routine chemistry and endocrinology analytes (See the *CMS-CLIA Routine Chemistry and Endocrinology Analyte List* below.)
- Analytes that are drug substances, which require routine therapeutic drug monitoring (TDM)
- Analytes associated with warnings in sporadic Food and Drug Administration (FDA) MedWatch or Health Canada MedEffects Alerts

CMS-CLIA Routine Chemistry and Endocrinology Analyte List

Alanine Aminotransferase
Albumin
Alkaline Phosphatase
Amylase
Aspartate Aminotransferase
Bilirubin, total
Calcium, total
Chloride
Cholesterol, total
Cholesterol, HDL
Creatine Kinase, total
Creatine Kinase, isoenzyme

Creatinine
Glucose
Iron, total
Lactate Dehydrogenase (LDH), total
LDH Isoenzymes (LDH1/LDH2)
Magnesium
Potassium
Sodium
Total Protein
Triglycerides
Urea Nitrogen
Uric Acid
Cortisol
Free Thyroxine
Human Chorionic Gonadotropin
T3 Uptake
Triiodothyronine

Inclusion—Laboratory Test Method

Methods used by greater than 2% of the laboratory institutions participating in the College of American Pathologists (CAP) Survey Program. Threshold of 2% deemed sufficient to evaluate method.

Inclusion—Drug Scope

- U.S. FDA-approved Rx product *ingredients* with New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologic License Application (BLA)
- U.S. Over-the-counter (OTC) products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbals listed on the FDB-approved [Herbal Products Inclusion List](#), which contains National Center for Complementary and Integrative Health (NCCIH) herbs

Inclusion—Warnings Content Scope

Drug-lab interferences can occur when a drug falsely alters a laboratory test result causing an erroneous interference in a laboratory test. For example, cefoxitin is an antibiotic used to treat various systemic infections.

Patients with serious infections often have their kidney function monitored by a serum creatinine test. Depending on the serum creatinine test method employed, cefoxitin has been shown to falsely increase serum creatinine test results.

DLIM only includes published drug-lab interference information that pertains to drug concentrations up to three times the maximum expected therapeutic drug concentration in accordance with the Clinical and Laboratory Standards Institute (CLSI) standard.

Exclusion—Analyte

Analytes primarily used in toxicology screening.

Exclusion—Test Method

Point-of-care testing, as proprietary test method details are unavailable and interferences rare; these are considered “waived” tests by CMS.

-  Select point-of-care tests may be included in DLIM if a significant and relevant drug/lab warning is identified—for example, serum glucose.

Exclusion—Drug Scope

-  Items from below may be included in DLIM if a trigger is received (see the [Maintenance](#) section).

- Non-U.S. products that contain ingredients exclusive to other countries
- Self-proclaimed Rx products without ANDA/NDA/BLA
- Rx drug products with FDA device registration approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation, or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products except those enumerated in the First Databank NDC Attributes inclusion list
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers
- Cosmetics
- Veterinary drugs
- Inactive ingredients

Exclusion—Warnings Content Scope

- Physiologic effects that manifest as altered lab results are not included. For example, toxicity or adverse effects or "Statin" drugs can elevate liver enzymes).

- DLIM excludes interferences that occur solely in the toxic range.
- DLIM content not adequately described or referenced even when part of trigger content—for example, the manufacturer package insert.

DLIM Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

This section includes the following data elements:

- DLIM Drug Group Identifier
- DLIM Drug Group Description
- Medical Test Lexicon Specific Lab ID
- DLIM Documentation Level Code and Description
- DLIM Monograph Identifier and Title

DLIM Drug Group Identifier

The DLIM Drug Group Identifier is a system-assigned number for each drug group. Groups are many times created at the ingredient level. DLIM Drug Group Identifiers are linked to the following First Databank drug identifiers:

- MED Routed Medication ID
- Routed Generic Identifier
- Clinical Formulation ID

Example 1 below shows clinical formulations with the same ingredient (such as, spironolactone) are linked to the same DLIM Drug Group Identifier.

Example 1

DLIM Drug Group Identifier	DLIM Drug Group Description	Clinical Formulation ID
48	Spironolactone	6813
48	Spironolactone	6814
48	Spironolactone	6815
48	Spironolactone	6816
48	Spironolactone	6817
48	Spironolactone	6818

Example 2 below shows multi-ingredient clinical formulation (such as, Acid/Zinc Gluconate) with two DLIM Drug Group Identifiers..

Example 2

Clinical Formulation ID	DLIM Drug Group Identifier	DLIM Drug Group Description
22036	2060	Ascorbic Acid/Vitamin C (oral ONLY)
22036	284	Zinc

DLIM Drug Group Description

The DLIM Drug Group Description created is usually ingredient based, but it can also include qualifiers such as strength, route, or dose form to more specifically describe the drug associated with the interference.

Example 1

DLIM_DRUG_GRP_ID	DLIM_DRUG_GRP_ID_DESC
48	Spironolactone

Example 2—Qualified Break-out

DLIM_DRUG_GRP_ID	DLIM_DRUG_GRP_ID_DESC
2060	Ascorbic Acid/Vitamin c (oral ONLY)
2102	Maltose (High Dose, IV)

Medical Test Lexicon Specific Lab ID

The MTL Specific Laboratory Test Identifier (or SLID) is a system-assigned First Databank unique code.

MTL Specific Laboratory Test Identifier Description

The SLID is assigned to each unique combination of specimen type, analyte, and specific lab method.

Example

MTL Specific Laboratory Test Identifier	MTL Specific Laboratory Test Identifier Description
449	Serum Digoxin, Fluorescence Polarization Immunoassay

Interference Type Code and Description

There are seven DLIM Interference Type Codes that can be assigned to a given DLIM Drug Group Identifier. A DLIM Drug Group Identifier can have more than one DLIM Interference Type Code.

DLIM Interference Type Code	DLIM Interference Type Code Description
01	Falsely Increases
02	Falsely Decreases
03	Causes False Positive
04	Causes False Negative
05	Falsely Increases or Falsely Decreases
06	Causes False Negative or False Positive
99	Not Applicable

"Not Applicable" is not utilized at this time.

DLIM Documentation Level Code and Description

There are four documentation levels that may be assigned to a DLIM Drug Group ID. See Rules for Documentation Level in the [Rule Sets](#) section for more information.

DLIM Documentation Level Code	DLIM Documentation Level Code Description
01	Established
02	Probable
03	Possible
99	Not Applicable

"Not Applicable" is not utilized at this time.

DLIM Monograph Identifier and Title

The DLIM Monograph Identifier is a system-assigned number. The DLIM Monograph Title is programmatically generated and includes the DLIM Drug Group Identifier name and the MTL Specific Laboratory Test Identifier Description value.

Example

DLIM Monograph Identifier	DLIM Monograph Title
109	Dopamine - Serum Total Bilirubin, Jendrassik-Grof

Monograph Text Sections

DLIM Text includes the DLIM Text Type Code and DLIM Text Type Code Description for the sections listed below.

Brief Overview

The Brief Overview section is programmatically generated and includes four elements: drug grouper name, interference type, SLID and evidence level. For example: "Spironolactone Falsey Increases Serum Digoxin, Fluorescence Polarization Immunoassay. Evidence: Probable."

DLIM Text Type Code	DLIM Text Type Code Description
01	Brief Overview

Discussion

The Discussion section provides a summary of the evidence evaluated for a given interference.

DLIM Text Type Code	DLIM Text Type Code Description
10	Discussion

Potential Significant Impact on Patient Care

The Potential Significant Impact on Patient Care section contains potential patient outcomes resulting from the interference, for example, clinical or economical outcomes.

DLIM Text Type Code	DLIM Text Type Code Description
20	Potential Significant Impact on Patient Care

References

The References section contains the following types of referential information:

DLIM_TXT_TYP_CODE	DLIM_TXT_TYP_CODE_DESC
91	References (Manufacturer's Information)
92	References (Human Study)
94	References (Meeting Abstract)
95	References (In vitro/Animal Study)
96	References (Review Article)
97	References (AHFS)
99	References (Unclassified)

Primary medical literature references are formatted according to PubMed standards and include the associated PubMed ID link.

The Reference (Review Article) may contain the following referential sources:

- Summary statements from FDA MedWatch sporadic alerts
- Summary statements from Health Canada MedEffect
- Laboratory Test Guidelines

An example of DLIM monograph 808 is shown below:

Example—Monograph ID 808 with Text Sections

DLIM_MONOGRAPH_ID	DLIM_MONOGRAPH_TITLE	DLIM_TEXT_TYP_CODE	DLIM_TXT_TYP_CODE_DESC	DLIM_TEXT
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	01	Brief Overview	Spironolactone Falsely Increases Serum Digoxin, Fluorescence Polarization Immunoassay. Evidence: Probable

808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	10	Discussion	Because of structural similarity, spironolactone and its active metabolite canrenone may cross-react with and falsely increase serum digoxin levels. Total daily spironolactone doses of >100mg increase susceptibility to this interference. Spironolactone also interferes with the microparticle enzyme immunoassay (MEIA) for digoxin. Alternative test methods include a Heterogeneous Competitive Enzyme Immunoassay, Particle Enhanced Turbidimetric Immunoassay, or Chemiluminescence Assay.
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	20	Potential Significant Impact on Patient Care	Many patients receive both spironolactone and digoxin for chronic heart failure. Spironolactone and its metabolite canrenone may falsely increase serum digoxin levels. This laboratory interference may lead to inappropriate underdosing of digoxin.
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	91	References (Manufacturer's Information)	Beckman Coulter, "Synchron Systems Chemistry Information Sheet - Digoxin", November 2004.
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	91	References (Manufacturer's Information)	Ortho-Clinical Diagnostics, "Instructions for use - Vitros Chemistry Products Digoxin Slides", 2004.

808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	95	References (In vitro/Animal Study)	Dasgupta A, Saffer H, Wells A, Datta P. Bidirectional (positive/negative) interference of spironolactone, canrenone, and potassium canrenoate on serum digoxin measurement: elimination of interference by measuring free digoxin or using a
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	95	References (In vitro/Animal Study)	chemiluminescent assay for digoxin. J Clin Lab Anal. 2002;16(4):172-7. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12112389&dopt=Abstract]
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	95	References (In vitro/Animal Study)	Datta P, Dasgupta A. A new turbidometric digoxin immunoassay on the ADVIA 1650 analyzer is free from interference by spironolactone, potassium canrenoate, and their common metabolite canrenone. Ther Drug Monit. 2003 Aug;25(4):478-82. [Pub Med URL:
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	95	References (In vitro/Animal Study)	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12883233&dopt=Abstract]

808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	95	References (In vitro/Animal Study)	Steimer W, Muller C, Eber B. Digoxin assays: frequent, substantial, and potentially dangerous interference by spironolactone, canrenone, and other steroids. Clin Chem. 2002 Mar;48(3):507-16. [Pub Med URL:
808	Spironolactone - Serum Digoxin, Fluorescence Polarization Immunoassay	95	References (In vitro/Animal Study)	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=11861441&dopt=Abstract

DLIM Rule Sets

This section provides rules that the clinical team uses in regards to creating the module's data, both general rules and rules specific to data elements.

Internal and external triggers are evaluated for applicability to DLIM warning content. (See the [Maintenance](#) section for more information.) Trigger content drug(s) are identified and DLIM precautions coding is applied to all applicable DLIM drug groups.

- [Rules of General Applicability](#)
- [Rules for DLIM Concept Linking](#)
- [Rules for Documentation Level](#)

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

- Drug knowledge is aggregated at the DLIM drug group level (see [DLIM Drug Group Identifier](#)) and then linked to Clinical Formulation IDs. Drug group linking to other drug identifiers (MED Routed Medication Identifiers and the Routed Generic Identifiers) in the First Databank knowledge base is programmatically performed. Linkage of DLIM information to drugs is not drug manufacturer specific.
- Non-U.S. drug clinical formulations may inherit U.S.-based DLIM clinical data.

Rules for DLIM Concept Linking

The interference specifications determine the linking to drug group(s), specific lab ID(s), type(s) of interference(s), and documentation level(s). The examples below illustrate link relationships in DLIM.

Example 1 below shows one DLIM Drug Group Identifier linked to two different SLIDs and two types of interferences.

Example 1—DLIM Drug Group Identifier to MTL Specific Laboratory Test Identifier

DLIM Drug Group Identifier	DLIM Drug Group Description	MTL Specific Laboratory Test Identifier Description	DLIM Interference Type Code	DLIM Interference Type Code Description
48	Spironolactone	Serum Digoxin, Fluorescence Polarization Immunoassay	01	False Increases
48	Spironolactone	Serum Digoxin, Microparticle Enzyme Immunoassay (MEIA)	02	False Decreases

Example 2 below shows one SLID linked to two DLIM Drug Group Identifiers.

Example 2—MTL Specific Laboratory Test Identifier to DLIM Drug Group Identifier

MTL Specific Laboratory Test Identifier	MTL Specific Laboratory Test Identifier Description	DLIM Drug Group Identifier	DLIM Drug Group Description	DLIM Interference Type Code Description	DLIM Documentation Level Code Description
978	Serum Tobramycin, Enzyme-Multiplied Immunoassay Technique (EMIT)	2026	Piperacillin (Parenteral)	Falsely Decreases	Established
978	Serum Tobramycin, Enzyme-Multiplied Immunoassay Technique (EMIT)	2094	Mezlocillin (Parenteral)	Falsely Decreases	Probable

Rules for Documentation Level

This section provides the evidence schema used to define documentation levels.

- Documentation Level 1 (Established) may be assigned based on evaluation of:
 - Drug manufacturer labeling, only if adequate description of interference.
 - Laboratory Test Manufacturer labeling with in vivo interference data.
 - Trigger Warning Content (for example, FDA MedWatch and Health Canada MedEffect).
 - More than 1 human study with the analyte and test method described.
- Documentation Level 2 (Probable) may be assigned based on evaluation of Human case reports and/or in vitro studies, but a causal relationship has not been reconfirmed in humans.
- Documentation Level 3 (Possible) may be assigned for referenced in:
 - Human case reports and/or in vitro studies but a causal relationship has not been reconfirmed in humans.
 - The quality of the data do not support the predictability of the interference occurring.

DLIM Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The First Databank Knowledge Base Services Department utilizes a robust methodology for capture, documentation, triage and tracking of the most important sources for drug knowledge changes. The external triggers that are triaged to the clinical editors for review are the following:

- MedEffects Alerts from Health-Canada (except Non-U.S. product alerts exclusive to Canada)
- FDA MedWatch Medical Product Safety Information Alerts
- FDA CDER NEW
- FDA CBER What's New
- FDA MedWatch Monthly Label Changes
- FDA Division of Drug Information (DDI)
- FDA Hematology/Oncology (Cancer) Approvals and Safety Notifications
- What's New at FDA in HIV/AIDS
- FDA Table of Pharmacogenomic Biomarkers in Drug Labels
- FDA Press Announcements

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review DLIM drug groups is a new Clinical Formulation Identifier added to MedKnowledge and its U.S. product labeling.

DLIM References

This section lists sources used by First DataBank to compile the information contained in the module.

First Databank utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. First Databank uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Clinical and Laboratory Standards Institute (CLSI). *Interference Testing in Clinical Chemistry; Approved Guidelines*.
- Kaplan LA, Pesce AJ, Kramierczak SC. *Clinical Chemistry Theory, Analysis, Correlation*.
- Centers for Medicare and Medicaid Services (CMS). *Clinical Laboratory Improvement Amendments (CLIA)*
- Laboratory Testing Method Manufacturer product information.
- Sonntag O, Scholer A. *Drug Interference in Clinical Chemistry: Recommendation for Drugs and Their Concentrations to be Used in Drug Interference Studies*.
- College of American Pathologists (CAP). *Surveys, 2004 C-B Chemistry*.
- College of American Pathologists (CAP). *Surveys, 2004 Z-B Therapeutic Monitoring*.
- Salway JG, ed. *Drug-Test Interactions Handbook*.
- Young D. *Effects of Drugs on Clinical Laboratory Test*.
- Primary Medical Literature.

DLIM Applications

This section provides information about the practical application of data contained in DLIM. The following sections are included:

[Determining the Clinical Review Status of a Drug](#)

[Screening a Drug for Possible Laboratory Test Interferences](#)

[Screening a Laboratory Test for Possible Drug Interferences](#)

[Displaying an Alternative Laboratory Test Method When an Interference Is Found](#)

[Displaying Drug-Lab Interference Monograph Information](#)

Determining the Clinical Review Status of a Drug

This application illustrates how to determine the clinical review status of a drug. DLIM indicates whether a drug has been reviewed by FDB clinical editors for possible participation in a drug-lab interference at the Clinical Formulation ID (GCN_SEQNO) level and Routed Medication Identifier (ROUTED_MED_ID) level. This application begins at the Clinical Formulation ID (GCN_SEQNO) level and assumes familiarity with the various drug concepts and their identifiers. See [Multiple Access Points™ \(MAPs™\)](#) for more information.

1. Select the DLIM Drug Identifier Type Code ([DLIM_DRUG_ID_TYP_CODE](#)) value from the [DLIM Drug Identifier Type Code Description Table](#) (RDLIMDR0_DRUG_ID_TYP_DESC) where the DLIM Drug Identifier Type Code Description ([DLIM_DRUG_ID_TYP_CODE](#)) column equals the DLIM_DRUG_ID_TYP_CODE_DESC of the drug product.
2. Select the DLIM Status Code ([DLIM_STATUS_CODE](#)) values from the [DLIM Clinically Reviewed Status Table](#) (RDLIMCR0_CLIN REVIEW STATUS) where the DLIM_DRUG_ID_TYP_CODE column equals the DLIM_DRUG_ID_TYPE_CODE value from the previous step, and the DLIM Drug Identifier ([DLIM_DRUG_ID](#)) column equals the identifier values of the drug product.
3. Select the DLIM Status Code Description ([DLIM_STATUS_CODE_DESC](#)) value from the [DLIM Status Code Description Table](#) (RDLIMSD0_STATUS_DESC) where the DLIM_STATUS_CODE column equals the DLIM_STATUS_CODE values from the previous step.

Example—Determining the Clinical Review Status of a Clinical Formulation ID (GCN_SEQNO)

A physician determines the clinical review status for ascorbic acid (Clinical Formulation ID [[GCN_SEQNO](#)] 00002143).

1. Select the DLIM Drug Identifier Type Code ([DLIM_DRUG_ID_TYP_CODE](#)) value from the [DLIM Drug Identifier Type Code Description Table](#) (RDLIMDR0_DRUG_ID_TYP_DESC) where the DLIM Drug Identifier Type Code Description ([DLIM_DRUG_ID_TYP_CODE](#)) column equals the DLIM_DRUG_ID_TYP_CODE_DESC of the drug product.

DLIM_DRUG_ID_TYP_CODE_DESC	DLIM_DRUG_ID_TYP_CODE
GCN_SEQNO	01
Routed Medication Identifier	02

In this example, ascorbic acid is represented by the Clinical Formulation ID ([GCN_SEQNO](#)). Therefore, the DLIM_DRUG_ID_TYP_CODE is identified as *01*.

2. Select the DLIM Status Code ([DLIM_STATUS_CODE](#)) values from the [DLIM Clinically Reviewed Status Table](#) (RDLIMCR0_CLIN REVIEW STATUS) where the DLIM_DRUG_ID_TYP_CODE column equals the DLIM_DRUG_ID_TYPE_CODE value from the previous step, and the DLIM Drug Identifier ([DLIM_DRUG_ID](#)) column equals the identifier values of the drug product.

DLIM_DRUG_ID	DLIM_DRUG_ID_TYP_CODE	DLIM_STATUS_CODE

00002143	01	01
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As indicated in the scenario above, the identifier value of 00002143 is used.

3. Select the DLIM Status Code Description (**DLIM_STATUS_CODE_DESC**) values from the **DLIM Status Code Description Table** (RDLIMSD0_STATUS_DESC) where the DLIM_STATUS_CODE column equals the DLIM_STATUS_CODE values from the previous step.

DLIM_STATUS_CODE	DLIM_STATUS_CODE_DESC
01	Reviewed; associated to one or more lab interference records

In this example, ascorbic acid has been reviewed by a FDB clinical editor, and is associated to one or more lab interference records.

Screening a Drug for Possible Laboratory Test Interferences

DLIM can be used to identify possible laboratory test results that may be erroneously affected by a given drug. This application shows how to query for those results and how to apply filters on the data if desired (for example, Documentation Level).

Part 1: Determine the clinical review status of the drug to see whether it is associated to a laboratory test interference.

1. Select the DLIM Drug Identifier Type Code ([DLIM_DRUG_ID_TYP_CODE](#)) value from the [DLIM Drug Identifier Type Code Description Table](#) ([RDLIMDR0_DRUG_ID_TYP_DESC](#)) where the DLIM Drug Identifier Type Code Description ([DLIM_DRUG_ID_TYP_CODE](#)) column equals the [DLIM_DRUG_ID_TYP_CODE_DESC](#) of the drug product.
2. Select the DLIM Status Code ([DLIM_STATUS_CODE](#)) values from the [DLIM Clinically Reviewed Status Table](#) ([RDLIMCR0_CLIN REVIEW STATUS](#)) where the [DLIM_DRUG_ID_TYP_CODE](#) column equals the [DLIM_DRUG_ID_TYP_CODE](#) value from the previous step, and the DLIM Drug Identifier ([DLIM_DRUG_ID](#)) column equals the identifier value of the drug product.
3. Select the DLIM Status Code Description ([DLIM_STATUS_CODE_DESC](#)) values from the [DLIM Status Code Description Table](#) ([RDLIMSD0_STATUS_DESC](#)) where the [DLIM_STATUS_CODE](#) column equals the [DLIM_STATUS_CODE](#) values from the previous step.

Part 2: Retrieve the Drug Group Identifier for the drug to be screened.

1. Select the DLIM Drug Group Identifier ([DLIM_DRUG_GRP_ID](#)) values from one of the following:
 - the [DLIM GCN_SEQNO to Drug Group Table](#) ([RDLIMGC1_GCNSEQNO_DRUG_GROUP](#)) where the Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug product.
 - the [DLIM Routed Medication Identifier to Drug Group Table](#) ([RDLIMRM0_ROUTED_MED_DRUG_GROUP](#)) where the MED Routed Medication ID ([ROUTED_MED_ID](#)) column equals the ROUTED_MED_ID value of the drug product.
2. Select the DLIM Drug Group Description ([DLIM_DRUG_GRP_ID_DESC](#)) values from the [DLIM Drug Group Identifier Table](#) ([RDLIMDI0_DRUG_GRP_ID](#)) where the [DLIM_DRUG_GRP_ID](#) column equals the [DLIM_DRUG_GRP_ID](#) values from the previous step.

Part 3: Retrieve all laboratory tests associated with the Drug Group Identifier.

1. Select the following column values from the [DLIM Laboratory Interference Master Table](#) ([RDLIMMA1_LAB_INTERFERENCE_MSTR](#)) where the [DLIM_DRUG_GRP_ID](#) column equals the [DLIM_DRUG_GRP_ID](#) values from Part 2.
 - DLIM Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#))
 - DLIM Interference Type Code ([DLIM_INTER_TYP_CODE](#))
 - DLIM Documentation Level Code ([DLIM_DOC_LEVEL_CODE](#))
2. Select the MTL Specific Laboratory Test Identifier Description ([MTL_SPEC_LAB_ID_DESC](#)) values from

the **MTL Specific Laboratory Test Identifier Table** (RMTLSLT0_SPECIFIC_LAB_ID) where the MTL_SPEC_LAB_ID column equals the MTL_SPEC_LAB_ID values from the previous step.

Part 4: Retrieve associated drug-lab interference information.

1. Select the DLIM Interference Type Code Description (**DLIM_INTER_TYP_CODE_DESC**) values from the **DLIM Interference Type Code Description Table** (RDLMID0_INTERFERENCE_TYP_DESC) where the DLIM_INTER_TYP_CODE column equals the DLIM_INTER_TYP_CODE values from Part 3.
2. Select the DLIM Documentation Level Code Description (**DLIM_DOC_LEVEL_CODE_DESC**) values from the **DLIM Documentation Level Code Description Table** (RDLMDD0_DOC_LEVEL_DESC) where the DLIM_DOC_LEVEL_CODE column equals the DLIM_DOC_LEVEL_CODE values from Part 3.

Part 5: Retrieve monograph information.

1. Select the DLIM Monograph Identifier (**DLIM_MONOGRAPH_ID**) values from the RDLMMA1_LAB_INTERFERENCE_MSTR table where the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID columns equal the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID values from Part 2 and Part 3.
2. Retrieve, construct, and display the monograph information. See the **DLIM Displaying Drug-Lab Interference Monograph Information** application for an illustration on how to construct and display DLIM monograph information.

Example—Screening a Drug for Possible Laboratory Test Interferences

A physician screens cefoxitin Inj (ROUTED_MED_ID of 00100513) for all possible laboratory test interferences.

Part 1: Determine the clinical review status of the drug to see whether it is associated to a laboratory test interference.

1. Select the DLIM Drug Identifier Type Code (**DLIM_DRUG_ID_TYP_CODE**) value from the **DLIM Drug Identifier Type Code Description Table** (RDLMIDR0_DRUG_ID_TYP_DESC) where the DLIM Drug Identifier Type Code Description (**DLIM_DRUG_ID_TYP_CODE**) column equals the **DLIM_DRUG_ID_TYP_CODE_DESC** of the drug product.

DLIM_DRUG_ID_TYP_CODE_DESC	DLIM_DRUG_ID_TYP_CODE
GCN_SEQNO	01
Routed Medication Identifier	02

In this example, cefoxitin Inj is represented by the Routed Medication Identifier (**ROUTED_MED_ID**). Therefore, the **DLIM_DRUG_ID_TYP_CODE** is identified as **02**.

2. Select the DLIM Status Code (**DLIM_STATUS_CODE**) values from the **DLIM Clinically Reviewed Status Table** (RDLMCR0_CLIN_REVIEW_STATUS) where the DLIM_DRUG_ID_TYP_CODE column equals the **DLIM_DRUG_ID_TYP_CODE** value from the previous step, and the DLIM Drug Identifier (**DLIM_DRUG_ID**) column equals the identifier value of the drug product.

DLIM_DRUG_ID	DLIM_DRUG_ID_TYP_CODE	DLIM_STATUS_CODE
00015944	01	01

As indicated in the scenario text above, the identifier value of 00100513 is used.

- Select the DLIM Status Code Description ([DLIM_STATUS_CODE_DESC](#)) values from the [DLIM Status Code Description Table](#) (RDLIMSD0_STATUS_DESC) where the DLIM_STATUS_CODE column equals the DLIM_STATUS_CODE values from the previous step.

DLIM_STATUS_CODE	DLIM_STATUS_CODE_DESC
01	Reviewed; associated to one or more lab interference records

In this example, cefoxitin Inj has been reviewed by a FDB clinical editor, and is associated to one or more lab interference records. To identify the associated laboratory tests, continue to Part 2.

Part 2: Retrieve the Drug Group Identifier for the drug to be screened.

- Select the DLIM Drug Group Identifier ([DLIM_DRUG_GRP_ID](#)) value from one of the following:
 - the [DLIM GCN_SEQNO to Drug Group Table](#) (RDLIMGC1_GCNSEQNO_DRUG_GROUP) where the Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug product.
 - the [DLIM Routed Medication Identifier to Drug Group Table](#) (RDLIMRM0_ROUTED_MED_DRUG_GROUP) where the Routed Generic Identifier ([ROUTED_GEN_ID](#)) column equals the ROUTED_GEN_ID value of the drug product.

In this example, cefoxitin Inj is represented by the Clinical Formulation ID ([GCN_SEQNO](#)). Therefore, the DLIM_DRUG_GRP_ID is selected from the [DLIM GCN_SEQNO to Drug Group Table](#) (RDLIMGC1_GCNSEQNO_DRUG_GROUP).

ROUTED_MED_ID	DLIM_DRUG_GRP_ID
00100513	02019

A Clinical Formulation ID ([GCN_SEQNO](#)) or [ROUTED_MED_ID](#) may be associated to more than one DLIM_DRUG_GRP_ID.

- Select the DLIM Drug Group Description ([DLIM_DRUG_GRP_ID_DESC](#)) values from the [DLIM Drug Group Identifier Table](#) (RDLIMDI0_DRUG_GRP_ID) where the DLIM_DRUG_GRP_ID column equals the DLIM_DRUG_GRP_ID values from the previous step.

DLIM_DRUG_GRP_ID	DLIM_DRUG_GRP_ID_DESC
02019	Cefoxitin

Part 3: Retrieve all laboratory tests associated with the Drug Group Identifier.

- Select the following column values from the **DLIM Laboratory Interference Master Table** (**RDLIMMA1_LAB_INTERFERENCE_MSTR**) where the **DLIM_DRUG_GRP_ID** column equals the **DLIM_DRUG_GRP_ID** values from Part 2.
 - DLIM Specific Laboratory Test Identifier (**MTL_SPEC_LAB_ID**)
 - DLIM Interference Type Code (**DLIM_INTER_TYP_CODE**)
 - DLIM Documentation Level Code (**DLIM_DOC_LEVEL_CODE**)

DLIM_DRUG_GRP_ID	MTL_SPEC_LAB_ID	DLIM_INTER_TYP_CODE	DLIM_DOC_LEVEL_CODE
02019	00000034	01	01
02019	00001075	01	02
02019	00001080	01	03



There may be more than one **MTL_SPEC_LAB_ID** associated to a **DLIM_DRUG_GRP_ID**.

- Select the MTL Specific Laboratory Test Identifier Description (**MTL_SPEC_LAB_ID_DESC**) values from the **MTL Specific Laboratory Test Identifier Table** (**RMTLSLT0_SPECIFIC_LAB_ID**) where the **MTL_SPEC_LAB_ID** column equals the **MTL_SPEC_LAB_ID** values from the previous step.

DLIM_DRUG_GRP_ID	MTL_SPEC_LAB_ID	MTL_SPEC_LAB_ID_DESC
02019	00000034	Serum Creatinine, Alkaline Picrate (Jaffe Reaction)
02019	00001075	Serum Tobramycin, Cloned Enzyme Donor Immunoassay (CEDIA)
02019	00001080	Serum Theophylline, Cloned Enzyme Donor Immunoassay (CEDIA)

Part 4: Retrieve associated drug-lab interference information.

- Select the DLIM Interference Type Code Description (**DLIM_INTER_TYP_CODE_DESC**) values from the **DLIM Interference Type Code Description Table** (**RDLIMID0_INTERFERENCE_TYP_DESC**) where the **DLIM_INTER_TYP_CODE** column equals the **DLIM_INTER_TYP_CODE** values from Part 3.

DLIM_INTER_TYP_CODE	DLIM_INTER_TYP_CODE_DESC
01	Falsely increases

2. Select the DLIM Documentation Level Code Description (DLIM_DOC_LEVEL_CODE_DESC) values from the [DLIM Documentation Level Code Description Table](#) (RDLIMDD0_DOC_LEVEL_DESC) where the DLIM_DOC_LEVEL_CODE column equals the DLIM_DOC_LEVEL_CODE values from Part 3.

DLIM_DOC_LEVEL_CODE	DLIM_DOC_LEVEL_CODE_DESC
01	Established
02	Probable
03	Possible



Data can be filtered by documentation level using the DLIM_DOC_LEVEL_CODE.

Part 5: Retrieve monograph information.

1. Select the DLIM Monograph Identifier (DLIM_MONOGRAPH_ID) values from the [DLIM Laboratory Interference Master Table](#) (RDLIMMA1_LAB_INTERFERENCE_MSTR) where the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID columns equal the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID values from Part 2 and Part 3.

DLIM_DRUG_GRP_ID	MTL_SPEC_LAB_ID	DLIM_MONOGRAPH_ID
02019	00000034	00001456
02019	00001075	00001665
02019	00001080	00001709

2. Retrieve, construct, and display the monograph information. See the [DLIM Displaying Drug-Lab Interference Monograph Information](#) application for an illustration on how to construct and display DLIM monograph information.

In summary, the drug cefoxitin Inj was found to have interferences with multiple laboratory tests.

Screening a Laboratory Test for Possible Drug Interferences

DLIM can be used to identify possible drugs that may erroneously affect laboratory test results.

Part 1: Retrieve the MTL Specific Laboratory Test Identifier for the laboratory test.

1. Select the MTL Laboratory Test Identifier ([LAB_ID](#)) value from the [MTL Laboratory Test Identifier Table](#) ([RMTLLAB0_LAB_ID](#)) where the MTL Laboratory Test Identifier Description ([MTL_LAB_ID_DESC](#)) column equals the laboratory test of interest, and the MTL Laboratory Test Identifier Status Code ([MTL_LAB_ID_STATUS](#)) column equals a value of 0 (Live).
2. Select the MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#)) and the MTL Specific Laboratory Test Identifier Description ([MTL_SPEC_LAB_ID_DESC](#)) values from the [MTL Specific Laboratory Test Identifier Table](#) ([RMTLSLT0_SPECIFIC_LAB_ID](#)) where the LAB_ID column equals the LAB_ID value from the previous step.

Part 2: Identify the drugs associated with the MTL Specific Laboratory Test Identifier.

1. Select the following column values from the [DLIM Laboratory Interference Master Table](#) ([RDLMIMA1_LAB_INTERFERENCE_MSTR](#)) where the MTL_SPEC_LAB_ID column equals the MTL_SPEC_LAB_ID values from Part 1.
 - DLIM Drug Group Identifier ([DLIM_DRUG_ID](#))
 - DLIM Interference Type Code ([DLIM_INTER_TYP_CODE](#))
 - DLIM Documentation Level Code ([DLIM_DOC_LEVEL_CODE](#))
2. Select the DLIM Drug Group Description ([DLIM_DRUG_GRP_ID_DESC](#)) values from the [DLIM Drug Group Identifier Table](#) ([RDLIMDI0_DRUG_GRP_ID](#)) where the DLIM_DRUG_GRP_ID column equals the DLIM_DRUG_GRP_ID values from the previous step.

Part 3: Retrieve associated drug-lab interference records.

1. Select the DLIM Interference Type Code Description ([DLIM_INTER_TYP_CODE_DESC](#)) values from the [DLIM Interference Type Code Description Table](#) ([RDLIMID0_INTERFERENCE_TYP_DESC](#)) where the DLIM_INTER_TYP_CODE column equals the DLIM_INTER_TYP_CODE values found in Part 2.
2. Select the DLIM Documentation Level Code Description ([DLIM_DOC_LEVEL_CODE_DESC](#)) values from the [DLIM Documentation Level Code Description Table](#) ([RDLIMDD0_DOC_LEVEL_DESC](#)) where the DLIM_DOC_LEVEL_CODE column equals the DLIM_DOC_LEVEL_CODE values found in Part 2.

Part 4: Retrieve monograph information.

1. Select the DLIM Monograph Identifier ([DLIM_MONOGRAPH_ID](#)) values from the [RDLIMMA1_LAB_INTERFERENCE_MSTR](#) table where the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID columns equal the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID values from Part 1 and Part 2.
2. Retrieve, construct, and display the monograph information. See the [Displaying Drug-Lab Interference Monograph Information](#) application for an illustration on how to construct and display DLIM monograph information.

Example—Screening a Laboratory Test for Possible Drug Interferences

A physician identifies possible drug interferences associated with a Serum Digoxin laboratory test. Show the interferences monograph in an abbreviated format that only includes the "Brief Overview" and "Potential Significant Impact on Patient Care" statements.

Part 1: Retrieve the MTL Specific Laboratory Test Identifier for the laboratory test.

1. Select the MTL Laboratory Test Identifier (LAB_ID, page 1780) value from the **MTL Laboratory Test Identifier Table** (RMTLLAB0_LAB_ID) where the MTL Laboratory Test Identifier Description (**MTL_LAB_ID_DESC**) column equals the laboratory test of interest, and the MTL Laboratory Test Identifier Status Code (**MTL_LAB_ID_STATUS**) column equals a value of 0 (Live).

MTL_LAB_ID_DESC	MTL_LAB_ID_STATUS	LAB_ID
Serum Digoxin	0	00000117

2. Select the MTL Specific Laboratory Test Identifier (**MTL_SPEC_LAB_ID**) and the MTL Specific Laboratory Test Identifier Description (**MTL_SPEC_LAB_ID_DESC**) values from the **MTL Specific Laboratory Test Identifier Table** (RMTLSLT0_SPECIFIC_LAB_ID) where the LAB_ID column equals the LAB_ID value from the previous step.

The example below displays partial results.

LAB_ID	MTL_SPEC_LAB_ID	MTL_SPEC_LAB_ID_DESC
00000117	00000126	Serum Digoxin, Radioimmunoassay
00000117	00000448	Serum Digoxin, Enzyme-Multiplied Immunoassay Technique (EMIT)
00000117	00000449	Serum Digoxin, Fluorescence Polarization Immunoassay

Part 2: Identify the drugs associated with the MTL Specific Laboratory Test Identifier.

1. Select the following column values from the **DLIM Laboratory Interference Master Table** (RDLMIMA1_LAB_INTERFERENCE_MSTR) where the MTL_SPEC_LAB_ID column equals the MTL_SPEC_LAB_ID values from Part 1.
 - DLIM Drug Group Identifier (**DLIM_DRUG_ID**)
 - DLIM Interference Type Code (**DLIM_INTER_TYP_CODE**)
 - DLIM Documentation Level Code (**DLIM_DOC_LEVEL_CODE**)

The example below displays partial results.

MTL_SPEC_LAB_ID	DLIM_DRUG_GRP_ID	DLIM_INTER_TYP_COD ED	DLIM_DOC_LEVEL_CO DE

00000449	00048	01	02
00000449	00348	01	02
00000449	02021	01	02
00000449	02024	01	02

2. Select the DLIM Drug Group ID Description ([DLIM_DRUG_GRP_ID_DESC](#)) values from the [DLIM Drug Group Identifier Table](#) (RDLIMIDI0_DRUG_GRP_ID) where the DLIM_DRUG_GRP_ID column equals the DLIM_DRUG_GRP_ID values from the previous step.

MTL_SPEC_LAB_ID	DLIM_DRUG_GRP_ID	DLIM_DRUG_GRP_ID_DESC
00000449	00048	Spironolactone
00000449	00348	Digoxin Immune Fab
00000449	02021	Siberian Ginseng
00000449	02024	Asian Ginseng

An MTL_SPEC_LAB_ID may be associated to more than one DLIM_DRUG_GRP_ID.

Part 3: Retrieve associated drug-lab interference records.

1. Select the DLIM Interference Type Code Description ([DLIM_INTER_TYP_CODE_DESC](#)) values from the [DLIM Interference Type Code Description Table](#) (RDLIMID0_INTERFERENCE_TYP_DESC) where the DLIM_INTER_TYP_CODE column equals the DLIM_INTER_TYP_CODE values found in Part 2.

DLIM_INTER_TYP_CODE	DLIM_INTER_TYP_CODE_DESC
01	Falsely Increases

2. Select the DLIM Documentation Level Code Description ([DLIM_DOC_LEVEL_CODE_DESC](#)) values from the [DLIM Documentation Level Code Description Table](#) (RDLIMDD0_DOC_LEVEL_DESC) where the DLIM_DOC_LEVEL_CODE column equals the DLIM_DOC_LEVEL_CODE values found in Part 2.

DLIM_DOC_LEVEL_CODE	DLIM_DOC_LEVEL_CODE_DESC
01	Established
02	Probable

Part 4: Retrieve monograph information.

1. Select the DLIM Monograph Identifier ([DLIM_MONOGRAPH_ID](#)) values from the [DLIM Laboratory Interference Master Table](#) (RDLIMMA1_LAB_INTERFERENCE_MSTR) where the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID columns equal the DLIM_DRUG_GRP_ID and the MTL_SPEC_LAB_ID values from Part 1 and Part 2.

MTL_SPEC_LAB_ID	DLIM_DRUG_GRP_ID	DLIM_MONOGRAPH_ID
00000449	00048	00000808
00000449	00348	00001611
00000449	02021	00001458
00000449	02024	00001466

2. Retrieve, construct, and display the monograph information. See the [DLIM Displaying Drug-Lab Interference Monograph Information](#) application for an illustration on how to construct and display DLIM monograph information.

In this example, the interferences monograph is shown in an abbreviated format that only includes the "Brief Overview" and "Potential Significant Impact on Patient Care" statements. See the "Displaying Monograph Sections" example in [Displaying Drug-Lab Interference Monograph Information](#) for an illustration of displaying specific monograph statements.

In summary, a Serum Digoxin lab test performed using the Fluorescence Polarization Immunoassay method has been reviewed by a FDB clinical editor and was found to have interferences with multiple drugs.

Displaying an Alternative Laboratory Test Method When an Interference Is Found

This application illustrates how to display an alternative laboratory test method when an interference is found. However MTL may not include every known method for a given laboratory test.

1. Select the MTL Laboratory Test Identifier ([LAB_ID](#)) value from the [MTL Specific Laboratory Test Identifier Table](#) (RMTSLT0_SPECIFIC_LAB_ID) where the MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#)) column equals the MTL_SPEC_LAB_ID value of the laboratory test.
 2. Select the following column values from the RMTSLT0_SPECIFIC_LAB_ID table where the LAB_ID column equals the LAB_ID value from the previous step.
 - MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#))
 - MTL Methodology Identifier ([MTL_METHOD_ID](#))
 - MTL Specific Laboratory Test Identifier Status Code ([MTL_SPEC_LAB_ID_STATUS](#))
 3. Select the following column values from the [DLIM Laboratory Interference Master Table](#) (RDLMIMA1_LAB_INTERFERENCE_MSTR) where the DLIM_DRUG_GRP_ID column equals the DLIM_DRUG_GRP_ID values of the drug.
 - MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#))
 - DLIM Interference Type Code ([DLIM_INTER_TYP_CODE](#))
 - DLIM Documentation Level Code ([DLIM_DOC_LEVEL_CODE](#))
 - DLIM Monograph Identifier ([DLIM_MONOGRAPH_ID](#))
- This step identifies other laboratory test methods that are a problem with a given drug or a set of drugs. These have to be removed from the final "alternate test" list.
4. Filter the results from step 2 by removing any records associated to the MTL_SPEC_LAB_ID values retrieved in step 3.
 5. Select the MTL Methodology Identifier Description ([MTL_METHOD_ID_DESC](#)) values from the [MTL Methodology Identifier Table](#) (RMTLMID0 METHODOLOGY_ID) where the MTL_METHOD_ID column equals the MTL_METHOD_ID values from step 4.
 6. Display the information to the end-user using the descriptions retrieved in the steps above.

Example—Displaying an Alternative Laboratory Test Method When an Interference Is Found

A physician identifies that trimethoprim ([DLIM_DRUG_GRP_ID](#) 00468) falsely increases serum methotrexate levels when the Competitive Binding Protein Assay (CBPA Method) ([MTL_METHOD_ID](#) 00049) is used ([MTL_SPEC_LAB_ID](#) 00000152) and needs to locate an alternative laboratory test method.

1. Select the MTL Laboratory Test Identifier ([LAB_ID](#)) value from the [MTL Specific Laboratory Test Identifier Table](#) (RMTSLT0_SPECIFIC_LAB_ID) where the MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#)) column equals the MTL_SPEC_LAB_ID value of the laboratory test.

MTL_SPEC_LAB_ID	LAB_ID
---------------------------------	------------------------

00000152	00000142
----------	----------

2. Select the following column values from the RMTLSLT0_SPECIFIC_LAB_ID table where the LAB_ID column equals the LAB_ID value from the previous step.

- MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#))
- MTL Specific Laboratory Test Identifier Status Code Description ([MTL_SPEC_LAB_ID_DESC](#))
- MTL Methodology Identifier ([MTL_METHOD_ID](#))

LAB_ID	MTL_SPEC_LAB_ID	MTL_SPEC_LAB_ID_DESC	MTL_METHOD_ID
00000142	00000152	Serum Methotrexate, Competitive Binding Protein Assay (CBPA Method)	00049
00000142	00000356	Serum Methotrexate, High Performance Liquid Chromatography	00027
00000142	00000357	Serum Methotrexate, Radioimmunoassay	00016
00000142	00000973	Serum Methotrexate, Fluorescence Polarization Immunoassay	00118
00000142	00000974	Serum Methotrexate, Enzyme-Multiplied Immunoassay Technique	00031
00000142	00000975	Serum Methotrexate, Enzyme Inhibition	00164
00000142	00000976	Serum Methotrexate, Homogeneous Enzyme Immunoassay	00317

Should the list be filtered by status using the MTL Specific Laboratory Test Identifier Status Code ([MTL_SPEC_LAB_ID_STATUS](#))? Would a physician want to see both active and retired tests? Within this example, if the retired tests are removed then [MTL_SPEC_LAB_ID](#) 152 is removed here and not in step 4 below.

3. Select the following column values from the [DLIM Laboratory Interference Master Table](#) (RDLMMA1_LAB_INTERFERENCE_MSTR) where the DLIM_DRUG_GRP_ID column equals the DLIM_DRUG_GRP_ID values of the drug.

- MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#))
- DLIM Interference Type Code ([DLIM_INTER_TYP_CODE](#))
- DLIM Documentation Level Code ([DLIM_DOC_LEVEL_CODE](#))
- DLIM Monograph Identifier ([DLIM_MONOGRAPH_ID](#))

DLIM_DRUG_GRP_ID	MTL_SPEC_LAB_ID	DLIM_INTER_TYP_CODE	DLIM_DOC_LEVEL_CODE	DLIM_MONOGRAP_H_ID
00468	00000034	03	03	00000342
00468	00000152	01	01	00000343
00468	00000933	02	03	00001716

As indicated in the scenario above, DLIM_DRUG_GRP_ID value of 00468 is used. This step identifies other serum methotrexate assay methods that are a problem with trimethoprim and that have to removed from the final “alternate test” list.

- Filter the results from step 2 by removing any records associated to the MTL_SPEC_LAB_ID values retrieved in step 3.

The table below shows all of the results from step 2.

MTL_SPEC_LAB_ID	LAB_ID	MTL_SPEC_LAB_ID_DESC	MTL_METHOD_ID
00000152	00000142	Serum Methotrexate, Competitive Binding Protein Assay (CBPA Method)	00049
00000356	00000142	Serum Methotrexate, High Performance Liquid Chromatography	00027
00000357	00000142	Serum Methotrexate, Radioimmunoassay	00016
00000973	00000142	Serum Methotrexate, Fluorescence Polarization Immunoassay	00118
00000974	00000142	Serum Methotrexate, Enzyme-Multiplied Immunoassay Technique	00031
00000975	00000142	Serum Methotrexate, Enzyme Inhibition	00164
00000976	00000142	Serum Methotrexate, Homogeneous Enzyme Immunoassay	00317

In this example, the first record (highlighted above) would be filtered from the list because it is associated to the MTL_SPEC_LAB_ID value of 00000152 retrieved in step 2.

- Select the MTL Methodology Identifier Description (MTL_METHOD_ID_DESC) values from the [MTL Methodology Identifier Table](#) (RMTLMID0 METHODOLOGY_ID) where the MTL_METHOD_ID column equals the MTL_METHOD_ID values from the previous step.

MTL_SPEC_LAB_ID	MTL_METHOD_ID	MTL_METHOD_ID_DESC
00000356	00027	High Performance Liquid Chromatography
00000357	00016	Radioimmunoassay
00000973	00118	Fluorescence Polarization Immunoassay
00000974	00031	Enzyme-Multiplied Immunoassay Technique (EMIT)
00000975	00164	Enzyme Inhibition
00000976	00317	Homogeneous Enzyme Immunoassay

6. Display the information to the end-user using the descriptions retrieved in the steps above. For example:

False increases may occur with Serum Methotrexate, Competitive Binding Protein Assay (CBPA Method); however, the following methods for determining Serum Methotrexate are not found to have the same interference: High Performance Liquid Chromatography; Radioimmunoassay; Fluorescence Polarization Immunoassay; Enzyme-Multiplied Immunoassay Technique (EMIT); Enzyme Inhibition; Homogeneous Enzyme Immunoassay.

-  Laboratory test methodologies can be filtered from MTL and DLIM application results if a laboratory facility does not use them.

Monograph Information

This application illustrates how to construct and display DLIM monograph information for end-user drug-lab interference messages.

- Example—Displaying the Full DLIM Monograph Text
- Example—Displaying Monograph Sections

Part 1: Retrieve Monograph Title, Section Headers, and Text

1. Select the DLIM Monograph Title (**DLIM_MONOGRAPH_TITLE**) values from the **DLIM Monograph Identifier Table** (**RDLIMMI0_MONO_ID**) where the DLIM Monograph Identifier (**DLIM_MONOGRAPH_ID**) column equals the **DLIM_MONOGRAPH_ID** values of the drug-lab interference monograph.
2. Select the following column values from the **DLIM Monograph Table** (**RDLIMMO1_MONO**) where the **DLIM_MONOGRAPH_ID** column equals the **DLIM_MONOGRAPH_ID** values from step 1.
 - DLIM Text Sequence Number (**DLIM_TEXT_SEQNO**)
 - DLIM Text Type Code (**DLIM_TXT_TYP_CODE**)
 - DLIM Text (**DLIM_TEXT**)
3. You can choose to include or exclude monograph sections by listing or excluding values from the **DLIM_TXT_TYP_CODE** column. Only the Brief Overview section (**DLIM_TXT_TYP_CODE** value of **01**) is available within every monograph. All other sections are optional and may not be available.
3. Select the DLIM Text Type Code Description (**DLIM_TXT_TYP_CODE_DESC**) values from the **DLIM Monograph Text Type Description Table** (**RDLIMTD0_MONO_TXT_TYP_DESC**) where the **DLIM_TXT_TYP_CODE** column equals the **DLIM_TXT_TYP_CODE** values from the previous step.

Part 2: Construct and Display the Monograph

1. Begin the monograph with the monograph title from step 1 in Part 1.
2. For each available section, use the **DLIM_TXT_TYP_CODE_DESC** values from step 3 as the section header.
3. Concatenate the section text for each section in the sequence determined by the **DLIM_TEXT_SEQNO** values from step 2.

While concatenating the text, the following must be taken into consideration:

 - Trim all trailing space from the end of each **DLIM_TEXT** record and insert one space before concatenating two **DLIM_TEXT** values.
 - When constructing the reference text, please note that five spaces are placed at the start of each new citation. For readability each new citation should begin with a new paragraph. Single citations split over multiple **DLIM_TEXT** records should be formatted as noted in the bullet above.
4. Display the monograph details to the end-user.

Example—Displaying the Full DLIM Monograph Text

A physician identifies possible drug interferences associated with a laboratory test and wishes to see monograph

text for the laboratory results that may be erroneously affected by a given drug. In this example, the monograph for the drug-lab interaction between the drug group cefoxitin Inj and the Serum Creatinine, Alkaline Picrate (Jaffe Reaction) laboratory test (DLIM_MONOGRAPH_ID 00001456) is retrieved for display.

Part 1: Retrieve Monograph Title, Section Headers, and Text

1. Select the DLIM Monograph Title (DLIM_MONOGRAPH_TITLE) values from the DLIM Monograph Identifier Table (RDLIMMI0_MONO_ID) where the DLIM Monograph Identifier (DLIM_MONOGRAPH_ID) column equals the DLIM_MONOGRAPH_ID values of the drug-lab interference monograph.

DLIM_MONOGRAPH_ID	DLIM_MONOGRAPH_TITLE
00001456	Cefoxitin - Serum Creatinine, Alkaline Picrate (Jaffe Reaction)

2. Select the following column values from the DLIM Monograph Table (RDLIMMO1_MONO) where the DLIM_MONOGRAPH_ID column equals the DLIM_MONOGRAPH_ID values from step 1.
 - DLIM Text Sequence Number (DLIM_TEXT_SEQNO)
 - DLIM Text Type Code (DLIM_TXT_TYP_CODE)
 - DLIM Text (DLIM_TEXT)

You can choose to include or exclude monograph sections by listing or excluding values from the DLIM_TXT_TYP_CODE column. Only the Brief Overview section (DLIM_TXT_TYP_CODE value of 01) is available within every monograph. All other sections are optional and may not be available.

Please note that the table below only contains a sample of the available references for this monograph, therefore some DLIM_TEXT_SEQNO numbers are not illustrated.

DLIM_MONOGRAPH_ID	DLIM_TEXT_SEQNO	DLIM_TXT_TYP_CODE	DLIM_TEXT
00001456	1	01	Cefoxitin Falsely Increases Serum Creatinine, Alkaline Picrate (Jaffe Reaction). Evidence: Established
00001456	2	10	This interference appears to be concentration-dependent and also dependent somewhat on the different assay systems or autoanalyzers utilizing the Jaffe reaction method.

00001456	3	20	Higher serum cefoxitin drug concentrations (50-100 mcg/ml) are reported to cause a more significant interference. Therefore, blood samples from patients should not be sent for creatinine analysis if drawn within 2 hours of cefoxitin administration (at the
00001456	4	20	peak) and preferably drawn at the trough. Erroneous creatinine values may lead to inappropriate clinical decisions, such as alteration in therapy that may adversely affect outcomes.
00001456	5	91	Mefoxin Package Insert; Merck and Co., Inc. May 2002
00001456	6	93	Allen LC, Michalko K, Coons C. More on cephalosporin interference with creatinine determinations. Clin Chem. 1982 Mar;28(3):555-6. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=7067111&dopt=Abstract]
00001456	7	93	Durham SR, Bignell AH, Wise R. Interference of cefoxitin in the creatinine estimation and its clinical relevance. J Clin Pathol. 1979 Nov;32(11):1148-51. [Pub Med URL:
00001456	8	93	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=512029&dopt=Abstract

00001456	12	95	Green AJ, Halloran SP, Mould GP, Barbour HM, Pritchard JL, Hallworth MJ, Labib M. Interference by newer cephalosporins in current methods for measuring creatinine. Clin Chem. 1990 Dec;36(12):2139-40. [PubMed URL:]
00001456	13	95	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=2253366&dopt=Abstract
00001456	36	96	Spencer K. Analytical reviews in clinical biochemistry: the estimation of creatinine. Ann Clin Biochem. 1986 Jan;23 (Pt 1):1-25. [PubMed URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=3532908&dopt=Abstract]

3. Select the DLIM Text Type Code Description (DLIM_TXT_TYP_CODE_DESC) values from the DLIM Monograph Text Type Description Table (RDLIMTD0_MONO_TXT_TYP_DESC) where the DLIM_TXT_TYP_CODE column equals the DLIM_TXT_TYP_CODE values from the previous step.

DLIM_TXT_TYP_CODE	DLIM_TXT_TYP_CODE_DESC
01	Brief Overview
10	Discussion
20	Potential Significant Impact on Patient Care
91	References (Manufacturer's Information)
93	References (Case Report)
95	References (In vitro/Animal Study)
96	References (Review Article)

Part 2: Construct and Display the Monograph

1. Begin the monograph with the monograph title from step 1 in Part 1.
2. For each available section, use the DLIM_TXT_TYP_CODE_DESC values from the step as the section header.

3. Concatenate the section text for each section in the sequence determined by the DLIM_TEXT_SEQNO values from step 2.

While concatenating the text, the following must be taken into consideration:

- Trim all trailing space from the end of each DLIM_TEXT record and insert one space before concatenating two DLIM_TEXT values.
- When constructing the reference text, please note that five spaces are placed at the start of each new citation. For readability each new citation should begin with a new paragraph. Single citations split over multiple DLIM_TEXT records should be formatted as noted in the bullet above.

In this example, the References (Case Report) section (DLIM_TXT_TYP_CODE value of 93) includes the following two DLIM_TEXT references.

DLIM_MONOGRAPH_ID	DLIM_TEXT_SEQNO	DLIM_TXT_TYP_CODE	DLIM_TEXT
00001456	6	93	Allen LC, Michalko K, Coons C. More on cephalosporin interference with creatinine determinations. Clin Chem. 1982 Mar;28(3):555-6. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=7067111&dopt=Abstract]
00001456	7	93	Durham SR, Bignell AH, Wise R. Interference of cefoxitin in the creatinine estimation and its clinical relevance. J Clin Pathol. 1979 Nov;32(11):1148-51. [Pub Med URL:]
00001456	8	93	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=512029&dopt=Abstract

Note that the first DLIM_TEXT value for this section does not contain an ending character; however, the second DLIM_TEXT reference value has five leading spaces. Therefore, the second DLIM_TEXT value is a new citation and should be joined as a new paragraph.

Note that the second DLIM_TEXT value does not contain an ending character and the third value does not contain leading spaces. Trim all trailing space and insert a single space before joining the two values. See the following step for an example of how the text should appear in the Reference (Case Report) section of the monograph.

4. Display the monograph details to the end-user.

Cefoxitin - Serum Creatinine, Alkaline Picrate (Jaffe Reaction)

Brief Overview

Cefoxitin Falsely Increases Serum Creatinine, Alkaline Picrate (Jaffe Reaction). Evidence: Established

Discussion

This interference appears to be concentration-dependent and also dependent somewhat on the different assay systems or autoanalyzers utilizing the Jaffe reaction method.

Potential Significant Impact on Patient Care

Higher serum cefoxitin drug concentrations (50-100 mcg/ml) are reported to cause a more significant interference. Therefore, blood samples from patients should not be sent for creatinine analysis if drawn within 2 hours of cefoxitin administration (at the peak) and preferably drawn at the trough. Erroneous creatinine values may lead to inappropriate clinical decisions, such as alteration in therapy that may adversely affect outcomes.

References (Manufacturer's Information)

Mefoxin Package Insert; Merck and Co., Inc. May 2002

References (Case Report)

Allen LC, Michalko K, Coons C. More on cephalosporin interference with creatinine determinations. Clin Chem. 1982 Mar;28(3):555-6. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=7067111&dopt=Abstract]

Durham SR, Bignell AH, Wise R. Interference of cefoxitin in the creatinine estimation and its clinical relevance. J Clin Pathol. 1979 Nov;32(11):1148-51. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=512029&dopt=Abstract]

References (In vitro/Animal Study)

Green AJ, Halloran SP, Mould GP, Barbour HM, Pritchard JL, Hallworth MJ, Labib M. Interference by newer cephalosporins in current methods for measuring creatinine. Clin Chem. 1990 Dec;36(12):2139-40. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=2253366&dopt=Abstract]

References (Review Article)

Spencer K. Analytical reviews in clinical biochemistry: the estimation of creatinine. Ann Clin Biochem. 1986 Jan;23(Pt 1):1-25. [Pub Med URL: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=3532908&dopt=Abstract]

Example—Displaying Monograph Sections

A physician identifies possible drug interferences associated with a laboratory test and wishes to see monograph text in an abbreviated format that only includes the “Brief Overview” and “Potential Significant Impact on Patient Care” statements, if available. In this example, the monograph (**DLIM_MONOGRAPH_ID** 00001611) for the drug-lab interaction between the drug group Digitoxin Immune Fab and the Serum Digoxin laboratory test is retrieved for display.

Part 1: Retrieve Monograph Title, Section Headers, and Text

1. Select the DLIM Monograph Title (**DLIM_MONOGRAPH_TITLE**) values from the DLIM Monograph Identifier Table (**RDLIMMI0_MONO_ID**) where the DLIM Monograph Identifier (**DLIM_MONOGRAPH_ID**) column equals the **DLIM_MONOGRAPH_ID** value of the drug-lab interference monograph.

DLIM_MONOGRAPH_ID	DLIM_MONOGRAPH_TITLE
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00001611	Digoxin Immune Fab - Serum Digoxin, Fluorescence Polarization Immunoassay
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2. Select the following column values from the **DLIM Monograph Table** (RDLIMMO1_MONO) where the DLIM_MONOGRAPH_ID column equals the DLIM_MONOGRAPH_ID values from step 1.
- DLIM Text Sequence Number (**DLIM_TEXT_SEQNO**)
 - DLIM Text Type Code (**DLIM_TXT_TYP_CODE**)
 - DLIM Text (**DLIM_TEXT**)

You can choose to include or exclude monograph sections by listing or excluding values from the DLIM_TXT_TYP_CODE column. Only the Brief Overview section (DLIM_TXT_TYP_CODE value of 01) is available within every monograph. All other sections are optional and may not be available.

In this example the monograph is filtered to only include the General Overview and the Potential Significant Impact on Patient Care sections. The DLIM_TXT_TYP_CODE column value is equal to the values of 01 and 20.

DLIM_MONOGRAPH_ID	DLIM_TXT_TYP_CODE	DLIM_TEXT_SEQNO	DLIM_TEXT
00001611	01	1	Digoxin Immune Fab False Increases Serum Digoxin, Fluorescence Polarization Immunoassay. Evidence: Probable
00001611	20	3	A blood sample for serum digoxin concentration should be obtained before administration of digoxin immune Fab if possible. Following digoxin antidote administration, serum digoxin levels may be misleading and should not be relied upon to guide treatment.
00001611	20	4	If levels are required, one author recommends ultrafiltration followed by measurement of free digoxin levels.

3. Select the DLIM Text Type Code Description (**DLIM_TXT_TYP_CODE_DESC**) values from the **DLIM Monograph Text Type Description Table** (RDLIMTD0_MONO_TXT_TYP_DESC) where the DLIM_TXT_TYP_CODE column equals the DLIM_TXT_TYP_CODE values from the previous step.

DLIM_TXT_TYP_CODE	DLIM_TXT_TYP_CODE_DESC
01	Brief Overview
20	Potential Significant Impact on Patient Care

Part 2: Construct and Display the Monograph

1. Begin the monograph with the monograph title from step 1 in Part 1.
2. For each available section, use the DLIM_TXT_TYP_CODE_DESC values from step 3 in Part 1 as the section header.
3. Concatenate the section text for each section in the sequence determined by the DLIM_TEXT_SEQNO values from step 2 in Part 1.

While concatenating the text, the following must be taken into consideration:

- Trim all trailing space from the end of each DLIM_TEXT record and insert one space before concatenating two DLIM_TEXT values.
- When constructing the reference text, please note that five spaces are placed at the start of each new citation. For readability each new citation should begin with a new paragraph. Single citations split over multiple DLIM_TEXT records should be formatted as noted in the bullet above.

In this example, the Potential Significant Impact on Patient Care section (DLIM_TXT_TYP_CODE value of 20) includes the following two DLIM_TEXT statements.

DLIM_MONOGRAPH_ID	DLIM_TXT_TYP_CODE	DLIM_TEXT_SEQNO	DLIM_TEXT
00001611	20	3	A blood sample for serum digoxin concentration should be obtained before administration of digoxin immune Fab if possible. Following digoxin antidote administration, serum digoxin levels may be misleading and should not be relied upon to guide treatment.
00001611	20	4	If levels are required, one author recommends ultrafiltration followed by measurement of free digoxin levels.

In this example, the second value should be joined by removing all trailing space at the end of the first text value and adding a space to the start of the following text. See the following step for an example of how the text should appear in the Potential Significant Impact on Patient Care section of the monograph.

4. Display the monograph details to the end-user.

Digoxin Immune Fab - Serum Digoxin, Fluorescence Polarization Immunoassay**Brief Overview**

Digoxin Immune Fab Falsely Increases Serum Digoxin, Fluorescence Polarization Immunoassay. Evidence: Probable

Potential Significant Impact on Patient Care

A blood sample for serum digoxin concentration should be obtained before administration of digoxin immune Fab if possible. Following digoxin antidote administration, serum digoxin levels may be misleading and should not be relied upon to guide treatment. If levels are required, one author recommends ultrafiltration followed by measurement of free digoxin levels.

DLIM ERD and Technical Specifications

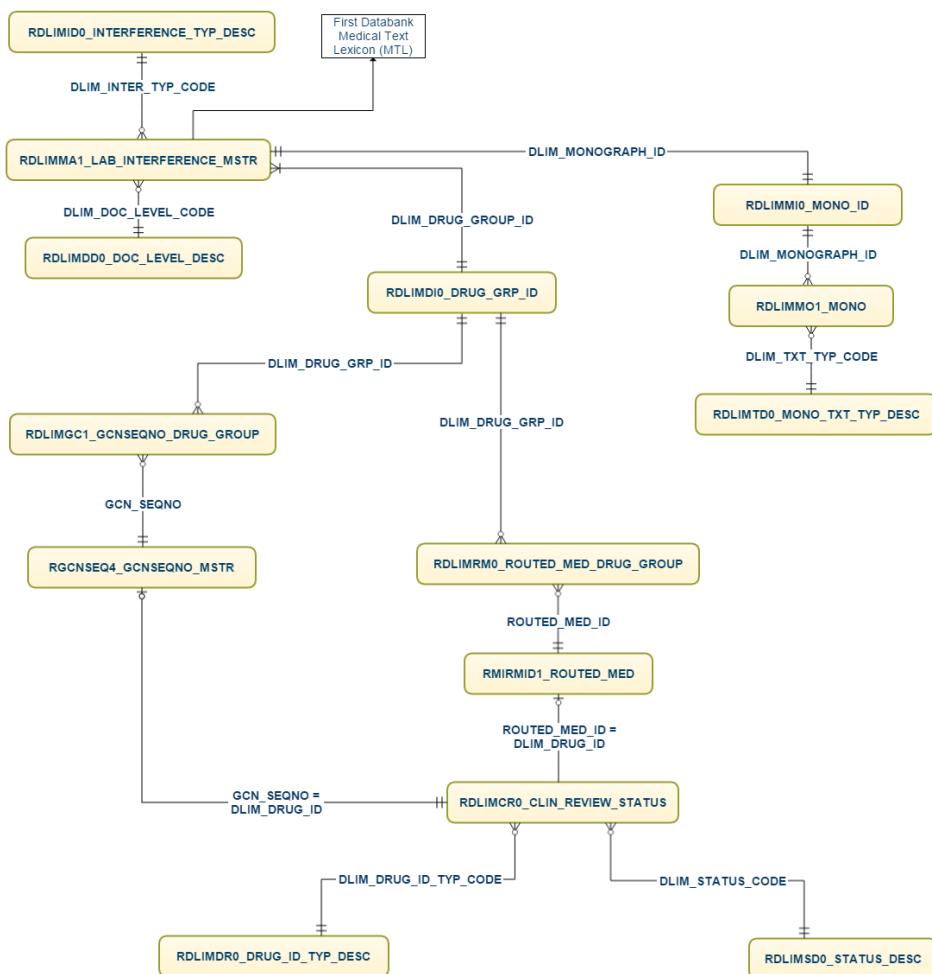
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- DLIM Tables
- DLIM ERD

DLIM Tables

- DLIM Clinically Reviewed Status Table
- DLIM Documentation Level Code Description Table
- DLIM Drug Group Identifier Table
- DLIM Drug Identifier Type Code Description Table
- DLIM GCN_SEQNO to Drug Group Table
- DLIM Interference Type Code Description Table
- DLIM Laboratory Interference Master Table
- DLIM Monograph Identifier Table
- DLIM Monograph Table
- DLIM Monograph Text Type Description Table
- DLIM Routed Medication Identifier to Drug Group Table
- DLIM Status Code Description Table

DLIM ERD



DLIM Clinically Reviewed Status Table

Table Name	RDLIMCR0_CLIN REVIEW STATUS
Revision Activity	add. 07-01-2003
Purpose	Indicates whether a drug has been reviewed by First Databank (FDB) clinicians for possible participation in a drug-lab interference record.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_DRUG_ID	DLIM Drug Identifier	N	8	9(8)
PF	DLIM_DRUG_ID_TYP_CODE	DLIM Drug Identifier Type Code	AN	2	X(2)
	DLIM_STATUS_CODE	DLIM Status Code	AN	2	X(2)

DLIM Documentation Level Code Description Table

Table Name	RDLIMDD0_DOC_LEVEL_DESC
Revision Activity	add. 07-01-2003
Purpose	Relates the Documentation Level Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_DOC_LEVEL_CODE	DLIM Documentation Level Code	AN	2	X(2)
	DLIM_DOC_LEVEL_CODE_DESC	DLIM Documentation Level Code Description	AN	50	X(50)

DLIM Drug Group Identifier Table

Table Name	RDLIMDI0_DRUG_GRP_ID
Revision Activity	add. 07-01-2003
Purpose	Represents a collection of drug concepts that are associated to common drug-lab interference records.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_DRUG_GRP_ID	DLIM Drug Group Identifier	N	5	9(5)
	DLIM_DRUG_GRP_ID_DESC	DLIM Drug Group Description	AN	100	X(100)

DLIM Drug Identifier Type Code Description Table

Table Name	RDLIMDR0_DRUG_ID_TYP_DESC
Revision Activity	add. 07-01-2003
Purpose	Relates the Drug Identifier Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_DRUG_ID_TYP_CODE	DLIM Drug Identifier Type Code	AN	2	X(2)
	DLIM_DRUG_ID_TYP_CODE_DESC	DLIM Drug Identifier Type Code Description	AN	100	X(100)

DLIM GCN_SEQNO to Drug Group Table

Table Name	RDLIMGC1_GCNSQNO_DRUG_GROUP				
Revision Activity	add. 07-01-2003				
Purpose	Links the clinical formulation to a set of drugs associated with a particular lab interference record.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	DLIM_DRUG_GRP_ID	DLIM Drug Group Identifier	N	5	9(5)

DLIM Interference Type Code Description Table

Table Name	RDLIMID0_INTERFERENCE_TYP_DESC
Revision Activity	add. 07-01-2003
Purpose	Relates the Interference Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_INTER_TY_P_CODE	DLIM Interference Type Code	AN	2	9(2)
	DLIM_INTER_TY_P_CODE_DESC	DLIM Interference Type Code Description	AN	50	9(50)

DLIM Laboratory Interference Master Table

Table Name		RDLIMMA1_LAB_INTERFERENCE_MSTR			
Revision Activity		add. 07-01-2003			
Purpose		Associates a collection of drug concepts to a laboratory test (with measurement method) and defines the nature of the possible drug-lab interference.			
Key	Column Name	Column Description	Format	Length	Picture
PF	DLIM_DRUG_GRP_ID	DLIM Drug Group Identifier	N	5	9(5)
PF	MTL_SPEC_LAB_ID	MTL Specific Laboratory Test Identifier (Stable ID)	N	8	9(2)
F	DLIM_INTER_TYP_CODE	DLIM Interference Type Code	AN	2	X(2)
F	DLIM_DOC_LEVEL_CODE	DLIM Documentation Level Code	AN	2	X(2)
F	DLIM_MONOGRAPH_ID	DLIM Monograph Identifier	N	8	9(8)

DLIM Monograph Identifier Table

Table Name	RDLIMMI0_MONO_ID
Revision Activity	add. 07-01-2003
Purpose	Uniquely identifies a drug-lab interference monograph record.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_MONOGRA PH_ID	DLIM Monograph Identifier	N	8	9(8)
	DLIM_MONOGRA PH_TITLE	DLIM Monograph Title	AN	255	X(255)

DLIM Monograph Table

Table Name	RDLIMMO1_MONO
Revision Activity	add. 07-01-2003
Purpose	Provides additional information related to the drug-lab interference record.

Key	Column Name	Column Description	Format	Length	Picture
PF	DLIM_MONOGRA PH_ID	DLIM Monograph Identifier	N	8	9(8)
P	DLIM_TEXT_SEQ NO	DLIM Text Sequence Number	N	5	9(5)
F	DLIM_TXT_TYP_ CODE	DLIM Text Type Code	AN	2	X(2)
	DLIM_TEXT	DLIM Text	AN	255	X(255)

DLIM Monograph Text Type Description Table

Table Name	FDLIMTD0_MONO_TEXT_TYP_DESC				
Revision Activity	add. 07-01-2003				
Purpose	Relates the Text Type Code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_TXT_TYP_CODE	DLIM Text Type Code	AN	2	X(2)
	DLIM_TXT_TYP_CODE_DESC	DLIM Text Type Code Description	AN	50	X(50)

DLIM Routed Medication Identifier to Drug Group Table

Table Name	RDLIMRM0_ROUTED_MED_DRUG_GROUP
Revision Activity	add. 07-01-2003
Purpose	Links a routed medication to a set of drugs associated with a particular lab interference record.

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	DLIM_DRUG_GRP_ID	DLIM Drug Group Identifier	N	5	9(5)

DLIM Status Code Description Table

Table Name	RDLIMSD0_STATUS_DESC
Revision Activity	add. 07-01-2003
Purpose	Relates the Status Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	DLIM_STATUS_CODE	DLIM Status Code	AN	2	X(2)
	DLIM_STATUS_CODE_DESC	DLIM Status Code Description	AN	100	X(100)

Duplicate Therapy Module (DPT) 1.0

- Duplicate Therapy Module Editorial Policies
- Applications
- ERD and Technical Specifications

Duplicate Therapy Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the Duplicate Therapy Module are provided in the following sections:

- Overview
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

Overview

Detecting and preventing duplicate therapy improves patient safety and reduces the risk of additive clinical effects by calling the duplications to the attention of healthcare personnel. Additionally, eliminating redundant therapies can reduce the cost of medication therapy.

The Duplicate Therapy Module offers point-of-care screening to identify potential duplications of drug therapy by comparing new drug orders to drugs that already exist in a patient drug profile. This is achieved using duplicate therapy class checking.

Duplicate therapy class checking uses specialized therapeutic drug classes developed specifically for duplicate therapy detection. The module identifies the drug groups involved and provides a duplicate therapy class name relative to the duplication.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

Duplicate Therapy is defined as unintentional duplicate "use" indications, duplicative pharmacology, or duplicative mechanisms of action that are not considered "adjunctive therapy." The Duplicate Therapy Module encompasses drugs with NDAs, ANDAs, BLAs, OTC drugs which contain FDA listed OTC Ingredients, nutritional products that contain significant amounts of iron, and limited herbal products (for example, St. John's Wort) that fall within the above definition.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

The customer file name for this component is **DPT Class Table** (RDPTCL0_CLASS_ID):

RDPTCL0_CLASS_ID

DPT_CLASS_ID	DPT_CLASS_DESC	DPT_ALLOWANCE
2	Angiotensin Converting Enzyme (ACE) Inhibitors	0

Key	Column Name	Column Description	Format	Length	Picture
P	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)
	DPT_CLASS_DESC	DPT Class Description	AN	60	X(60)
	DPT_ALLOWANCE	DPT Duplication Allowance	N	2	9(2)

Column Name	Column Description
DPT Class ID	This is a stable system-generated numeric identifier associated with the Duplicate Therapy Class.
DPT_Class_Desc	Duplicate Therapy Class Description is intended to convey the general intent of the DPT Class. For example: HMGCo-A Reductase Inhibitors
Allowance Factor	Indicates the number of drugs within a class that may be present in a patient's profile without generating an alert. A Duplicate Therapy Allowance Factor is assigned to each DPT Class.

Example—DPT_ALLOWANCE and associated columns

DPT_CLASS_ID	DPT_CLASS_DESC	DPT_ALLOWANCE
1058	Antihistamines	00
1059	Ophthalmic Antiglaucoma	02
483	HMGCo-A Reductase Inhibitors	00
1062	Antihyperlipidemics	01
1061	Antimalarial	01
1063	Antiplatelet Drugs	00

DPT screening can occur at the level of the Clinical Formulation (**GCN_SEQNO**); the Routed Medication ID; or at the Routed Generic (a GCN_SEQNO based data element analogous to the Routed Med).

DPT GCN_SEQNO Table

Table Name	RDPTGC0_GCNSEQNO_LINK				
Purpose	Links a Clinical Formulation (GCN_SEQNO) to a Duplicate Therapy Class(es)				

Column Summary

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	MED Routed Medication ID	N	6	9(6)
PF	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)

DPT Routed Medication ID Table

Table Name	RDPTRTM0_ROUTEDED_MED_LINK				
Purpose	Links a Routed Medication to its Duplicate Therapy Class(es)				

Column Summary

Key	Column Description	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID	N	8	9(8)
PF	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)

DPT Routed Generic Table

Table Name	RDPTRG0_ROUTEDED_GEN_LINK				
Purpose	Links a Routed Generic to its Duplicate Therapy Class(es)				

Column Summary

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_GEN_ID	Routed Generic Identifier	N	8	9(8)
PF	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)

The Routed Med and Routed Generic relationships are programmatically generated from the Clinical Formulation.

Rule Sets

This section provides rules that the clinical team uses in regards to creating the module's data, both general rules and rules specific to data elements.

Creation and Maintenance of Class Associations

Each new clinical formulation is assessed based on its indications, pharmacology, or mechanism of action for inclusion in DPT. Once a DPT Class is published to customers it will not be deleted, but it may become obsolete. Obsolete DPT Classes will not be linked to Clinical Formulations and are currently screened programmatically from the Class Description file RDPTCL0.

Examples:

Class associations are based on the following:

- a. Pharmacologically and structurally similar drugs, such as ACE Inhibitors as a DPT Class, as well as structurally related drugs that share pharmacologic effects but are NOT similar therapeutic uses (azathioprine and 6-mercaptopurine)
- b. Drugs with related pharmacologic effects and similar therapeutic uses, such as H2 Antagonist and Proton Pump Inhibitors share a single DPT class
- c. Groups of drugs which share therapeutic uses but differ pharmacologically, such as a combination of the antipseudomonal extended spectrum penicillin, Zosyn Piperacillin/Tazobactam), with an antipseudomonal carbapenem

Example: Primaxin (Imipenem/Cilastatin) in the DPT class: 454 Extended Spectrum or Antipseudomonal Antibiotics.

Primaxin also participates in other specific class groupings such as 452 Carbapenems (All) and in the large structural group 96 Beta-Lactams.

Duplication Allowance Factors

For the majority of Duplicate Therapy Classes, the Allowance Factor is zero, indicating that an alert will be triggered when two or more drugs in the same duplicate therapy class are present. The most common scenario for Duplicate Therapy Checking is comparing a newly ordered drug to the patient's existing medication list. If a new drug shares the same DPT class as a drug in the patient's medication list, and if the allowance factor is "zero," then a "match" of two drugs will generate a Duplicate Therapy alert. A Duplication Allowance Factor of "1" requires a match on three drugs to trigger an alert. A Duplication Allowance Factor of "2" requires a match on four drugs to trigger an alert and so on.

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

Triggers for Clinical Review

- FDA MedWatch Safety.
- Newly created or enhanced Clinical Formulations are reviewed weekly to determine if they meet the inclusion criteria.

- Customer or manufacturer clinical inquiries are reviewed daily and the database is updated weekly as appropriate.

References

This section lists sources used by FDB to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Gilman AG, Hardman JG, Limbird LE. Goodman & Gilman's *The Pharmacological Basis of Therapeutics*.
- Treatment Guidelines
- *PubMed.gov*. Available at: <http://www.ncbi.nlm.nih.gov/sites/entrez?db=PubMed>
- Product labeling
- *ChemIDpluslite*, an NLM sponsored ingredient structure and synonym search website. Available at: <http://chem2.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- *USP Dictionary Online*, U.S. naming standard and ingredient structure search website. Available at: <http://www.uspusan.com/usdn/>

DPT Applications

This section provides information about the practical application of data contained in this module.

Introduction

Detecting Therapeutic Class Duplications

Comparing Duplicate Therapy Classifications

Implementing the DPT Duplication Allowance

Generating Messages, Warnings, and Reports

Introduction

In general, upon initial implementation, FDB recommends checking the patient profile for duplicate therapies between the active drugs in the profile. To do this, treat each active drug in the profile as a new drug and perform duplicate therapy checking against the remaining active drugs in the profile.

After the initial implementation, duplicate therapy checking is most efficient if limited to checking new therapies against drugs already in the patient profile (current therapy) rather than checking current therapy against current therapy each time.

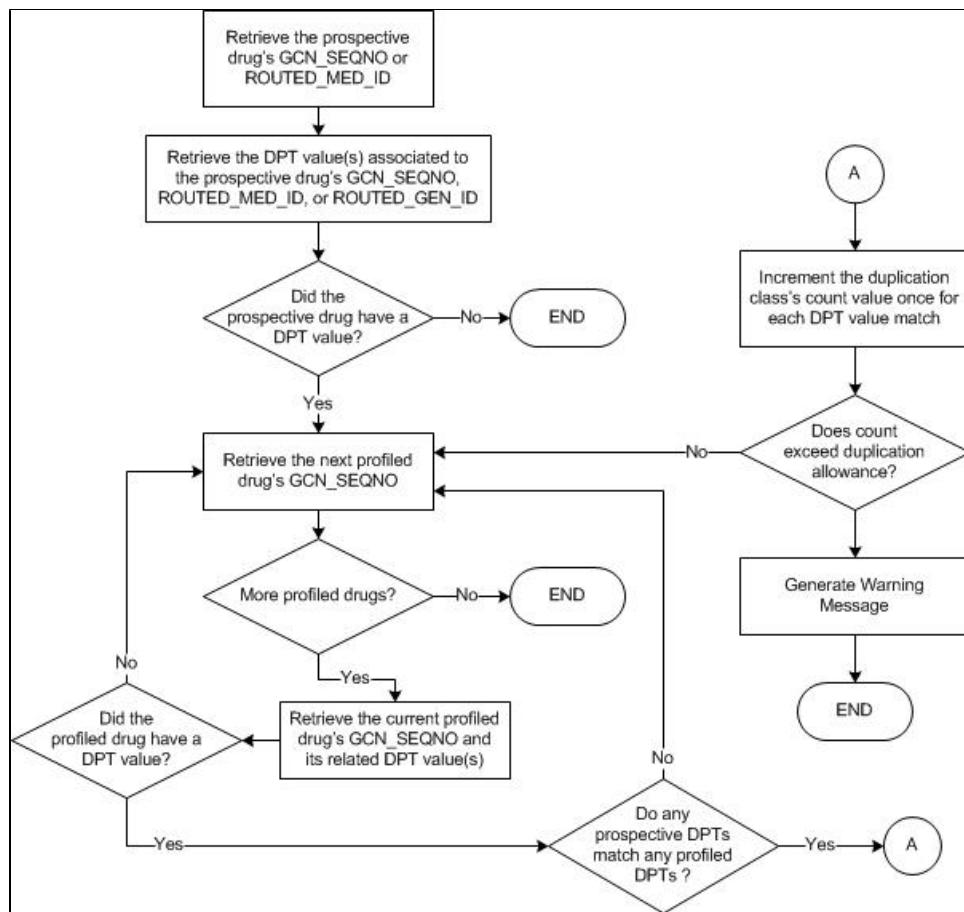
The following sections provide detailed information about duplicate therapy checking. FDB offers a variety of drug concepts and their identifiers to support duplicate therapy checking. These identifiers are referred to as **Multiple Access Points™ (MAPs™)** and represent drug products, ingredients, and formulations. Familiarity with the MAPs section is recommended before attempting the applications contained in this section.

Detecting Therapeutic Class Duplications

To detect a duplication of therapy, use the following application:

1. Retrieve the Clinical Formulation ID (**GCN_SEQNO**) from the DPT GCN_SEQNO Table or the Routed Medication ID (**ROUTED_MED_ID**) from the DPT Routed Medication ID Table for the newly prescribed (prospective) drug and for each drug in the patient profile (profiled drugs).
2. Retrieve the associated DPT Class Identifiers (**DPT_CLASS_ID**) from the **DPT Class Table** (**RDPTCL0_CLASS_ID**) for each prospective drug and each profiled drug.
3. Compare the **DPT_CLASS_IDs** and retrieve the DPT Class Description (**DPT_CLASS_DESC**) record from the **RDPTCL0_CLASS_ID** table when Duplicate Therapy Class matches occur.
4. Compare the number of times that a match of a given class is returned with the DPT Duplication Allowance (**DPT_ALLOWANCE**) from the **RDPTCL0_CLASS_ID** table. If the number of matches exceeds the **DPT_ALLOWANCE** value, a duplicate therapy exists. In most instances, the duplication allowance is zero. Programming for a duplication allowance of one or more should occur only for drugs in the same class that are used concurrently, per accepted medical practice.

This process is also illustrated in the Detecting Therapeutic Class Duplications diagram below.



In the example below, gentamicin sulfate is prescribed to a patient who is currently taking tobramycin. Both drugs participate in Duplicate Therapy Class 19—Aminoglycosides, Parenteral. The DPT_ALLOWANCE value for this class is zero; therefore, two prescriptions in this class represent a duplicate therapy and a warning message should be generated.

Profile Status	Screened Drugs	GCN_SEQNO	Duplicate Therapy Class Identifier	Duplication Allowance
New	Gentamicin Sulfate	009287	19—Aminoglycosides, Parenteral	0
Active	Tobramycin	009302	19—Aminoglycosides, Parenteral	0

Considerations for Detecting Therapeutic Class Duplications

The Routed Medication IDs (**ROUTED_MED_ID**) represents more general concepts than the Clinical Formulation ID (**GCN_SEQNO**). A drug at the **ROUTED_MED_ID** level may participate in more duplicate therapy classes than the same drug at the Clinical Formulation ID (**GCN_SEQNO**) level. The broader assignment of duplicate therapy classes at the **ROUTED_MED_ID** level may require further inquiry to the Clinical Formulation ID (**GCN_SEQNO**) level for the greatest degree of specificity.

The tables below show the Duplicate Therapy Classes that the following drug products, each having a different strength, participate in at the Clinical Formulation ID (GCN_SEQNO) level.

Acetylsalicylic acid 81 mg Chewable Tab (Clinical Formulation ID [GCN_SEQNO] 005380) and *Aspirin 325 mg Tab* (Clinical Formulation ID [GCN_SEQNO] 004376) participate in the following Duplicate Therapy Classes:

DPT_CLASS_ID	DPT_CLASS_DESC
00001634	Low dose Aspirin (81 mg or less)

- Low dose aspirin is intentionally excluded from the salicylate/NSAID DPT Classes to avoid nuisance hits and over-messaging for physicians. Low dose aspirin is rarely, if ever, administered as an analgesic in adults, so alerting against other NSAIDs and salicylates in DPT Class 276 Non-Steroidal Anti-Inflammatory (NSAID) & Salicylates is generally not useful.

Acetylsalicylic acid 325 mg Tab (Clinical Formulation ID [GCN_SEQNO] 004376) participates in the following Duplicate Therapy Classes:

DPT_CLASS_ID	DPT_CLASS_DESC
00000276	Non-Steroidal Anti-Inflammatory (NSAID) & Salicylates
00001064	Antiplatelet and Antithrombotic Drugs
00001784	Antiplatelet and Antithrombotic Drugs (Selected Group 2)

Acetylsalicylic acid 500 mg Tab (Clinical Formulation ID [GCN_SEQNO] 004377) participates in the following Duplicate Therapy Classes:

DPT_CLASS_ID	DPT_CLASS_DESC
00000276	Non-Steroidal Anti-Inflammatory (NSAID) & Salicylates
00001063	Antiplatelet Drug-excluding antiplatelet ASA 325 mg & below
00001064	Antiplatelet and Antithrombotic Drugs
00001784	Antiplatelet and Antithrombotic Drugs (Selected Group 2)

Notice, as shown below, that the same Duplicate Therapy Classes are assigned but the strength distinction found at the Clinical Formulation ID (GCN_SEQNO) level is lost at the ROUTED_MED_ID level.

Acetylsalicylic acid oral (ROUTED_MED_ID 00103912) participates in the following Duplicate Therapy Classes:

DPT_CLASS_ID	DPT_CLASS_DESC
00000276	Non-Steroidal Anti-Inflammatory (NSAID) & Salicylates
00001063	Antiplatelet Drug-excluding antiplatelet ASA 325 mg & below
00001064	Antiplatelet and Antithrombotic Drugs
00001634	Low dose Aspirin (81 mg or less)
00001784	Antiplatelet and Antithrombotic Drugs (Selected Group 2)

Comparing Duplicate Therapy Classifications

When comparing the DPT Class Identifiers ([DPT_CLASS_ID](#)) for the new drug against the active drugs in the profile, we recommend that you do not limit the search to one match per pair. Although it may seem helpful if your screening functions are processed serially (for example, the system stops processing when it encounters a match and resumes processing after the match is addressed), matches are not processed in priority order, so later matches may be more clinically relevant or otherwise more important. The following example illustrates a potential problem with stopping duplication searches after a single match:

New Drug	lovastatin	lovastatin
Active Drug in Profile	atorvastatin	atorvastatin
Duplicate Therapy Class	1062—Antihyperlipidemics	0483—HMG-CoA Reductase Inhibitors
DPT Duplication Allowance	1	0
Number of duplications present?	1	1
Exceeds Allowance?	No	Yes

Using lovastatin and atorvastatin as the prescribed drugs, the first duplicate therapy match occurs in the Antihyperlipidemics class and screening is stopped because a match has occurred. The reporting of this duplication is suppressed because the DPT Duplication Allowance ([DPT_ALLOWANCE](#)) for this class is one, and therefore this match is allowed. However, had processing continued, another match in the HMG-CoA Reductase Inhibitors class would occur. This class has a DPT_ALLOWANCE of zero, so the match would exceed the allowance and generate a warning message.

Implementing the DPT Duplication Allowance

The DPT Duplication Allowance (**DPT_ALLOWANCE**) designates a maximum number of duplicate therapy matches allowed for a duplicate therapy class before alerting the end-user. The duplicate therapy warnings may be suppressed in situations where the concurrent use of more than one medication from the same class is an accepted medical practice. Additionally, you can implement the Duplicate Therapy Module without screening or displaying the DPT_ALLOWANCE value. This offers faster processing of duplicate therapy screening by simplifying the screening application.

Class Description	DPT Duplication Allowance
Antihyperlipidemics	1
HMG-CoA Reductase Inhibitors	0

Using the DPT_ALLOWANCE example values above, a total of two active prescriptions (one duplication match) for the Antihyperlipidemics class is considered acceptable. However, if a third Antihyperlipidemia drug is added, causing two duplication matches, a warning is generated.

For HMG-CoA Reductase Inhibitors, a second active prescription for a drug in this class generates a warning, as a single match exceeds the DPT_ALLOWANCE value of zero.

The options for implementing the DPT_ALLOWANCE are as follows:

- For full functionality of Duplicate Therapy Module as a screening tool for duplicate therapies, implement the DPT Duplication Allowance.
- Allow end-users to enable or disable screening using the DPT Duplication Allowance by implementing the DPT Duplication Allowance as an optional feature. If the end-user disables use of the DPT Duplication Allowance, all possible duplicates are returned so that the end-user must use professional judgment to screen for false alerts. If the end-user enables screening, the system would function the same as the option listed above.
- To require review and enable the end-user to exercise professional judgment to evaluate possible false alerts, display the DPT Duplication Allowance value to the end-user but do not implement the alert suppression based on the DPT Duplication Allowance.
- To provide end-users with the ability to use their own table of values for DPT Duplication Allowances, implement the DPT Duplication Allowance feature to allow end-users to create user-defined tables. This type of implementation provides the end-user with the advantage of customizing this field for regional standards of practice or specialized patient populations. However, this type of implementation also requires extra programming for the user-defined table and differentiating reports and warnings based on user-defined values from FDB default values.
- To speed processing, limit the process of counting DPT Duplication Allowances to the few drug classes that have DPT Duplication Allowances greater than zero.

Generating Messages, Warnings, and Reports

Three conditions can occur when screening a new drug for duplicate therapy. These conditions and the suggested formats for messages, warnings, and reports are described below:

1. If a new drug is recognized by the Duplicate Therapy Module, but no matches are found, a message to reflect this condition can be generated in the following format:

No Match Message Format

THERAPEUTIC DUPLICATION MESSAGE
No duplicate therapy found with [HOST DRUG NAME 1]

Example—No Match Message

THERAPEUTIC DUPLICATION MESSAGE
No duplicate therapy found with Lasix.

2. If a new drug is not recognized by, or is not classified in the Duplicate Therapy Module, a message to reflect this condition should be generated in the following format:

Drug Not Available Message Format

THERAPEUTIC DUPLICATION MESSAGE
Duplicate therapy checking with [HOST DRUG NAME 1] not available.

Example—Drug Not Available Message

THERAPEUTIC DUPLICATION MESSAGE
Duplicate therapy checking with Zanoterone not available.

This message helps users distinguish when an alert is not generated because there is no Duplicate Therapy issue, and when an alert is not generated because a new drug is not recognized or classified in this module. Medical devices—DTC 99999999 should generate a Not Applicable message.

3. If a new drug is recognized by the Duplicate Therapy Module and matches are found, warnings or reports should be generated in the following formats.

If the duplication allowance is zero, and a single match occurs, the following format is suggested:

Warning Message Format—Single Match

THERAPEUTIC DUPLICATION WARNING
Duplication Allowance: [DUPLICATION ALLOWANCE]
[HOST DRUG NAME 1] and [HOST DRUG NAME 2] are members of the [CLASS DESCRIPTION] class and may represent duplicate therapy.

Example—Single Match Message

THERAPEUTIC DUPLICATION WARNING

Duplication Allowance: 0

Dalmane and Valium are members of the Benzodiazepine class and may represent duplicate therapy.

If the duplication allowance is one or more, we recommend structuring the warning to show *all* drugs identified as a match:

Warning Message Format—Multiple Match

THERAPEUTIC DUPLICATION WARNING

Duplication Allowance: [DUPLICATION ALLOWANCE]

[HOST DRUG NAME 1] and [HOST DRUG NAME 2, HOST DRUG NAME 3,...] are members of the [CLASS DESCRIPTION] class and may represent duplicate therapy.

Example—Multiple Match Message

THERAPEUTIC DUPLICATION WARNING

Duplication Allowance: 1

INVIRASE, NORVIR, and CRIXIVAN are members of the Antiviral-HIV (Antiretroviral) Protease Inhibitor class and may represent duplicate therapy.

To print a report when all possible information is desired, we recommend the following format. This type of report is most appropriate in the outpatient setting. The previous example is illustrated below using multiple matches:

Report Format—All Possible Information

THERAPEUTIC DUPLICATION REPORT

Duplication Allowance: [DUPLICATION ALLOWANCE]

[HOST DRUG NAME 1] and [HOST DRUG NAME 2, HOST DRUG NAME 3,...] are members of the [CLASS DESCRIPTION] class and may represent duplicate therapy.

Patient received [QUANTITY] of [HOST DRUG NAME 2] on [DATE].

Patient received [QUANTITY] of [HOST DRUG NAME 3] on [DATE].

...

[DTCOPY]

Example—All Possible Information Report

THERAPEUTIC DUPLICATION REPORT

Duplication Allowance: 1

INVIRASE, NORVIR, and CRIXIVAN are members of the Antiviral-HIV (Antiretroviral) Protease Inhibitor class and may represent duplicate therapy.

Patient received 200 MG of INVIRASE on 10/1/07.

Patient received 80 MG/ML of NORVIR on 10/1/07.

Patient received 400 MG of CRIXIVAN on 10/1/07.

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DPT ERD and Technical Specifications

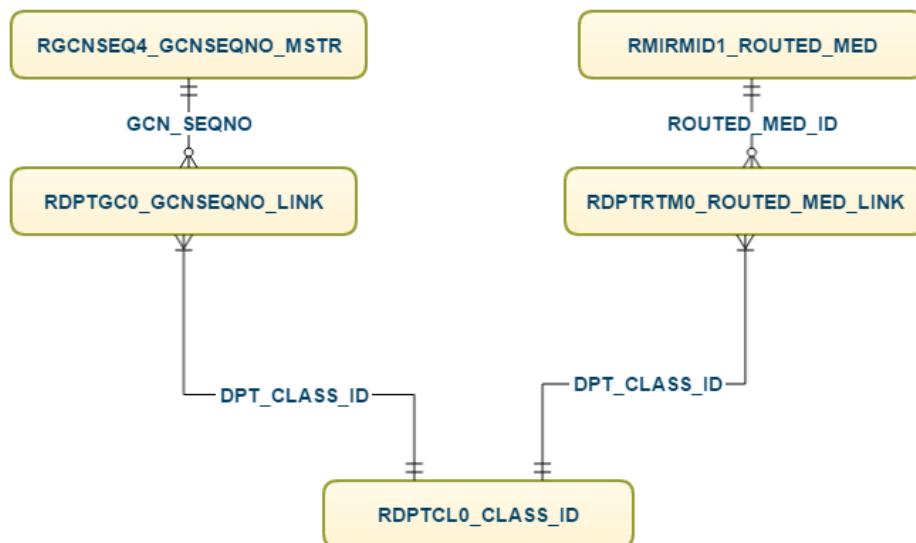
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Duplicate Therapy Module Tables
- Duplicate Therapy Module ERD

Duplicate Therapy Module Tables

- DPT Class Table
- DPT GCN_SEQNO Table
- DPT Routed Medication ID Table

Duplicate Therapy Module ERD



DPT Class Table

Table Name	RDPTCL0_CLASS_ID		
Revision Activity	add.01-01-2002		
Purpose	Provides attributes for a duplicate therapy class including its duplication allowances.		

Key	Column Name	Column Description	Format	Length	Picture
P	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)
	DPT_CLASS_DESC	DPT Class Description	AN	60	X(60)
	DPT_ALLOWANCE	DPT Duplication Allowance	N	2	9(2)

DPT GCN_SEQNO Table

Table Name	RDPTGC0_GCNSEQNO_LINK				
Revision Activity	add.01-01-2002				
Purpose	Links a clinical formulation to a duplicate therapy class.				
Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)

DPT Routed Medication ID Table

Table Name	RDPTRTM0_ROUTEDED_MED_LINK				
Revision Activity	add.01-01-2002				
Purpose	Links a routed medication to its duplicate therapy class(es). The routed medication relationships are programmatically generated from the clinical formulation.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	Med Routed Medication ID (Stable ID)	N	8	9(8)
PF	DPT_CLASS_ID	DPT Class Identifier	N	8	9(8)

Indications Module (INDM) 2.0

- Indications Module Editorial Policies
- Applications
- ERD and Technical Specifications

i In this module, U.S. data and external identifiers are used in some of the examples.

Indications Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the module are provided in the following sections:

- Overview
- Inclusion Criteria
- Exclusion Criteria
- Data Elements
- Rule Sets
- Rules for Data Elements
- Maintenance
- References

Overview

The purpose of the Indications Module™ (INDM™) is to deliver drug knowledge that helps clinicians make informed decisions regarding therapy options, based on current medical evidence. The module includes both FDA-approved and some non-FDA-approved, "unlabeled" indications substantiated by primary medical literature or treatment guidelines. INDM content may also be used to generate an inferred patient problem list and facilitate Drug-Disease Contraindications (DDC) checking when actual patient diagnoses are unavailable. INDM content may also be used to build disease groups for Medication Therapy Management (MTM).

Inclusion Criteria

Drug Scope

Drugs included are those that have a Clinical Formulation ID ([GCN_SEQNO](#)) in FDB MedKnowledge and are either:

- FDA-approved prescription products with a New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologics License Application (BLA)
- FDA-approved over-the-counter (OTC) products with an OTC New Drug Application (NDA) or FDA OTC Drug Monograph
- Some non-FDA approved products may also be included

Indications Content Scope

- All indications listed in FDA-approved prescribing information (PI) will be reviewed for inclusion in INDM.
- Indications listed in FDA OTC Drug Monographs with a Tentative Final Ruling Category I (Generally Recognized As Safe and Effective) are reviewed for inclusion in INDM.
- Non-FDA approved indications substantiated by treatment guidelines, consensus statements, pivotal clinical trials, inclusion in select tertiary references or labeling for non-US products (see the Maintenance section) may also be reviewed for inclusion in INDM.
- More specific indications than those listed in the Indications section of the PI may be listed in INDM to

support indication-specific dosing for the Dosing and Ordering modules.

Exclusion Criteria

Drug Scope

- Self-proclaimed U.S. Rx products without ANDA/NDA/BLA
- Rx drug products with 510K (medical device) approval
- Dietary supplements
- Herbal supplements
- Large volume parenteral, nutritional, irrigation or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Homeopathic drugs
- OTC products without an FDA OTC Monograph
- Bulk packaged products
- Medical supplies, soaps, cleansers
- Cosmetics, unless also FDA approved as a prescription drug (for example, botulinum toxin, bimatoprost)
- Veterinary drugs
- Inactive ingredients
- U.S. products with Clinical Formulation routes that are not supported by FDA-approved package insert labeling.
- U.S. products with unapproved routes or dose forms

Indications Content

Clinical trial demographic details and outcome statements are not included within indications:

- Study population demographics
 - Example: "population studied were male, non-HIV age less than 65 years"
- Treatment outcome which is not a disease
 - Example: Atorvastatin - "Reduce risk of hospitalization for CHF"
- Current Use Limited (CUL) indications: Standards for appropriate medication treatment evolve based upon improved understanding and new treatment options for a disease. INDM may exclude labeled indications for older drugs if usage is not consistent with present day standards of care.
 - Example: Glycopyrrolate for treatment of peptic ulcer disease

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

INDM Indication Code

The INDM Indication Code (**INDCTS**) is a system-generated number for each collection of drug indications.

INDM Indications Drug Description

The INDM Indications Drug Description (**INDCTS_DRUG_DESC**) assigned to the INDM Indication Code (**INDCTS**) provides information about drug(s) linked to the indication list.

Disease Identifiers

Each indication is encoded with an FML Disease Identifier (**DXID**), which identifies specific disease states, procedures, condition related concepts, and diagnostic tests associated with drug use. The DXID is a system-generated number maintained in the First Databank Medical Lexicon (FML). First Databank also publishes legacy First Databank Disease Code (**FDBDX**). FDBDXs are created and include embedded ICD9cm codes. FDBDXs have a one-to-one relationship with DXIDs.

INDM Labeled Code

There are three possible values, one of which is assigned to each DXID record.

Example—RINDMLD0_LABELED_DESC

INDCTS_LB	INDLBLDESC
L	Drug Indication has been approved by the FDA
P	Grouper Indication for Proxy only
U	Non-FDA Approved Drug Indication

The INDM Labeled Code (**INDCTS_LBL**) identifies whether the drug indication has been approved by the FDA (*L*), is a non-FDA approved drug indication (*U*), or whether it is a Proxy indication (*P*). Proxy indications (*P*) are broad disease descriptions to be used solely for the purpose of Drug-Disease Contraindication (DDC) checking (for further details, see the Data Elements section.)

- By definition, Proxy indications are neither FDA approved (*L*) nor evidence-based unapproved (*U*) indications. Thus, Proxy indications are not intended for use/display in a “drugs to treat” application of the data, or for indication-based dose screening (see the Rule Sets section for further details.)

INDM Proxy Indicator

Field values are *N* (no) or *Y* (yes).

If the Indication Description is a Proxy, the INDM Proxy Indicator (**PROXY_IND**) field value will always be *Y* (Yes).

If the Indication Description is Labeled or Unlabeled, this field value will always be *N* (No).

This field is programmatically generated based upon assigned labeled field INDM Labeled Code (**INDCTS_LBL**) values.

Example—RINDMMA2_INDCTS_MSTR

INDCTS	INDCTS_SN	INDCTS_LBL	FDBDX	DXID	PRED_CODE	PROXY_IND
278	0	L	01.038900	110	3	N
278	1	P	01.041900	154	1	Y
278	2	L	07.421000	1483	3	N

INDM Sequence Number

Sequencing of FML Disease Identifier (**DXID**) values is represented by INDM Sequence Number (**INDCTS_SN**) values and is generated by the system. It is not a priority sequence, but is a numeric sort of First Databank Disease Code (**FDBDX**) codes. This is not a stable code.

INDM Predictor Code

The INDM Predictor Code (**PRED_CODE**) field values are 1, 2, or 3.

Example—RINDMMA2_INDCTS_MSTR

INDCTS	INDCTS_SN	INDCTS_LBL	DXID	PRED_CODE	PROXY_IND
253	0	L	1117	3	N
253	1	L	1432	2	N
253	2	L	1448	2	N
253	3	U	1460	3	N
253	4	U	1500	3	N

Rule Sets

This section provides rules that the clinical team uses in regard to creating the module's data, both general rules and rules specific to data elements.

Trigger content text (for example, FDA “CDER New” labeling updates) are reviewed, and concepts applicable to INDM are identified. See the Maintenance section for list of triggers. Disease terminology concepts within the First Databank Medical Lexicon (FML) are searched and codes/descriptions are selected. Associated attributes of Labeled, Predictor, and Proxy are included. Trigger content drug(s) are identified and indications coding is applied to all applicable drug groups in the module.

Rules of General Applicability

A Clinical Formulation ID (**GCN_SEQNO**) with one or more ingredients is linked to a single INDM Indication Code (**INDCTS**)

Example—Single Indication for Multiple GCN_SEQNO

GCN_SEQNO	INDCTS	INDCTS_DRUG_DE SC	STR	GCDF_DESC

57865	2037	EZETIMIBE,SIMVAST ATIN	10MG-40MG	TABLET
57864	2037	EZETIMIBE,SIMVAST ATIN	10MG-40MG	TABLET
57863	2037	EZETIMIBE,SIMVAST ATIN	10MG-40MG	TABLET
57859	2037	EZETIMIBE,SIMVAST ATIN	10MG-40MG	TABLET

GCN_SEQNO aggregates drug products that share like ingredient sets, route of administration, dosage form, and strength of drug but are marketed by multiple manufacturers. Therefore, assignment of INDM information to drugs is NOT manufacturer-specific.

Example—Single Indication for Multiple Manufacturers

GCN_SEQNO	INDCTS	INDCTS_DRUG_DESC	RT	GCDF_DESC	STR	BN	NDC
46216	25	FLUOXETINE	ORAL	TABLET	10MG	PROZAC	00002400602
46216	25	FLUOXETINE	ORAL	TABLET	10MG	PROZAC	00002400630
46216	25	FLUOXETINE	ORAL	TABLET	10MG	FLUOXETINE HCL	00093718810
46216	25	FLUOXETINE	ORAL	TABLET	10MG	FLUOXETINE HCL	00093718856
46216	25	FLUOXETINE	ORAL	TABLET	10MG	SARAFEM	00430021014

Routed Medication ID and Routed Generic ID links to the INDM are programmatically assigned.

Non-U.S. drug Clinical Formulations may inherit U.S.-based INDM clinical data

- ⓘ Indications content is not published at the NDC level. Thus, under certain circumstances, aggregated indications drug knowledge relevant to the “labeled” or “unlabeled” status of a given INDM master table may not apply to all products linked to the master table content. For example, both Betapace and Betapace AF contain the same active ingredient (sotalol) but have different FDA-approved indications. Betapace is approved for treatment of ventricular arrhythmias while Betapace AF is approved for treatment of atrial fibrillation. However, FDB has a single set of indications for sotalol-containing drugs because clinically, either product can be used to treat either type of cardiac arrhythmia

Rules for Indication Code Drug Groups: Description and Linking

A Clinical Formulation ID (GCN_SEQNO) is linked to an INDCTS drug group that is usually based on having a common ingredient list, but can be broader to include a class of ingredients (for example, ANALGESIC,

EXPECTORANT), or may be narrower to include only certain dose forms, routes or strengths of a single ingredient (for example, *Metoprolol EXT REL*, *Metronidazole 750mg ER*).

Example—Break Out Groups Based on Dose Form, Route, and Strength for RINDMDDO_INDCTS_DRUG_DESC

INDCTS	INDCTS_DRUG_DESC
248	METOPROLOL (PO IMMEDIATE RELEASE)
1349	METOPROLOL (EXT REL)
1350	METOPROLOL (IV)
1994	METOPROLOL, HYDROCHLOROTHIAZIDE
1482	METRONIDAZOLE (750MG ER)

Example—Aggregated Clinical Formulations

GCN_SEQ_NO	INDCTS	INDCTS_DRUG_DESC	RT	GCDF_DESC	STR	BN	HIC3	HICL
51657	1945	TADALAFI L	ORAL	TABLET	20MG	CIALIS	F2A	A7GB
65368	1945	TADALAFI L	ORAL	TABLET	20MG	ADCIRCA	B1D	A7GB

Rules for Indication Descriptions

- A list of indications is created for each INDM Indication Code (**INDCTS**). Each indication consists of a DXID/FDBDX code-description pair.
- Limit detailed descriptions for indications, that is, consolidated indication. Indications need not be described to the level of detail that includes the “phase of illness” or the sub-type of disease, unless required for dosing purposes or unless illness subtypes require different drug therapy.
 - **Example 1 of consolidated indication:** Indication may not reflect demographics of the specific patient population used for FDA approval. Therefore, use DXID for “HIV infection” instead of: “[Etravirine] is a human immunodeficiency virus type 1 (HIV-1) non-nucleoside reverse transcriptase inhibitor (NNRTI) indicated for treatment of HIV-1 infection in treatment-experienced patients 6 years of age and older with viral strains resistant to an NNRTI and other antiretroviral agents.”
 - **Example 2 of consolidated indication:** Indication may not reflect specific FDA-approved stage of disease or priority of therapy for a specific disease. Therefore, use DXID for “Multiple Myeloma” instead of “KYPROLIS is indicated for the treatment of patients with multiple myeloma who have received at least two prior therapies including bortezomib and an immunomodulatory agent and have demonstrated disease progression on or within 60 days of completion of the last therapy. Approval is based on response rate [see Clinical Studies (14.1) at <http://dailymed.nlm.nih.gov/dailymed/lookup.cfm?setid=ea66eb30-e665-4693-99a1-a9d3b4bbe2d6#>]. Clinical benefit, such as improvement in survival or symptoms, has not been verified.”

- Indication description needs to have sufficient detail, especially if a sub-type of the disease is a **relative contraindication**. “In addition, some drugs that are *indicated* for one form of the illness are *contraindicated* in another form of the illness. For example, Sotalol is indicated for prevention, but contraindicated for cardioversion of atrial fibrillation.”
- Indication description needs to have sufficient detail, especially if a sub-type of the disease **requires different drug therapy**.
 - **Example:** When evaluating drugs to treat Atrial Fibrillation, **breakouts** (that is, more granular disease descriptions) were needed as different drug therapy is used for:
 - Cardioversion of Atrial Fibrillation
 - Prevention of Recurrent Atrial Fibrillation
 - Ventricular Rate Control in Atrial Fibrillation
- Indication description needs to have sufficient detail, especially if a sub-type of the disease has a different **dosing regimen**.
- If a required FML Disease Identifier (**DXID**) is not available in FML, a new DXID is created.

Rules for Data Elements

INDM Predictor Code

The INDM Predictor Code (**PRED_CODE**) is a numerical value assigned to each drug-indication pair and is an estimate of the likelihood that the drug is being used for the indication specified.

- Programmatic Predictor Code Validations:
 - An indication group (group by INDCTS) may have only one indication with a Predictor Code of 1. In this case, all other indications must have a Predictor Code of 3.
 - An indication group may have up to three indications with Predictor Codes of 2. All other indications must have a Predictor Code of 3.
 - All Proxy Indications have a Predictor Code of 1.
- Predictor codes are 1, 2, or 3. An indication with a predictor code of 1 corresponds to a high likelihood, that is, a greater than 90% of patients taking this medication, 2 corresponds to a moderate likelihood, 30 to 50% of patients taking this medication, and 3 corresponds to less than 30% likelihood that patients are taking this medication for the particular indication.
- The utility of the PRED_CODE is to infer or prioritize the indications for a known drug when patient diagnoses are unavailable. Often this diagnosis information is unknown, but can be inferred by the indications for drugs the patient is taking.
 - For example, a patient taking glyburide would almost certainly have “type 2 diabetes mellitus”. Glyburide has a predictor code of 1.
- Assignment of the PRED_CODE is based upon:
 - Frequency of a particular disease, represented by the indication, in the population.
 - The relative ranking of the drug (represented by the INDCTS) for the indication in focus. For example, is this drug a national performance measure versus a second line drug therapy for a

particular disease?

- The granularity (detail) of the disease concept.
- The place of a particular indication viewed in context of the INDCTS entire indication list.
- Predictor Codes and Labeled Codes (*L*, *U* or *P*) are independently assigned.

INDM Proxy Indication

Proxy indications or conditions describe a drug's use more generally for the purpose of facilitating drug disease contraindication (DDC) checking. Proxy indications are added to the indication code list when existing indications are too specific to trigger DDC alerts. An indication group (group for INDCTS) is evaluated for a proxy indication when:

- The indication list has very granular indications, that is, DXIDs are not likely to be used in DDC. For example, broad spectrum antibiotics with bacteria and site-specific indications will be assigned a proxy indication of *Bacterial Infection*.
- A drug has many (that is, greater than three) common uses and greater than 90% of indications are within a specific/specialty treatment area. For example, cisplatin and doxorubicin are each commonly used for a wide variety of cancers. Their proxy indication is *Malignancy*.

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The First Databank Knowledge Base Services Department utilizes a robust methodology for the capture, documentation, triage, and tracking of the most important sources for drug knowledge changes. The external triggers that are triaged to the clinical editors for review are the following:

- MedEffects Alerts from Health Canada
- FDA MedWatch Medical Product Safety Information Alerts
- FDA CDER NEW
- FDA CBER What's New
- FDA MedWatch Monthly Label Changes
- FDA Division of Drug Information (DDI)
- FDA Hematology/Oncology (Cancer) Approvals and Safety Notifications
- What's New at FDA in HIV/AIDS
- FDA Press Announcements

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review INDm drug groups or DXID content is when a drug product is first linked to a Clinical Formulation ID ([GCN_SEQNO](#)).

References

This section lists sources used by First Databank to compile the information contained in the module.

First Databank utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. First Databank uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions.

First Databank may rely on current source reference text editions or versions when updating data, as well as when researching questions about data. However, a formal data Indications module review does not occur for every new release of source editions or versions. Additional sources include:

- FDA OTC Monographs
- AHFS Drug Information. Published by American Society of Health System Pharmacists
- The Harriet Lane Handbook
- The Medical Letter, Inc. The Medical Letter Treatment Guidelines and The Medical Letter on Drugs and Therapeutics
- Zynx Health Inc. products. Available at: <http://www.zynxhealth.com>.
- Primary Medical Literature content: clinical trials, consensus statements, guidelines
- Product information for non-U.S. products

INDM Applications

This section provides information about the practical application of data contained in this module. These applications may use tables from the [FDB Medical Lexicon™ \(FML™\) 2.0](#) module. These applications depend upon the following conditions:

- Familiarity with FML and its primary identifier, the FML Disease Identifier ([DXID](#)). Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) module for more information.
- Familiarity with drug concepts and their identifiers. Refer to the [Multiple Access Points \(MAPs\)](#) for more information.
- The ability to navigate to a Clinical Formulation ID (GCN_SEQNO) from a concept such as the DIN or MEDID. Refer to [MedKnowledge Identifiers and Attributes](#) for more information.
- Assignment of a DxID or ICD Code to a given disease state. Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) module for more information.

[Retrieving a Drug's List of Indications](#)

[Retrieving Drugs Indicated for a Selected Condition—Using the Exclusion Table to Refine the Treatment Options](#)

[Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy](#)

[Detecting Possible Drug-Related Iatrogenic Diseases](#)

Retrieving a Drug's List of Indications

This application illustrates how to retrieve a drug's list of indications. It uses the process described in the FML module's **Finding DXID Descriptions and Synonyms** application to find each indication's **Primary Professional Name**. You can change the process to display any description or synonym type.

You can retrieve all indications, only indications that are FDA-approved, or only indications that are non-FDA approved.

This application displays a list of FDA-approved indications for Zithromax 250mg oral tablets (Clinical Formulation ID [GCN_SEQNO] 026721).

1. Retrieve the INDM Indications Code (**INDCTS**) associated to the drug product's Clinical Formulation ID (**GCN_SEQNO**) using the **INDM GCN_SEQNO/Drug Indications Code Relation Table** (**RINDMGC0_INDCTS_GCNSEQNO_LINK**).

GCN_SEQNO	INDCTS
026721	00662

2. For each Clinical Formulation ID (GCN_SEQNO)/INDCTS combination retrieved in step 2, retrieve the following columns from the **INDM Master Table** (**RINDMMA2_INDCTS_MSTR**):

- INDM Sequence Number (**INDCTS_SN**)
- INDM Labeled Code (**INDCTS_LBL**)
- FML Disease Identifier (**DXID**)
- INDM Proxy Indicator (**PROXY_IND**)

INDCTS	INDCTS_SN	INDCTS_LBL	DXID	PROXY_IND
00662	00	U	00004346	N
00662	01	U	00000051	N
00662	02	U	00000052	N
00662	03	U	00000055	N
00662	04	U	00000056	N
00662	05	L	00000082	N
00662	06	L	00000083	N
00662	07	L	00000261	N
00662	08	L	00000267	N
00662	09	U	00008229	N
00662	10	U	00008228	N
00662	11	L	00000290	N

00662	12	L	00000294	N
00662	13	L	00000296	N
00662	14	U	00013495	N
00662	15	P	00000412	Y
00662	16	L	00001378	N
00662	17	L	00001379	N
00662	18	L	00001380	N
00662	19	L	00001382	N
00662	20	L	00001385	N
00662	21	U	00001485	N
00662	22	L	00001744	N
00662	23	L	00001745	N
00662	24	L	00001746	N
00662	25	L	00001796	N
00662	26	L	00001801	N
00662	27	U	00008226	N
00662	28	U	00001815	N
00662	29	U	00001816	N
00662	30	L	00001819	N
00662	31	L	00001820	N
00662	32	L	00001821	N
00662	33	U	00001839	N
00662	34	U	00001840	N
00662	35	U	00001842	N
00662	36	L	00001846	N
00662	37	L	00006572	N
00662	38	L	00006573	N
00662	39	L	00006574	N
00662	40	L	00004199	N
00662	41	U	00002434	N
00662	42	U	00002437	N

00662	43	U	00002438	N
00662	44	U	00002439	N
00662	45	L	00002597	N
00662	46	L	00002598	N
00662	47	L	00002608	N
00662	48	L	00003656	N

3. Filter the results of step 2 to remove the record with a PROXY_IND value of **Y** (Yes). This example only filters out one record (INDCTS_SN = 15) from step 2's example data. See the section about the INDM Proxy Indicator (**PROXY_IND**) for more information on this column.
4. Filter (or sort, if you prefer) the results of step 3 if you wish to remove FDA-approved or non-FDA-approved indications. This example filters out numerous non-FDA-approved indications by removing results with an INDCTS_LBL value of **U** (Unlabeled).
5. Follow the process described in the FML module's [Finding DXID Descriptions and Synonyms](#) application to find each DXID value's Primary Professional Name.
6. Display the resulting set of Primary Professional Names. In this example the names appear sorted by their INDCTS_SN value (hidden from the end-user), but this sorting is arbitrary.

If applicable, you may also separate the results into two groups when you display them to the end-user: FDA-approved indications and non-FDA-approved indications.

Example—Partial list of Zithromax's FDA-approved indications (Primary Professional Names)

Primary Professional Name
Pharyngitis due to Streptococcus Pyogenes
Streptococcal Tonsillitis
Acute Gonococcal Urethritis
Acute Gonococcal Cervicitis
Chancroid
Chlamydia Trachomatis Urethritis
Chlamydia Cervicitis
Haemophilus Influenzae Acute Otitis Media
Streptococcus Acute Otitis Media
Moraxella Catarrhalis Acute Otitis Media
Pneumococcal Acute Otitis Media

Acute Otitis Media Infection

Acute Streptococcus Pneumoniae Bacterial Sinusitis

Acute Haemophilus Influenzae Bacterial Sinusitis

Acute Moraxella Catarrhalis Bacterial Sinusitis

Pneumococcal Pneumonia

Haemophilus Influenzae Pneumonia

Retrieving Drugs Indicated for a Selected Condition - Using the Exclusion Table to Refine the Treatment Options

This application illustrates how to build a list of drugs that are indicated for a selected diagnosis or medical problem—represented by an ICD code. You can customize the end results of this process based on your application's requirements. Some examples of the different identifiers that this application can return include:

- MED Medication ID (MEDID)—Present a list of brand and/or generic medications that include strength, dosage form, and route information to the end-user. Useful for CPOE, physician, and pharmacy audiences.
- MED Medication Name (MED_NAME)—Present a list of Brand and/or Generic medication names to the end-user. Less specific than the MEDID above. Useful for presenting a short, concise list of products to prescriber and physician audiences.
- The Generic Name - Short Version (GNN) or Long Version (GNN60)—Present a list of generically-named clinical formulations to the end-user.
- Hierarchical Specific Therapeutic Class Code (HIC3)—Optionally present a list of specific therapeutic classes to the end-user. This concept is useful as a grouping mechanism. Each Clinical Formulation ID (GCN_SEQNO) has one HIC3 to sort the retrieved drug concepts.

This application may yield drugs that are indicated for conditions different from, but closely related to, the original ICD code or condition used in the query. First Databank (FDB) suggests that you display the results as drug/condition pairs so the end-user can tell which condition each drug is indicated for. Additionally, FDB reminds you that, if applicable, you may want to filter obsolete products out of the return set.

This application is broken into the following three parts:

- **Part 1** retrieves Generic MEDIDs that are indicated for the initial search condition and any applicable condition related to the initial search condition. However, because of spatial restrictions, this example only uses a small subset of the retrieved MEDIDs in the sample data. All drugs retrieved in this example have either FDA-approved or unlabeled indications relating to the original search ICD code. Part 1 also retrieves other pieces of information necessary to the other parts of the application.
- **Part 2** retrieves descriptions for both the drug products and DxID conditions.
- **Part 3** groups the resulting medications based on how closely their indications relate to the initial condition. It also includes an option to display information to the user and exit the application.

Part 1: Retrieve MEDIDs and specific indication information

Part 1 builds a list of MEDIDs indicated for the initial condition (or one of its related conditions). It also gathers other pieces of information for use in later parts of this example.

1. Query the **FML ICD Search Table** (RFMLISR1_ICD_SEARCH) for the FML Related DxID (**RELATED_RXID**) and the FML Navigation Code (**FML_NAV_CODE**) where:
 - the Search ICD Code (**SEARCH_ICD_CD**) equals the code you are checking,
 - the ICD Code Type (**ICD_CD_TYPE**) column equals the value of the type of ICD code you are checking, and
 - the FML Clinical Module Code (**FML_CLIN_CODE**) equals 01.



- The Related DxID (**RELATED_RXID**) will be used in the next step to retrieve related indications.
- The FML_CLIN_CODE value of 01 restricts DxID semantic neighborhood results to indication information.
- The FML Navigation Code (**FML_NAV_CODE**) describes how the **SEARCH_RXID** relates to the **RELATED_RXID**. It will be used during Part 3 of this application

2. Query the DXID column of the **INDM Master Table** (RINDMMA2_INDCTS_MSTR) using each of the DXID values found in Step 1 to retrieve their INDM Indication Codes (**INDCTS**) and INDM Labeled Code (**INDCTS_LBL**).
3. Retrieve the INDM Labeled Code (**INDCTS_LBL**). Use the **INDCTS_LBL** value of **P** to filter out proxy indications. A value of **P** means the indication is a Proxy indication (used to infer patient diagnoses exclusively for contraindication checking algorithm). See the INDM Proxy Indicator section in your FDB MedKnowledge manual for more information on this column. Optionally, you may perform additional filtering and sorting using the INDM Labeled Code (**INDCTS_LBL**) (see Step 6) or the INDM Predictor Code (**PRED_CODE**) (see Step 7) at this time.
4. Query the **FML ICD Search Exclusion Table** (RFMLISX0_ICD_SEARCH_EXCLUSION) with the following fields from Step 2:
 - FML Search ICD Code (**SEARCH_ICD_CD**)
 - ICD Code Type (**ICD_CD_TYPE**)
 - FML Related DXIDs (**RELATED_RXID**)
 - FML Clinical Module Code (**FML_CLIN_CODE_DESC**)
 - Clinical Drug Group (**CLIN_DRUG_GROUP**) (In this application, the **INDCTS** populates this field.)
5. Filter the results of Step 4 from the results of Step 3.
6. *Optional:* If you wish to filter or sort indications based on FDA-approval status, use the **INDCTS_LBL**. A value of **U** means the indication is Unlabeled (i.e., not currently FDA-approved), and a value of **L** means the indication is FDA-approved.
7. *Optional:* If you wish to filter or sort indications based on their degree of certainty, use the **PRED_CODE**. See the INDM Predictor Code in your FDB MedKnowledge manual for more information on the nature of this column.
8. Retrieve the INDM Indications Drug Description (**INDCTS_DRUG_DESC**) for the INDM Indication Code (**INDCTS**) treatment options from the **INDM Drug Description Table** (RINDMDD0_INDCTS_DRUG_DESC) and present this list to the end user.
9. Query the INDCTS column of the **INDM GCN_SEQNO/Drug Indications Code Relation Table** (RINDMGC0_INDCTS_GCNSEQNO_LINK) using the INDCTS values found in Step 2 (or those INDCTS codes that remain after filtering in Steps 6 and 7) to retrieve their related GCN_SEQNOs.
10. Query the GCN_SEQNO column of the **MED Medication ID Table** (RMIID2_MED) using the filtered list of

GCN_SEQNOs that remain after Step 10 to retrieve the related MEDIDs.

11. Rearrange the results to form the following result set:

- FML Search ICD Code ([SEARCH_ICD_CD](#))
- FML Navigation Code ([FML_NAV_CODE](#)) from Step 1
- FML Related DXIDs ([RELATED_DXID](#))
- MED Medication ID ([MEDID](#))
- INDM Labeled Code ([INDCTS_LBL](#))

Part 2: Retrieve descriptions for the codes found in Part 1

Part 2 retrieves plain-english descriptions for the information found in part 1. However, part 2 ignores the GCN_SEQNO because its description is not necessary to display MEDIDs to the end-user.

1. Query the ICD Code Description ([ICD_DESC](#)) column of the [FML ICD Code Description Table](#) ([RFMLINM1_ICD_DESC](#)) using the Search ICD Code ([SEARCH_ICD_CD](#)) from Part 1 to retrieve the description for each [SEARCH_ICD_CD](#).
2. Query the MEDID column of the [MED Medication Table](#) ([RMIIID2_MED](#)) using the MEDID values found in part 1 to retrieve each MEDID's MED Medication Description ([MED_MEDID_DESC](#)).
3. Follow the process described in the application about Finding DXID Descriptions and Synonyms in your FDB MedKnowledge Manual to retrieve each DXID's **Primary Layman Name**.
4. Query the FML_NAV_CODE column of the [FML Navigation Description Table](#) ([RFMLNVD0_NAVIGATION_DESC](#)) to find each FML_NAV_CODE's FML Navigation Code Description ([FML_NAV_CODE_DESC](#)).
5. Query the INDCTS_LBL column of the [INDM Labeled Code Description Table](#) ([RINDMLD0_LABELED_DESC](#)) to find each INDCTS_LBL code's INDM Labeled Code Description ([INDLBLDESC](#)).

 Optionally, you may use an equivalent text description. For example, instead of "Drug Indication has been approved by the FDA" you can use "FDA-Approved."

Part 3: Sort the products based on how their indications relate to the initial search condition

Part 3 sorts the data found in part 1 and part 2 based on how the drug indications relate to the initial condition.

1. Sort the drugs from part 2 based on their FML_NAV_CODE_DESC. Construct a string to present to the end user that loosely follows these guidelines:
 - If **FML_NAV_CODE_DESC = Equal**; "The following drugs are indicated for the management of [DXID_SYN_DESC100]."
 - If **FML_NAV_CODE_DESC = Broader** or **Narrower**; "The following drugs are indicated for the management of [DXID_SYN_DESC100], a condition related to the initial search condition [*Initial Search Condition's DXID_SYN_DESC100*]."

2. Conclude the application by displaying the drugs to the end-user.

i This process will return duplicate strengths, routes, and dosage forms for drugs of the same medication name. If you wish to narrow the results down to eliminate these types of duplicates, navigate to a less-specific Medication Name Concept. See the MED Applications in your FDB MedKnowledge manual for more information on navigating between the various medication concepts.

i You can also sort by specific therapeutic class (HIC3) or Enhanced Therapeutic Classification (ETC).

Example—Retrieving Drugs Indicated for a Selected Condition—Using the Exclusion Table to Refine the Treatment Options

For purposes of demonstrating this application, the following scenario is used: A pregnant patient is diagnosed with hypertension (ICD-9-CM code 642.00) and a physician would like to prescribe a medication to treat the hypertension that can be safely administered to this pregnant patient.

Part 1: Retrieve MEDIDs and specific indication information

Part 1 builds a list of MEDIDs indicated for the initial condition (or one of its related conditions). It also gathers other pieces of information for use in later parts of this example.

1. Query the **FML ICD Search Table** (RFMLISR1_ICD_SEARCH) for the FML Related DxID (**RELATED_RXID**) and the FML Navigation Code (**FML_NAV_CODE**) where:

- the Search ICD Code(s) (**SEARCH_ICD_CD**) equals the **642.00**
- the ICD Code Type (**ICD_CD_TYPE**) column equals **01**
- the FML Clinical Module Code (**FML_CLIN_CODE**) equals **01**

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
642.00	01	00001432	01	03
642.00	01	00002543	01	03
642.00	01	00002553	01	03
642.00	01	00002554	01	03
642.00	01	00002556	01	03
642.00	01	00003446	01	03

i

- The Related DxID (**RELATED_RXID**) will be used in the next step to retrieve related indications.
- The FML_CLIN_CODE value of 01 restricts RxID semantic neighborhood results to indication information.

- The FML Navigation Code ([FML_NAV_CODE](#)) describes how the SEARCH_DXID relates to the RELATED_DXID. It will be used during Part 3 of this application.

2. Query the DXID column of the [INDM Master Table](#) (RINDMMA2_INDCTS_MSTR) using each of the DXID values found in Step 1 to retrieve their INDM Indication Codes ([INDCTS](#)) and INDM Labeled Code ([INDCTS_LBL](#)).

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXI D	FML_CLIN_CO DE	INDCTS	INDCTS_LBL
...
642.00	01	00001432	01	1141	L
642.00	01	00001432	01	1142	L
642.00	01	00001432	01	1144	L
642.00	01	00001432	01	1145	L
642.00	01	00001432	01	1146	L
642.00	01	00001432	01	1147	L
642.00	01	00001432	01	1160	L
642.00	01	00001432	01	1205	L
642.00	01	00001432	01	1215	L
642.00	01	00001432	01	1226	L
642.00	01	00001432	01	1228	L
...		
642.00	01	00001432	01	1751	L
...		

3. Retrieve the INDM Labeled Code ([INDCTS_LBL](#)). Use the INDCTS_LBL value of **P** to filter out proxy indications. A value of **P** means the indication is a Proxy indication (used to infer patient diagnoses exclusively for contraindication checking algorithm). See the INDM Proxy Indicator section in your FDB MedKnowledge manual for more information on this column. Optionally, you may perform additional filtering and sorting using the INDM Labeled Code ([INDCTS_LBL](#)) (see Step 6) or the INDM Predictor Code ([PRED_CODE](#)) (see Step 7) at this time.
4. Query the [FML ICD Search Exclusion Table](#) (RFMLISX0_ICD_SEARCH_EXCLUSION) with the following fields from Step 2:
- FML Search ICD Code ([SEARCH_ICD_CD](#))
 - ICD Code Type ([ICD_CD_TYPE](#))
 - FML Related DXIDs ([RELATED_DXI D](#))

- FML Clinical Module Code ([FML_CLIN_CODE_DESC](#))
- Clinical Drug Group ([CLIN_DRUG_GROUP](#)) (In this application, the INDCTS populates this field.)

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXID	FML_CLIN_CODE	CLIN_DRUG_GROUP
642.00	01	00001432	01	1228
642.00	01	00001432	01	1751

In this example, CLIN_DRUG_GROUP 1228 (valsartan) and 1751 (valsartan, hydrochlorothiazide) appear as exclusions.

5. Filter the results of Step 4 from the results of Step 3, as shown below.

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXI D	FML_CLIN_CO DE	INDCTS	INDCTS_LBL
...
642.00	01	00001432	01	1141	L
642.00	01	00001432	01	1142	L
642.00	01	00001432	01	1144	L
642.00	01	00001432	01	1145	L
642.00	01	00001432	01	1146	L
642.00	01	00001432	01	1147	L
642.00	01	00001432	01	1160	L
642.00	01	00001432	01	1205	L
642.00	01	00001432	01	1245	L
642.00	01	00001432	01	1226	L
...		

6. *Optional:* If you wish to filter or sort indications based on FDA-approval status, use the INDCTS_LBL. A value of **U** means the indication is Unlabeled (i.e., not currently FDA-approved), and a value of **L** means the indication is FDA-approved. This example does not filter any results.
7. *Optional:* If you wish to filter or sort indications based on their degree of certainty, use the PRED_CODE. See the INDM Predictor Code in your FDB MedKnowledge manual for more information on the nature of this column. This example does not filter any results.
8. Retrieve the INDM Indications Drug Description ([INDCTS_DRUG_DESC](#)) for the INDM Indication Code ([INDCTS](#)) treatment options from the INDM Drug Description Table ([RINDMDD0_INDCTS_DRUG_DESC](#)) and present this list to the end user.

INDCTS	INDCTS_DRUG_DESC	INDCTS_LBL
...		...
1141	NIFEDIPINE (EXTENDED RELEASE)	L
1142	DILTIAZEM (EXT-REL)	L
1144	NICARDIPINE(SUST REL)	L
1145	ISRADIPINE (EXTENDED RELEASE)	L
1146	FELODIPINE(SUST REL)	L
1147	NISOLDIPINE(SUST REL)	L
1160	TRANDOLAPRIL	L
1205	ENALAPRILAT	L
1215	TRANDOLAPRIL,VERAPAMIL	L
1226	ENALAPRIL MALEATE,FELODIPINE	L
...		

9. In this example, *Nifedipine (Extended Release)* (INDCTS = 1141) is selected. Query the INDCTS column of the **INDM GCN_SEQNO/Drug Indications Code Relation Table** (RINDMGC0_INDCTS_GCNSEQNO_LINK) using the INDCTS values found in Step 2 (or those INDCTS codes that remain after filtering in Steps 6 and 7) to retrieve their related GCN_SEQNOs. The following GCN_SEQNOs represent a small sample from the resulting set; the remainder of this application will only use the following GCN_SEQNOs:

INDCTS	INDCTS_LBL	GCN_SEQNO
1141	L	11792
1141	L	12059
1141	L	12060
1141	L	12061
1141	L	17309
1141	L	17310
1141	L	17312
1141	L	19932
1141	L	20551

1141	L	20616
1141	L	20617
1141	L	20618
1141	L	28395
1141	L	41326
1141	L	41327
1141	L	41762

Please note that your results will probably outnumber this example application's results.

10. Query the GCN_SEQNO column of the **MED Medication ID Table** (RMIID2_MED) using the filtered list of GCN_SEQNOs that remain after Step 10 to retrieve the related MEDIDs.

GCN_SEQNO	MEDID	INDCTS	INDCTS_LBL
020616	00150971	1141	L
012061	00174216	1141	L
012059	00200428	1141	L
020617	00227404	1141	L
020618	00233862	1141	L
012060	00283789	1141	L

The example above is filtered for generically named packaged products only (MED_NAME_SOURCE_CD = 2).

11. Rearrange the results to form the following result set:

- FML Search ICD Code (**SEARCH_ICD_CD**)
- FML Navigation Code (**FML_NAV_CODE**) from Step 1
- FML Related DXIDs (**RELATED_RXID**)
- MED Medication ID (**MEDID**)
- INDM Labeled Code (**INDCTS_LBL**)

SEARCH_ICD_CD	FML_NAV_CODE	RELATED_RXID	MEDID	INDCTS_LBL
642.00	03	00001432	00150971	L
642.00	03	00001432	00174216	L
642.00	03	00001432	00200428	L
642.00	03	00001432	00227404	L

642.00	03	00001432	00233862	L
642.00	03	00001432	00283789	L

Part 2: Retrieve descriptions for the codes found in Part 1

Part 2 retrieves descriptions for the information found in part 1. However, part 2 ignores the GCN_SEQNO because its description is not necessary to display MEDIDs to the end-user.

1. Query the ICD Code Description (**ICD_DESC**) column of the **ICD Description Table** (RFMLINM1_ICD_DESC) using the Search ICD Code (**SEARCH_ICD_CD**) from Part 1 to retrieve the description for each SEARCH_ICD_CD.

ICD_DESC	FML_NAV_CODE	RELATED_RXID	MEDID	INDCTS_LBL
ESSEN HYPERTEN PREG-UNSP	03	00001432	00150971	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	00174216	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	00200428	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	00227404	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	00233862	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	00283789	L

2. Query the MEDID column of the **MED Medication Table** (RMIID2_MED) using the MEDID values found in part 1 to retrieve each MEDID's MED Medication Description (**MED_MEDID_DESC**).

ICD_DESC	FML_NAV_CODE	RELATED_RXID	MED_MEDID_DESC	INDCTS_LBL
ESSEN HYPERTEN PREG-UNSP	03	00001432	nifedipine ER 30 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	nifedipine ER 90 mg Tab	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	nifedipine ER 30 mg Tab	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	nifedipine ER 60 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	nifedipine ER 90 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	03	00001432	nifedipine ER 60 mg Tab	L

3. Follow the process described in the application about Finding DXID Descriptions and Synonyms in your FDB MedKnowledge Manual to retrieve each DXID's **Primary Layman Name**.

ICD_DESC	FML_NAV_CODE	DXID_SYN_DESC 100	MED_MEDID_DESC	INDCTS_LBL
ESSEN HYPERTEN PREG-UNSP	03	High Blood Pressure	nifedipine ER 30 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	03	High Blood Pressure	nifedipine ER 90 mg Tab	L
ESSEN HYPERTEN PREG-UNSP	03	High Blood Pressure	nifedipine ER 30 mg Tab	L
ESSEN HYPERTEN PREG-UNSP	03	High Blood Pressure	nifedipine ER 60 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	03	High Blood Pressure	nifedipine ER 90 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	03	High Blood Pressure	nifedipine ER 60 mg Tab	L

4. Query the FML_NAV_CODE column of the **FML Navigation Description Table** (RFMLNVD0_NAVIGATION_DESC) to find each FML_NAV_CODE's FML Navigation Code Description (**FML_NAV_CODE_DESC**).

ICD_DESC	FML_NAV_CODE_DESC	DXID_SYN_DESC 100	MED_MEDID_DESC	INDCTS_LBL
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 30 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 90 mg Tab	L
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 30 mg Tab	L
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 60 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 90 mg 24 hr Tab	L
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 60 mg Tab	L

5. Query the INDCTS_LBL column of the **INDM Labeled Code Description Table** (RINDMLD0_LABELED_DESC) to find each INDCTS_LBL code's INDM Labeled Code Description (**INDLBLDESC**).

ICD_DESC	FML_NAV_CODE_DESC	DXID_SYN_DESC100	MED_MEDID_DESC	INDLBLDESC
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 30 mg 24 hr Tab	Drug Indication has been approved by the FDA
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 90 mg Tab	Drug Indication has been approved by the FDA
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 30 mg Tab	Drug Indication has been approved by the FDA
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 60 mg 24 hr Tab	Drug Indication has been approved by the FDA
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 90 mg 24 hr Tab	Drug Indication has been approved by the FDA
ESSEN HYPERTEN PREG-UNSP	Narrower	High Blood Pressure	nifedipine ER 60 mg Tab	Drug Indication has been approved by the FDA

- Optionally, you may use an equivalent text description. For example, instead of “Drug Indication has been approved by the FDA” you can use “FDA-Approved.” The example output later in this application uses descriptions that differ from the INDLBLDESC value.

Part 3: Sort the products based on how their indications relate to the initial search condition

Part 3 sorts the data found in part 1 and part 2 based on how the drug indications relate to the initial condition. Additionally, this part of the application presents you with an optional step that concludes the example without grouping the drugs by their therapeutic class codes.

- Sort the drugs from part 2 based on their FML_NAV_CODE_DESC. Construct a string to present to the end user that loosely follows these guidelines:
 - If FML_NAV_CODE_DESC = Equal:** “The following drugs are indicated for the management of [DXID_SYN_DESC100].”
 - If FML_NAV_CODE_DESC = Broader or Narrower:** “The following drugs are indicated for the management of [DXID_SYN_DESC100], a condition related to the initial search condition [Initial Search Condition’s ICD_DESC].”
- Conclude the application by displaying the drugs to the end-user.

The following drugs are indicated for the management of *High Blood Pressure*, a condition related to the initial search condition *Essential Hypertension or Pregnancy—Unspecified*.

nifedipine ER 30 mg 24 hr Tab	FDA-Approved
-------------------------------	--------------

-  This process will return duplicate strengths, routes, and dosage forms for drugs of the same medication name. If you wish to narrow the results down to eliminate these types of duplicates, navigate to a less-specific Medication Name Concept. See the MED Applications in your FDB MedKnowledge manual for more information on navigating between the various medication concepts.

Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy

This application illustrates how to use the Drug-Disease Contraindications Module (DDCM) along with the Indications Module (INDM) to populate inferred patient diagnoses when patient problem list information is not available, specifically for the purpose of screening a prescribed drug for drug-disease contraindications.

This example screens prescribed Adderall XR 5 mg 24 hour capsules (Clinical Formulation ID [GCN_SEQNO] 050428) for drug-disease contraindications. No diagnosis information exists for the patient, so indications will be inferred based on the patient's current medication of Timoptic 0.25% Eye Drops (Clinical Formulation ID [GCN_SEQNO] 007855).

- Find the INDM Indications Code ([INDCTS](#)) related to Timoptic's Clinical Formulation ID (GCN_SEQNO) of 007855 using the [INDM GCN_SEQNO/Indications Code Relation Table](#) (RINDMG0_INDCTS_GCNSEQNO_LINK).

GCN_SEQNO	INDCTS
007855	00929

- Retrieve each INDCTS code's set of INDM Predictor Code ([PRED_CODE](#)) and FML Disease Identifier ([DXID](#)) using the [INDM Master Table](#) (RINDMMA2_INDCTS_MSTR2). Those DXID codes that have a PRED_CODE of 1 or 2 (*certain* or *somewhat certain*, respectively) represent likely indications based on the patient's current medication(s).

INDCTS	DXID	PRED_CODE
00929	00001205	1

DXIDs with a PRED_CODE of 3 represent conditions that may exist based on current medication, but they have less predictive value than PRED_CODE 1 or 2. You may take this into account when your application displays end-user messages.

- For each DXID retrieved in the previous step, query the [FML Disease Identifier \(DxID\) Search Table](#) (RFMLDSR0_RXID_SEARCH) and retrieve the [RELATED_RXID](#) (RELATED_RXID) and FML Navigation Code ([FML_NAV_CODE](#)) values. Use the DXID from the previous step as the Search RxID ([SEARCH_RXID](#)). Retrieve only those RELATED_RXID values which have an FML Clinical Module Code ([FML_CLIN_CODE](#)) value of 03 (Drug-Disease Contraindications Module).

SEARCH_RXID	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
00001205	00001205	03	01
00001205	00001211	03	03

The FML Navigation Code describes the relationship between the two RxID values. You will use it later in this process when you compile information and construct an alert message.

Not every DxID appears as a SEARCH_DXID.

- Follow the steps detailed in the [Retrieving a List of Drug Contraindications](#) application of the DDCM chapter to find DDCM information about the new medication being prescribed. The results of this process when carried out for Adderall are summarized below.

DDXCN	DDXCN_SL	DXID	DXID_DESC100
50023	1	00000580	Hyperthyroidism
50023	2	00000962	Psychotic Disorder
50023	2	00001001	Drug Dependence
50023	1	00001005	Drug Abuse
50023	2	00001012	Gilles De La Tourette Syndrome
50023	1	00001018	Feeling Agitated
50023	1	00001211	Glaucoma
50023	3	00001432	Hypertension
50023	1	00001594	Disease of Cardiovascular System
50023	1	00001641	Severe Arteriosclerotic Vascular Disease
50023	2	00003145	Anorexia
50023	1	00003452	Lactating Mother
50023	1	00004739	Moderate Hypertension
50023	1	00013488	Structural Disorder of Heart

- Construct a list of the *matching* DXID values between the set of RELATED_DXID values found in step 3 (signifying indications inferred from the patient's active medications, in this case Timoptic), and the set of DXID values found in step 4 (signifying DDCM contraindications for Adderall). Also take note of the SEARCH_DXID and related FML_NAV_CODE values (found in step 3), and the related DDXCN_SL values (found in step 4). The compiled list below (in this case a single DxID) summarizes the DxID matches for this example.

Search DxID (from step 3)	Matching DxID (from step 3 and step 4)	Navigation Code (from step 3)	Severity Level (from step 4)
00001205	00001211	03	1

- Retrieve the FML 100-character Description ([DXID_DESC100](#)) for each SEARCH_DXID and DXID in the previous step using the [FML Disease Identifier \(DxID\) Table](#) (RFMLDX0_DXID).

DXID	DXID_DESC100
00001205	Open Angle Glaucoma
00001211	Glaucoma

7. Retrieve the Generic Name - Long Version (**GNN60**) for both Adderall and Timoptic using their Ingredient List Identifiers (**HICL_SEQNO**) and the [Ingredient List Identifier Description Table \(RHICLSQ1_HICLSEQNO_MSTR\)](#).

GCN_SEQNO	HICL_SEQNO	GNN60
007855	002105	TIMOLOL MALEATE
050428	013449	AMPHETAMINE ASPARTATE/AMPHETAMINE SULFATE/DEXTROAMPHETAMINE

If you have access to a description that is more specific than the GNN60 (for example a DIN-level description such as the Label Name), you may certainly use it instead of the GNN60.

8. Construct each of the following messages that applies to the results of step 6 using the information found above. When the **FML_NAV_CODE** does not equal 01, you must display two DxID descriptions. The *Inferred DXID_DESC100* denotes an inferred indication, and the *Matched Related DXID_DESC100* denotes an indication related to prescribed therapy.

- **If FML_NAV_CODE = 01 and**
 - DDXCN_SL = 1 then display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. The drug [*Prescribed Medication GNN60*] is contraindicated in patients with [*Inferred DXID_DESC100*].”
 - DDXCN_SL = 2 then display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. Patients with [*Inferred DXID_DESC100*] should be carefully evaluated before initiating therapy and monitored closely while taking [*Prescribed Medication GNN60*].”
 - DDXCN_SL = 3 then display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. Patients with [*Inferred DXID_DESC100*] should be carefully monitored during therapy with [*Prescribed Medication GNN60*].”
- **If FML_NAV_CODE = 02 or FML_NAV_CODE = 03 and**
 - DDXCN_SL = 1 **then** display, “Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. This condition is similar to [*Matched Related DXID_DESC100*] which is a contraindication for the use of [*Prescribed Medication GNN60*].”
 - DDXCN_SL = 2 **then** display, “Your patient has an inferred diagnosis of [*Inferred*

DXID_DESC100] based on your patient's current use of [*Current Medication MED_MEDID_DESC*]. This condition is similar to [*Matched Related DXID_DESC100*], which should be carefully evaluated before initiating therapy, and patients should be monitored closely while taking [*Prescribed Medication GNN60*]."

- *DDXCN_SL = 3 then* display, "Your patient has an inferred diagnosis of [*Inferred DXID_DESC100*] based on your patient's current use of [*Current Medication GNN60*]. This condition is similar to, [*Matched Related DXID_DESC100*], and patients should be carefully monitored during therapy with [*Prescribed GNN60*]."

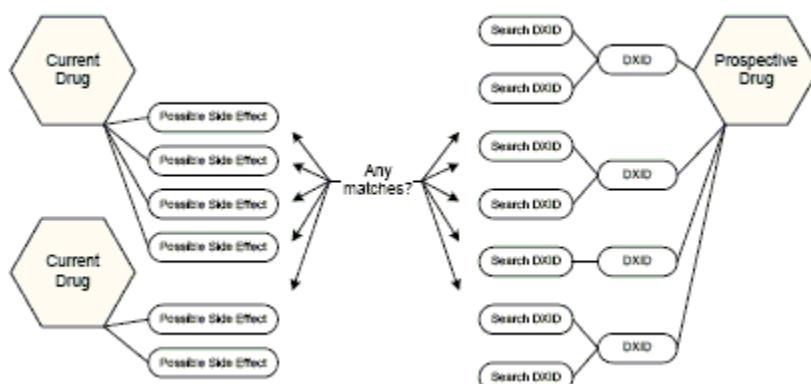
 The sample message templates above are suggestions based on interpretations of the *DDXCN_SL* descriptions. Customers can modify these warnings as they see fit.

9. Display the results to the end-user.

Your patient has an inferred diagnosis of Open Angle Glaucoma based on your patient's current use of **TIMOLOL MALEATE**. This condition is similar to **Glaucoma** which is a contraindication for the use of **AMPHETAMINE ASPARTATE/AMPHETAMINE SULFATE/DEXTRAMPHETAMINE**.

Detecting Possible Drug-Related Iatrogenic Diseases

This application illustrates how to use the INDM module in conjunction with the [Side Effects Module™ \(SIDE\) 2.0](#) to help identify cases when a prescribed drug may be treating a drug-related iatrogenic disease. If a patient's prospective drug indications match current drug side effects, it is possible that the prospective drug is being prescribed to treat problems caused by the patient's current drug (see illustration).



In cases like these, it may be appropriate to modify prescribed therapy for the drug *causing the side effect* rather than simply prescribing a second drug to treat the drug-related problems or side effects.

- i You can use this application in cases where neither drug is truly "current" or "prospective" (for example, to compare two drugs on a patient profile). In these cases, carry out the steps of this application iteratively for each drug, each time using one drug as the current drug and the other as the prospective drug.

This example uses Prozac 20MG capsule (Clinical Formulation ID [GCN_SEQNO] 046214) as the patient's current drug, with a prospective drug of Viagra 50MG tablet (Clinical Formulation ID [GCN_SEQNO] 039190).

Part 1: Build a Side Effects Table for the Current Drug

Part 1 builds a table of all side effects related to the patient's current drugs.

1. Query the GCN_SEQNO column of the [SIDE GCN_SEQNO/Drug Side Effect Code Relation Table \(RSIDEGC0_GCNSEQNO_LINK\)](#) using the current drug's Clinical Formulation ID (GCN_SEQNO) value to retrieve the related SIDE Side Effects Codes ([SIDE](#)).

GCN_SEQNO	SIDE
046214	00951

2. Query the SIDE column of the [SIDE Master Table \(RSIDEMA3_MSTR\)](#) using the SIDE values found in step 1 to retrieve their related FML Disease Identifier ([DXID](#)). The data below only reflects a portion of this step's results.

GCN_SEQNO	SIDE	DXID
046214	00951	00000967
046214	00951	00000985
...
046214	00951	00003387
046214	00951	00003410

3. Store each distinct combination of the Clinical Formulation ID (GCN_SEQNO), SIDE, and DXID codes in a **Temporary Side Effects Table** for later use.

GCN_SEQNO	SIDE	DXID
046214	00951	00000607
046214	00951	00000736
...
046214	00951	00003387
046214	00951	00003410

Part 2: Build an Indications Table for the Prospective Drug

Part 2 builds a table of all indications related to the prospective drugs

1. Query the GCN_SEQNO column of the **INDM GCN_SEQNO/Indications Code Relation Table** (RINDMGC0_INDCTS_GCNSEQNO_LINK) using the drug's Clinical Formulation ID (GCN_SEQNO) value to retrieve the related INDM Indication Code (**INDCTS**).

GCN_SEQNO	INDCTS
039190	01343

Some Clinical Formulation IDs (GCN_SEQNOs) have zero related INDCTS codes; you may want to take this into account when you program your application.

2. Query the INDCTS column of the **INDM Master Table** (RINDMMA2_INDCTS_MSTR) using each INDCTS value from step 1 to retrieve the related DXIDs. You can also retrieve the INDM Predictor Code (**PRED_CODE**) at this time to improve the sensitivity of the inferred indication.

GCN_SEQNO	INDCTS	DXID
039190	01343	00002383

3. Query the FML Search DxID (**SEARCH_DXID**) column of the **FML Disease Identifier (DxID) Search Table** (RFMLDSR0_DXID_SEARCH) using the DXID values found in step 2 to retrieve their FML Related DxID (

RELATED_RXID) values—if any exist—and FML Navigation Code (**FML_NAV_CODE**) values. Specify an FML Clinical Code (**FML_CLIN_CODE**) value of **02** to restrict the results to side effect information.

GCN_SEQNO	INDCTS	SEARCH_RXID	RELATED_RXID	FML_NAV_CODE
039190	01343	00002383	00002383	01

4. Store each distinct combination of the Clinical Formulation ID (GCN_SEQNO), INDCTS, SEARCH_RXID, RELATED_RXID, and FML_NAV_CODE codes in a **Temporary Indications Table** for later use.

GCN_SEQNO	INDCTS	SEARCH_RXID	RELATED_RXID	FML_NAV_CODE
039190	01343	00002383	00002383	01

Part 3: Compare Side Effects to Indications and Display Results

1. Join the **Temporary Side Effects Table** from part 1 and the **Temporary Indications Table** from part 2. Retrieve all records from the **Temporary Side Effects Table** where:

- The Clinical Formulation ID (GCN_SEQNO) from the Temporary Side Effects Table **does not equal** the Clinical Formulation ID (GCN_SEQNO) from the Temporary Indications Table, and
- The RXID from the Temporary Side Effects Table **equals** the RELATED_RXID from the Temporary Indications Table

This query returns current drugs whose side effects match prospective drug indications.

GCN_SEQNO	SIDE	RXID	RELATED_RXID	FML_NAV_CODE
046214	00951	00002383	00002383	01

2. Follow the process described in [Finding RXID Descriptions and Synonyms](#) to retrieve each RELATED_RXID's **Primary Professional Name**.

RELATED_RXID	RXID_DESC100
00002383	Erectile Dysfunction

i If the RELATED_RXID and SEARCH_RXID values differ, keep track of which description is the *related* RxID description, and which is the search RxID description. You will use both descriptions in step 4 below.

3. *Optional:* Query the **SIDE Master Table** (RSIDEMA3_MSTR) using the SIDE value to retrieve any of the various Side Effect columns. See the [Side Effects Module™ \(SIDE\) 2.0](#) chapter for more information about the various side effect attributes.
4. Construct a string to present to the end user that loosely follows these guidelines:
 - If **FML_NAV_CODE = 01**; “[RXID_DESC100] appears as a possible side effect of [Current Drug]. [Prospective Drug] is indicated in patients with [RXID_DESC100], therefore it may be appropriate to

make sure that [Prospective Drug] has not been prescribed solely to treat a drug-related iatrogenic disease caused by [Current Drug]."

- If **FML_NAV_CODE = 02 or 03**; "[Search DXID_DESC100] appears as a possible side effect of [Current Drug]. Because [Prospective Drug] is indicated in patients with [Related DXID_DESC100], which is related to [Search DXID_DESC100], it may be appropriate to make sure that [Prospective Drug] has not been prescribed solely to treat a drug-related iatrogenic disease caused by [Current Drug]."

5. Display the final results.

Erectile Dysfunction appears as a possible side effect of Prozac 20MG capsule. Viagra 50MG tablet is indicated in patients with Erectile Dysfunction, therefore it may be appropriate to make sure that Viagra 50MG tablet has not been prescribed solely to treat a drug-related iatrogenic disease caused by Prozac 20MG capsule.

INDM ERD and Technical Specifications

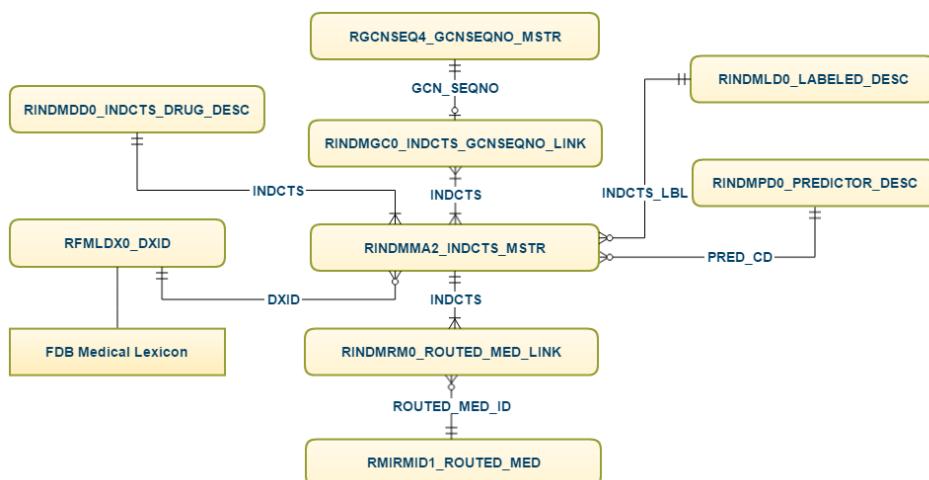
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Indications Module Tables
- Indications Module ERD

Indications Module Tables

- INDM Drug Description Table
- INDM GCN_SEQNO/Indications Code Relation Table
- INDM Labeled Code Description Table
- INDM Master Table
- INDM Predictor Code Description Table
- INDM Routed Medication Table

Indications Module ERD



INDM Drug Description Table

Table Name	RINDMDD0_INDCTS_DRUG_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the INDM Indications Code to a text description of the drug associated with it.

Key	Column Name	Column Description	Format	Length	Picture
P	INDCTS	INDM Indications Code	N	5	9(5)
	INDCTS_DRUG_DESC	INDM Indications Drug Description	AN	100	X(100)

INDM GCN_SEQNO Indications Code Relation Table

Table Name	RINDMGC0_INDCTS_GCNSEQNO_LINK				
Revision Activity	original				
Purpose	Links a drug to a list of indications.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	INDCTS	INDM Indications Code	N	5	9(5)

INDM Labeled Code Description Table

Table Name	RINDMLD0_LABELED_DESC				
Revision Activity	add.03-14-2002				
Purpose	Relates the INDM Labeled Code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	INDCTS_LBL	INDM Labeled Code	AN	1	X(1)
	INDLBLDESC	INDM Labeled Code Description	AN	90	X(90)

INDM Master Table

Table Name	RINDMMA2_INDCTS_MSTR				
Revision Activity	rev.03-14-2002				
Purpose	Associates a drug product to an indication and provides attributes of that relationship.				

Key	Column Name	Column Description	Format	Length	Picture
P	INDCTS	INDM Indications Code	N	5	9(5)
P	INDCTS_SN	INDM Sequence Number	N	2	9(2)
F	INDCTS_LBL	INDM Labeled Code	AN	1	X(1)
F	FDBDX	First Databank Disease Code	AN	9	X(9)
F	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)
	PROXY_IND	INDM Proxy Indicator	AN	1	X(1)
F	PRED_CODE	INDM Predictor Code	AN	1	X(1)

INDM Predictor Code Description Table

Table Name	RINDMPD0_PREDICTOR_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the INDM Predictor Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	PRED_CODE	INDM Predictor Code	AN	1	X(1)
	PREDDESC	INDM Predictor Code Description	AN	90	X(90)

INDM Routed Medication Table

Table Name	RINDMRM0_ROUTEDED_MED_LINK
Revision Activity	add.07-01-2002
Purpose	Links the routed medication to an indication.

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	INDCTS	INDM Indications Code	N	5	9(5)

Interactions

- Drug-Drug Interaction Module™ (DDIM™)
- Drug-Drug Interaction Module for Consumers™ (DDIM-C™)
- Drug-Food Interaction Module™ (DFIM™)
- Drug-Food Interaction Module for Consumers™ (DFIM-C™) 1.0

Drug-Drug Interaction Module

Drug-Drug Interaction Module™ (DDIM™) 3.2

- General Information
- Drug-Drug Interaction Module Editorial Policies
- Applications
- ERD and Technical Specifications

DDIM General Information

The General Information section contains high-level information about the module.

- Overview
- Definitions
 - Drug-Drug Interaction
- Concepts
 - Finding Drug-Drug Interactions
 - DDI_MONOX
 - DDI_CODEX
 - Interaction Monographs
 - The Drug-Drug Expanded Interaction Code
 - The Drug-Drug Interaction Description
 - The Drug-Drug Interaction Expanded Monograph Number
 - The Drug-Drug Interaction Clinical Effect Code
 - The Drug-Drug Interaction Severity Levels
 - The Reference Category Line Identifiers

Overview

The First Databank (FDB) Drug-Drug Interaction Module (DDIM) for professionals assists in identifying and preventing drug interactions between two administered drug products. DDIM supports marketable drug products and reports only the most clinically significant interactions.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within the DDIM monograph for the interaction.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module may also be defined.

Drug-Drug Interaction

A pharmacologic response in a patient who receives two agents that differs from the expected pharmacologic response had the patient taken each drug separately. This definition includes synergistic and antagonistic effects, as well as some additive side effects. An additive side effect (as defined by DDIM and DDIM-C editorial policy) is a potentially life-threatening side effect. This definition includes side effects caused by non-contraindicated drug combinations to concurrent therapy, previously only identified in FDB's Side Effects Module™ (SIDE).

Concepts

This section describes concepts and database elements that are important for understanding the module.

Finding Drug-Drug Interactions

DDIM codifies drug-drug interactions using the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)).

There are two options for determining if an interaction exists between two drug products (drug1 and drug2): The DDI_MONOX equal value method, which uses the Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)), and the DDI_CODEX sum value method, which uses the [DDI_CODEX](#).

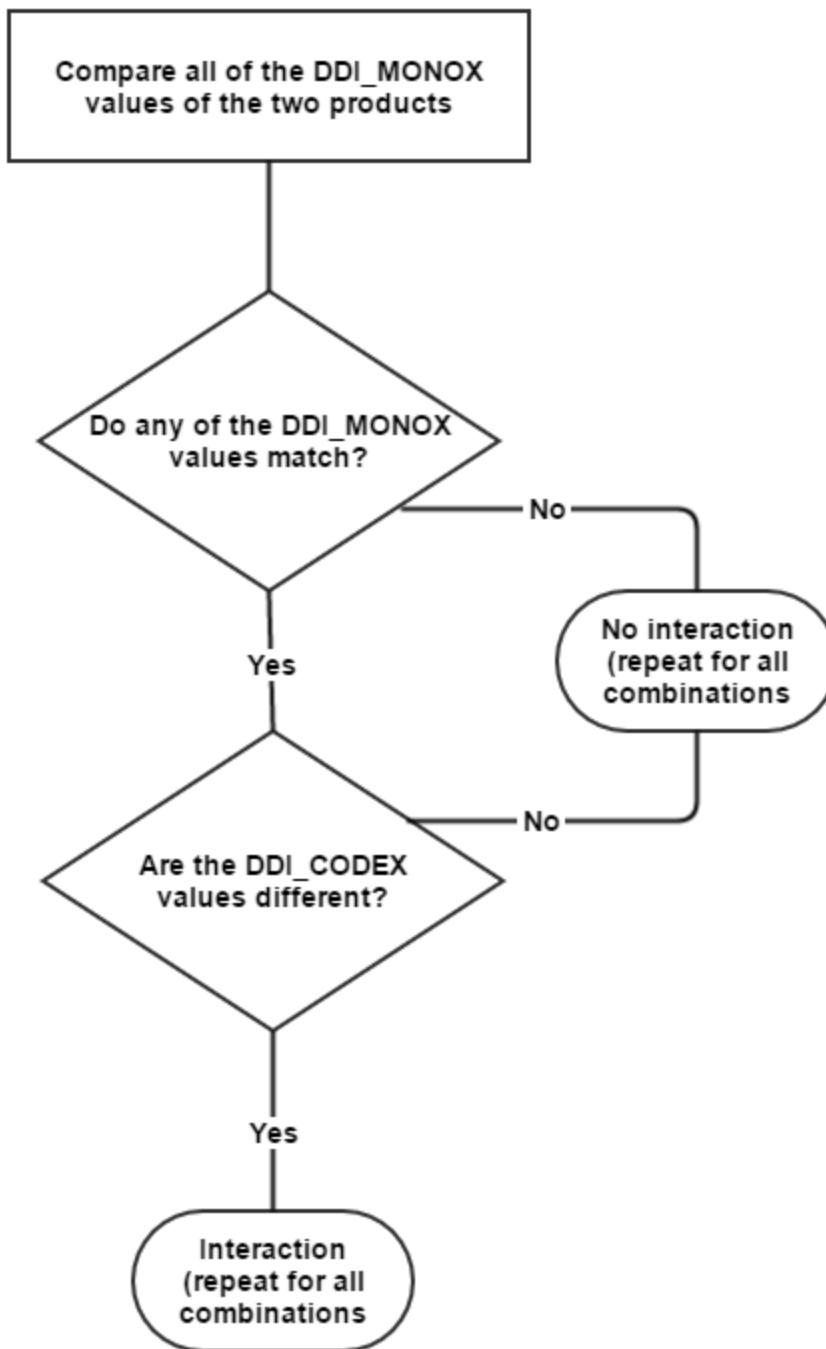
Your requirements will likely determine which method will work best for you. The DDI_MONOX equal value method can be performed strictly utilizing database joins. The DDI_CODEX sum value method requires iterative logic and data structures. Both yield the same results and neither method is more or less correct than the other.

DDI_MONOX

For the DDI_MONOX equal value method, if BOTH of the following are true, there is an interaction:

- (DDI_MONOX of drug1) equals [=] (DDI_MONOX of drug2)
- (DDI_CODEX of drug1) does not equal [not =] (DDI_CODEX of drug2)

Drug products can have more than one DDI_MONOX value. Therefore, to identify an interaction between two drugs, take all the DDI_MONOX values associated to each drug product and see if any DDI_MONOX values match. The corresponding DDI_CODEX values must be different for there to be an interaction.



For example:

Drug 1 Values		Drug 2 Values	
DDI_CODEX	DDI_MONOX	DDI_CODEX	DDI_MONOX
00071	00071	01045	01045
01130	01130	30858	01142
30765	01235	30870	01130
		31705	00295

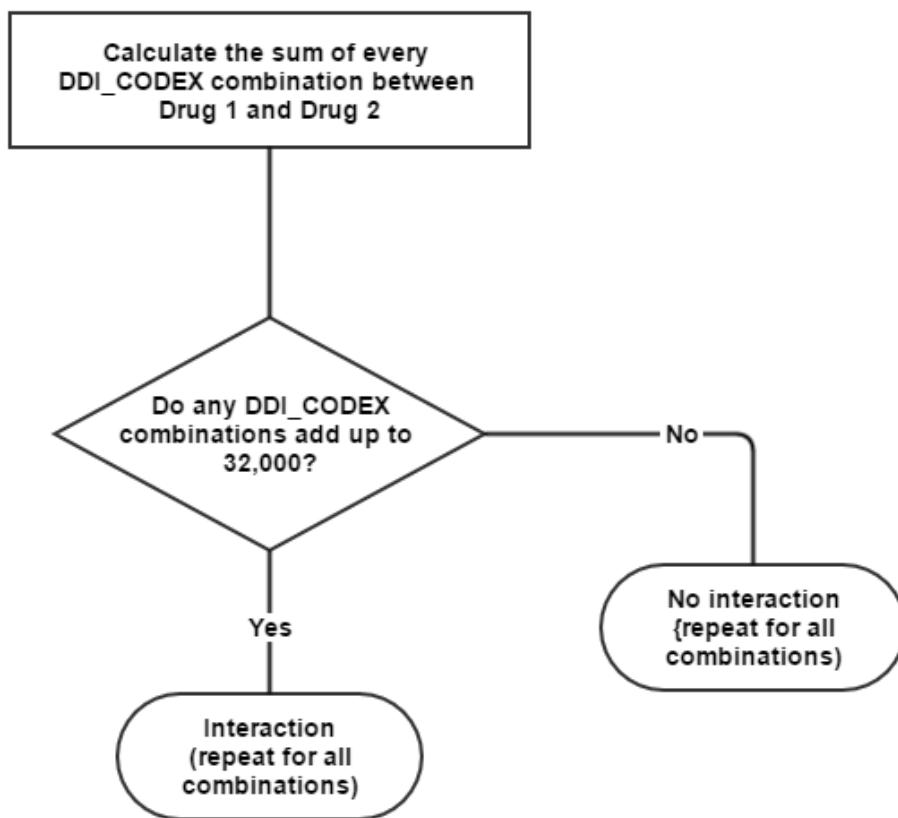
DDI_MONOX: 01130 = 01130
 DDI_CODEX: 01130 ≠ 30870

DDI_CODEX

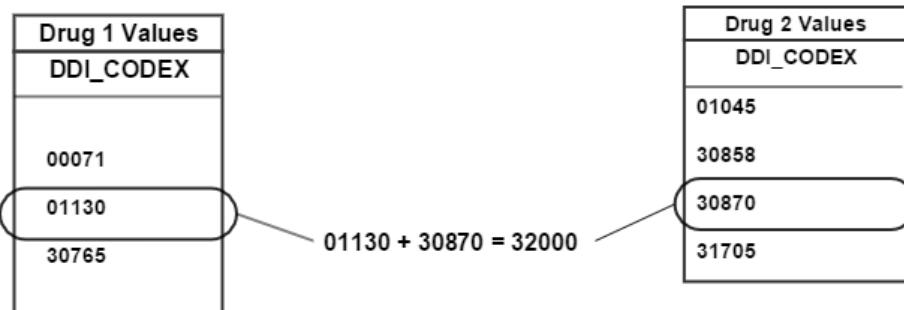
For the DDI_CODEX sum value method, if the following is true, there is an interaction:

(DDI_CODEX of drug1) plus [+] (DDI_CODEX of drug2) equals [=] 32,000

Drug products can have more than one DDI_CODEX value. Therefore, to identify an interaction between two drugs, take the sum of each DDI_CODEX value associated to each drug product and see if any pairs add up to 32,000.



For Example:



DDI_CODEX values are associated to a product's Clinical Formulation ID ([GCN_SEQNO](#)) or Routed Medication Identifier ([ROUTED_MED_ID](#)).

Interaction Monographs

Each drug-drug interaction has an interaction monograph, which provides detailed information about the given drug interaction. Monographs provide:

- Clinical significance
- The mechanism of action
- Clinical effects
- Predisposing factors that may make the interaction more severe in certain patients
- Patient management recommendations
- Discussion sectionReferences to the primary literature. Reference citations are formatted as in the National Library of Medicine's MedLine

FDB recommends that you provide the entire DDIM monograph for a given interaction to the end-user.

The Drug-Drug Expanded Interaction Code

DDIM uses the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) to identify drug-drug interactions, reference interaction monographs, and supply additional interaction information. The DDI_CODEX and its text description, the Drug-Drug Interaction Description ([DDI_DES](#)) column, reside in the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR).

DDI_CODEX values are associated with drugs at the following MedKnowledge concept levels using the following tables:

- The Clinical Formulation ID ([GCN_SEQNO](#)) in the [GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#) (RADIMGC4_GCNSEQNO_LINK)
- The MED Routed Medication ID ([ROUTED_MED_ID](#)) in the [DDIM Routed Medication Table](#) (RDDIMRM0_ROUTED_MED_LINK)

An interaction exists between two drugs if any two of their DDI_CODEX values add up to 32,000 or if any two of the DDI_MONOX values matches and the corresponding DDI_CODEX values do not match. In addition to vital to

the drug-interaction identification process, the DDI_CODEX also provides access to other columns that offer various types of interaction information (see the [Drug-Drug Interaction Master Table \[RADIMMA5_MSTR\]](#)).

DDIM accommodates up to 16,000 drug monographs, which can cover multiple pairs of interacting agents.

The Drug-Drug Interaction Description

The Drug-Drug Interaction Description ([DDI_DES](#)) contains a text description of the associated DDI_CODEX. There are two different DDI_DES descriptions for each drug interaction, for example:

DDI_CODEX	DDI_DES
01130	SELECTED XANTHINE DERIVATIVES/FLUVOXAMINE
30870	FLUVOXAMINE/SELECTED XANTHINE DERIVATIVES

Two descriptions exist for each drug-drug interaction; one for each DDI_CODEX value.

The Drug-Drug Interaction Expanded Monograph Number

Each Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) is associated with a DDIM monograph in the [Drug-Drug Interaction Monograph Text Table](#) (RADIMMO5_MONO). DDIM Monographs explain drug-drug interactions in greater detail and provide information references for end-users. FDB recommends that you allow end-users to access the monographs at the time of drug interaction screening.

The RADIMMO5_MONO table contains one or more rows for each DDI_MONOX. A complete monograph consists of all rows with the same DDI_MONOX number. Each row contains a line of descriptive text in the Drug-Drug Interaction Monograph Text column ([IAMTEXTN](#)).

The rows are further categorized by type, such as Discussion text, Clinical Effects text, or Reference text, using the Drug-Drug Interaction Monograph Line Identifier ([IAMIDENTN](#)). The text's sequence of appearance on the monograph is specified by the Drug-Drug Interaction Monograph Text Sequence Number ([ADI_MONOSN](#)). Finally, the Drug-Drug Interaction Reference Category Line Identifier ([IAMREFCAT](#)) column provides more information about rows that have an IAMIDENTN type of R.

For example, the monograph for xanthine derivatives and fluvoxamine (DDI_MONOX 01130) contains 60 lines of text. Here are the first 10 lines as they appear in the RADIMMO5_MONO table (sorted by ADI_MONOSN):

DDI_MONOX	ADI_MONOSN	IAMIDENTN	IAMTEXTN	IAMREFCAT
01130	001	T	MONOGRAPH TITLE: Selected Xanthine Derivatives	
01130	002	B		
01130	003	L	SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient	

01130	004	L	and take action as needed.	
01130	005	B		
01130	006	A	MECHANISM OF ACTION: Fluvoxamine may inhibit the metabolism of the xanthine	
01130	007	A	derivatives by the cytochrome P450-1A2 isoenzyme.(1,2)	
01130	008	B		
01130	009	E	CLINICAL EFFECTS: Concurrent use of fluvoxamine and xanthine derivatives	
01130	010	E	may result in elevated levels of the xanthine derivative and toxicity.	

See the RADIMMO5_MONO, page 893 Technical Specification for descriptions of these columns. Displayed in a more user-friendly format, the ten rows in the monograph above may appear like this:

Example—Sample of the Monograph Text for DDIM Monograph 01130

MONOGRAPH TITLE: Selected Xanthine Derivatives
SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient and take action as needed.
MECHANISM OF ACTION: Fluvoxamine may inhibit the metabolism of the xanthine derivatives by the cytochrome P450-1A2 isoenzyme.(1,2)
CLINICAL EFFECTS: Concurrent use of fluvoxamine and xanthine derivatives may result in elevated levels of the xanthine derivative and toxicity.

The Drug-Drug Interaction Clinical Effect Code

The Drug-Drug Interaction Clinical Effect Code (**ADI_EFFTC**) provides an abbreviated version of a given interaction's clinical effect description, using the **Drug-Drug Interaction/Clinical Effects Relation Table (RADIMIE4_CLIN_EFFECTS_LINK)**. This code and its description column are located in the **Drug-Drug Interaction/Clinical Effects Description Table (RADIMEF0_CLIN_EFFECT)**.

The RADIMEF0_CLIN_EFFECT table

ADI_EFFTC	ADI_EFFTXT
ADD	Additive side effects form both drugs
ARF	Adverse reaction of the former drug

ARL	Adverse reaction of the latter drug
AVD	Avoid concurrent use when possible
CEE	Conflicting evidence exists for these drugs
CIS	Contraindicated in some patients
DEF	Decreased effect of the former drug
DEL	Decreased effect of the latter drug
INF	Increased effect of the former drug
INL	Increased effect of the latter drug
MAR	Adverse reaction with both drugs
MXF	Mixed effects of the former drug
MXL	Mixed effects of the latter drug
LBC	Labeling conflicts between countries or products

The Drug-Drug Interaction Severity Levels

The Drug-Drug Interaction Severity Levels ([DDI_SL](#)) classify drug interactions based on their degree of patient risk. DDI_SL values are associated with DDI_CODEX values in the [Drug-Drug Interaction Master Table \(RADIMMA5_MSTR\)](#). Severity levels do not incorporate the level of documentation for an interaction.

Interactions have severity levels of 1, 2, 3, and 9, where 1 represents the highest patient risk potential. Because all of the interactions within the DDIM module are considered clinically significant, FDB does not recommend entirely shutting off any severity levels of 1-3 during drug-drug interaction screening. FDB does recognize the need for and encourages the use of different levels and styles of alerts setting for different end-users (e.g. physicians, pharmacists, etc) and settings (e.g. inpatient, outpatient, etc).

DDI_SL	Severity Level Description	Severity Level Implications
1	Contraindicated Drug Combination	This drug combination is contraindicated and generally should not be dispensed or administered to the same patient.
2	Severe Interaction	Action is required to reduce risk of severe adverse interaction.
3	Moderate Interaction	Assess risk to patient and take action as needed.
9	Undetermined Severity—Alternative Therapy Interaction	Assess risk to patient and take action as needed.

Severity Level 1, “Contraindicated Drug Combination”

Drug combinations generally should not be dispensed or administered to the same patient. A manufacturer label

warning that indicates the contraindication warrants inclusion of a drug combination in this category, regardless of clinical evidence or lack of clinical evidence to support the contraindication.

Severity Level 2, “Severe Interaction”

Interactions that produce serious consequences in most patients. However, monitoring and/or titrating the agent(s) involved in severe interactions can significantly minimize the risk of adverse effects. If a drug product’s label contains the phrase, “concurrent use should be avoided,” the interaction is assigned this severity level. The drug combination may be absolutely contraindicated in some but not all patients, and the corresponding DDIM monograph contains information on how to identify these patients. The DDIM monograph also includes drugs that patients can take on a staggered schedule, but should never take at the same time. Actions required for severe interactions include, but are not limited to, discontinuing one or both agents, adjusting dosage, altering administration scheduling, and providing additional patient monitoring.

Severity Level 3, “Moderate Interaction”

Interactions of moderate severity. The clinician should assess the patient’s characteristics and take action as needed. Actions required for moderate interactions include, but are not limited to, discontinuing one or both agents, adjusting dosage, altering administration scheduling, and providing additional patient monitoring.

Severity Level 9, “Undetermined Severity - Alternative Therapy Interaction”

Interactions that involve alternative therapy agents. These interactions may exist between drugs and alternative therapy agents, or between multiple alternative therapy agents.

FDB defines alternative drug therapy as therapies not subject to the documentation of safety and efficacy through the United States’ Food and Drug Administration (FDA), such as a New Drug Application (NDA), an Abbreviated New Drug Application (ANDA), and so on. Alternative therapies include, but are not limited to, phytopharmaceuticals (herbal agents), Homeopathics, Nutriceuticals, and Anthroposophics.

Undetermined Severity indicates that an interaction is possible, but its potential severity is unknown. Actions required for undetermined severity interactions include, but are not limited to, discontinuing one or both agents, adjusting dosage, altering administration scheduling, and additional patient monitoring.

-  Current DDIM version severity levels do not directly correspond to the significance levels used in DDIM version 3.1, or in the obsolete DDIM version 3.0.

In the current DDIM version, Severity Levels 1 and 2 represent the most clinically significant interactions (contraindications and severe interactions). In past the DDIM versions 3.0 and 3.1, the most clinically significant interactions were contained in significance levels 1 and 3, depending on the amount of documentation available to support the interaction.

The Reference Category Line Identifiers

FDB provides the Drug-Drug Interaction Reference Category Line Identifier ([IAMREFCAT](#)) to assist clinicians in evaluating the quantity and type of documentation available for a given interaction. Each reference listed on an interaction’s monograph has an associated IAMREFCAT value that describes the nature of the reference.

IAMREFCAT	IAMREFCATD
1	Manufacturer's Information
2	Human Clinical Trial
3	Case Report
4	Meeting Abstract
5	In vitro/Animal Study
6	Review article

Reference indicators should not be used to mask or turn off severity levels. Rather, you can utilize these indicators to provide more detailed interaction alert messages.

Manufacturer's information encompasses product labeling, "Dear Healthcare Professional" letters, and correspondence between manufacturers and FDB. Human clinical trials encompass clinical trials of any size and type (single-blind, double-blind, placebo and non-placebo controlled, controlled, non-controlled, etc).

Review articles are infrequently utilized in DDIM because they typically refer to the same references incorporated in the DDIM monograph. Use of review articles is limited to those articles that draw new conclusions from previous works.

Without accessing an interaction's entire monograph, you can use the Drug-Drug Reference Category Indicators provided in the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR) to quickly determine its available reference types. The following table lists the IAMREFCAT values and their associated reference category indicator columns:

IAMREFCAT value	Associated RADIMMA5_MSTR column
1	Drug-Drug Interaction Reference Category Indicator - Manufacturer Info (DDI_MFGI)
2	Drug-Drug Interaction Reference Category Indicator - Human Clinical Trial (DDI_TRIALI)
3	Drug-Drug Interaction Reference Category Indicator - Case Reports (DDI_CASEI)
4	Drug-Drug Interaction Reference Category Indicator - Meeting Abstract (DDI_ABSI)
5	Drug-Drug Interaction Reference Category Indicator - In vitro/Animal Study (DDI_IVASI)
6	Drug-Drug Interaction Reference Category Indicator - Review (DDI_REVI)

Drug-Drug Interaction Module Editorial Policies

- Editorial Process
- Sources

i To maintain the integrity between the interaction codes and the tables, FDB recommends that you load all files with every update.

Editorial Process

The following section describes the processes and criteria the clinical editors use to add or review database elements.

i To maintain the integrity between the interaction codes and the tables, FDB recommends that you load all files with every update.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffect Canada Alerts from Health Canada
- MedWatch™ Safety Alerts
- Internal Triggers for Clinical Review
- CredibleMeds Updates

Internal Triggers for Clinical Review

The internal trigger that prompts the Clinical editors to add or review data is a new Clinical Formulation ID (GCN_SEQNO).

Inclusion Criteria

DDIM is not intended to be comprehensive, but instead is intended to be a clinically relevant subset of evidence-based interactions that do not unnecessarily burden the prescribing and dispensing workflows with alerts. DDIM uses the following as guidance: expected clinical severity, the quantity and quality of available evidence or documentation, and, for pharmacodynamics interactions, the unexpected nature of the potential interaction that may have pharmacodynamic effects including reduced efficacy or toxicity (e.g. additive effects on QT Prolongation). The DDIM monographs discuss the interaction's frequency of occurrence, but frequency is no part of the criteria for inclusion in the module.

Interactions are evaluated based upon ingredient, route, dose form, and strength. Interaction characteristics determine the level of specificity applied to drug interaction linking. For example, cimetidine and ranitidine belong to the same therapeutic class, but have different interaction potential, and therefore different interaction profiles.

When evaluating drug interactions, detailed patient-specific data is desirable, but not often available. DDIM is designed to function without patient specific data, but many interaction monographs include patient variable discussions. Onset, predisposing factors, and risk versus benefit are all patient-specific considerations.

- **Onset**—appears in the DISCUSSION section of the monograph. This information is extremely patient-specific. If a patient is on the verge of toxicity with one drug, adding another drug that impairs the first drug's elimination can rapidly produce toxicity (within a matter of hours). However, in a different patient, the same interaction may instead produce toxicity after a week of concurrent administration.
- **Predisposing Factors**—appears in the PREDISPOSING FACTORS section of the monograph. Certain patient populations may be predisposed to the effects of an interaction due to their medical conditions. For example, the interaction between amino glycosides and penicillin usually concerns only those patients with pre-existing renal disease.
- **Risk Versus Benefit**—In some situations, the benefit of administering two interacting drugs may outweigh the potential risk. Treating all patients in the same manner is inappropriate. The PREDISPOSING FACTORS and MANAGEMENT sections of the monograph address these issues and help the clinician develop a management strategy for individual patients.

Additive QT Prolongation

One potentially life-threatening additive side effect covered by DDIM is additive QT prolongation. DDIM maintains lists of Known QT Prolonging Agents and Possible QT Prolonging Agents. The starting point for these lists are the lists of "Drugs with Known Risk of Torsades de Pointes" and "Drugs with Possible Risk of Torsades de Pointes" maintained by [CredibleMeds.org](#). In addition to the lists maintained by [CredibleMeds.org](#), information from regulatory approved prescribing information, regulatory reviews, and primary medical literature is considered when evaluating agents for inclusion on and exclusion from DDIM's list of Known QT Prolonging Agents and Possible QT Prolonging Agents.

Exclusion Criteria

DDIM excludes interactions that involve tobacco, illicit drugs, and those interactions that are only clinically significant in the context of overdose.

When a drug is withdrawn from worldwide marketing, historical interaction data will not be removed from the database; however, new monographs may not be created for the product.

Sources

This section lists sources used by FDB to compile the information contained in the module.

References for DDIM include government approved prescribing information (from any country in which FDB has customers) printed in English, primary medical literature, and occasionally a secondary reference.

The primary medical literature that is cited within DDIM consists mostly of human clinical trials and case reports. Use of in vitro studies or animal data is reserved for documenting the mechanism of the interaction or for confirming that related agents interact as well. Use of review articles is limited to those that provide a new conclusion or recommendation about the interaction. Use of secondary references is limited to documenting the mechanism of the interaction, confirming that related agents interact as well, or providing a new conclusion or recommendation about the interaction. Secondary references are classified as "review articles".

DDIM Applications

- Screening for Active Ingredient Drug-Drug Interactions
- Displaying Drug-Drug Interaction Screening Messages
- Listing Interacting Agents
- Using DDIM as a Reference Tool
- Examples that use DDIM
- Displaying Coadministration Text
- Screening Drugs with a Washout Period

DDIM Screening for Active Ingredient Drug-Drug Interactions

This application illustrates how to identify drug-drug interactions that result from a product's active ingredients and methods on how to display this information to the user. An interaction exists between two products if the sum of any two Drug-Drug Expanded Interaction Codes ([DDI_CODEX](#)) equals 32,000 or if the Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) values of any two drug products match and the [DDI_CODEX](#) values do not match. For purposes of demonstrating this application, the following scenario is used: A physician prescribes the following drug products to a patient experiencing chronic conditions:

Drug Product	GNN	DIN
Indocid 25MG capsule	Indomethacin	00016039
Duralith 300MG tablet SA	Lithium Carbonate	00590665
Seromycin 250MG Pulv Cap	Cycloserine	02032414

Part 1: Determine the [DDI_CODEX](#) Values

1. Select the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) values from the [GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#) (RADIMGC4_GCNSEQNO_LINK) where the GCN_SEQNO column equals the values from the previous step. Only the first few related [DDI_CODEX](#) values are shown below for illustrative purposes.

GCN_SEQNO	DDI_CODEX
004004	00077
004004	00223
004004	00225
004004	00297

Part 2: Find a Drug-Drug Interaction

Depending on your business needs, use either the [DDI_CODEX](#) sum value method or the [DDI_MONOX](#) equal value method to determine if there is an interaction.

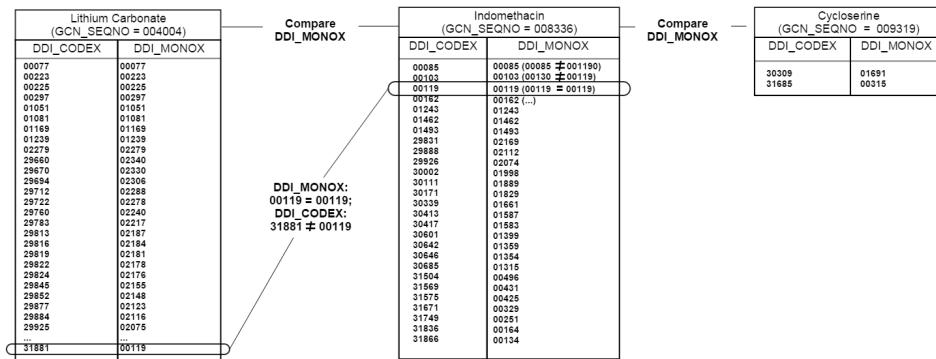
Part 2A: [DDI_MONOX](#) equal value method

1. Select the Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) values from the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR) where the [DDI_CODEX](#) column equals the values from the previous step.

DDI_CODEX	DDI_MONOX
00077	00077
00223	00223
00225	00225

00297	00297
31881	00119

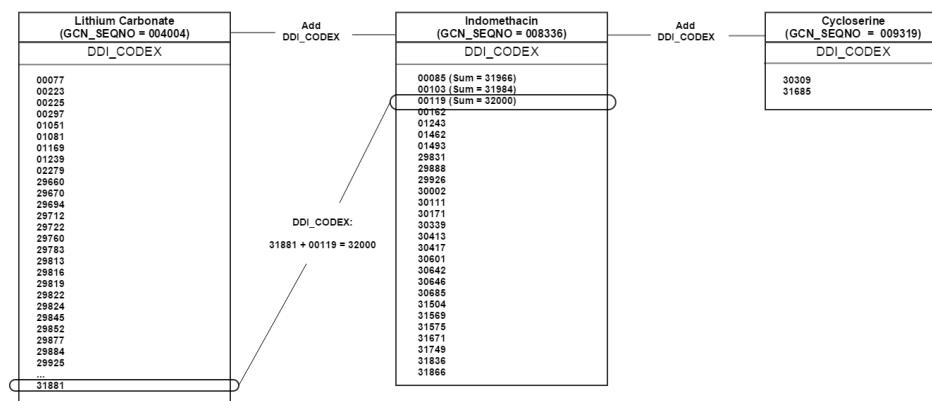
2. Compare all the associated DDI_MONOX values of each drug product to locate matching DDI_MONOX values that correspond to different DDI_CODEX values, which indicates that the two drugs interact.



i Only a subset of the value comparisons are illustrated. This application does not stop at the first instance of an interaction, as FDB recommends that you present every interaction to the clinician.

Part 2B: DDI_CODEX sum value method

For each of the drug product's Drug-Drug Expanded Interaction Code (**DDI_CODEX**) values, add the value to each DDI_CODEX value for the other drug products you are screening to locate pairs whose sum equals 32,000, which indicates that the two drugs interact.



i Only a subset of the sum calculations are illustrated. This application does not stop at the first instance of an interaction, as FDB recommends that you present every interaction to the clinician.

Part 3: Display the Drug-Drug Interaction Information to End-User

Display the drug-drug interaction information to the end-user. See the [Displaying Drug-Drug Interaction Screening Messages](#) application for display options.

DDIM Displaying Drug-Drug Interaction Screening Messages

This application illustrates the display options for end-user drug-drug interaction messages.

For purposes of demonstrating this application, the following scenario is used: A clinician wishes to see interaction messages displayed for the following drug-drug interaction:

DDI_CODEX	DDI_DES
00119	NSAIDS/LITHIUM
31881	LITHIUM/NSAIDS

Displaying the Full Monograph Text

See "Interaction Monographs" and "Drug-Drug Expanded Interaction Code" in the **Concepts** section for more information on displaying DDIM monographs.

1. Select the Drug-Drug Interaction Expanded Monograph Number (**DDI_MONOX**) value from the **Drug-Drug Interaction Master Table** (RADIMMA5_MSTR) where the DDI_CODEX column equals a DDI_CODEX value that participates in an interaction.

DDI_CODEX	DDI_DES	DDI_MONOX
00119	NSAIDS/LITHIUM	00119
31881	LITHIUM/NSAIDS	00119

Both DDI_CODEX values link to the same DDI_MONOX value, so you may use either value to perform this step.

2. Select the records from the **Drug-Drug Interaction Monograph Text Table** (RADIMMO5_MONO) where the DDI_MONOX column equals the DDI_MONOX value from the previous step.
Display the Drug-Drug Interaction Monograph Text (**IAMTEXTN**) column in the order indicated by the Drug-Drug Interaction Monograph Text Sequence Number (**ADI_MONOSN**) column.

DDI_MONOX	ADI_MONOSN	IAMIDENTN	IAMTEXTN	IAMREFCAT
00119	001	T	MONOGRAPH TITLE: NSAIDs/Lithium	
00119	002	B		
00119	003	L	SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient and	
00119	004	L	take action as needed.	

00119	005	B		
00119	006	A	MECHANISM OF ACTION: Decreased renal excretion of lithium, possibly	
00119	007	A	resulting from NSAID-induced prostaglandin inhibition.	
00119	008	B		
00119	009	E	CLINICAL EFFECTS: May observe increased lithium toxicity.	
00119	010	B		
00119	011	P	PREDISPOSING FACTORS: None determined.	
00119	012	B		
00119	013	M	PATIENT MANAGEMENT: If both drugs are administered, monitor plasma lithium	
00119	014	M	levels and observe the patient for signs and symptoms of lithium toxicity.	
00119	015	M	Adjust the dose of lithium accordingly.	
00119	016	B		
00119	017	D	DISCUSSION: Numerous studies and case reports have been documented that	
00119	018	D	administration of a NSAID to a patient stabilized on lithium therapy may	

00119	019	D	result in increased serum lithium levels and possible toxicity. Full effects	
00119	020	D	may take 1 to 2 weeks to develop and may persist for a week after the NSAID	
00119	021	D	is discontinued.	
00119	022	B		
00119	023	R	REFERENCES:	
00119	024	B		
00119	025	R	1.Frolich JC, Leftwich R, Ragheb M, Oates JA, Reimann I, Buchanan D.	2
00119	026	R	Indomethacin increases plasma lithium. Br Med J 1979 Apr 28;1(6171):1115-6	2
00119	027	R	2.Ragheb M, Ban TA, Buchanan D, Frolich JC. Interaction of indomethacin and	2
00119	028	R	ibuprofen with lithium in manic patients under a steady-state lithium	2
00119	029	R	level. J Clin Psychiatry 1980 Nov;41(11):397-8.	2
...	

You can choose to include or exclude monograph sections by listing or excluding values from the Drug-Drug Interaction Monograph Line Identifier column (**IAMIDENTN**) and the Drug-Drug Interaction Reference Category Line Identifier column (**IAMREFCAT**).

For example:

Patient Management: If both drugs are administered, monitor plasma lithium levels and observe the patient for signs and symptoms of lithium toxicity. Adjust the dose of lithium accordingly.

3. Display the monograph details to the end-user.

A sample of the monograph text is shown below:

MONOGRAPH TITLE: NSAID/Lithium

SEVERITY LEVEL: 3 - Moderate Interaction: Assess the risk to the patient and take action as needed.

MECHANISM OF ACTION: Decreased renal excretion of lithium, possibly resulting from NSAID-induced prostaglandin inhibition.

CLINICAL EFFECTS: May observe increased lithium toxicity.

PREDISPOSING FACTORS: None determined.

PATIENT MANAGEMENT: If both drugs are administered, monitor plasma lithium levels and observe the patient for signs and symptoms of lithium toxicity. Adjust the dose of lithium accordingly.

DISCUSSION: Numerous studies and case reports have been documented that administration of a NSAID to a patient stabilized on lithium therapy may result in increased serum lithium levels and possibly toxicity. Full effects may take 1 to 2 weeks to develop and may persist for a week after the NSAID is discontinued.

REFERENCES:

1. Frolick JC, Leftwich R, Ragheb M, Oates JA, Reimann I, Buchanan D. Indomethacin increases plasma lithium. Br Med J 1979 Apr 28; 1(6171):1115-6
2. Rabheb M, Ban TA, Buchanan D, Frolich JC. Interaction of indomethacin and ibuprofen with lithium in manic patients under a steady state lithium level. J Clin Psychiatry 1980 Nov;41(11):397-8

Displaying the Drug-Drug Interaction Severity Level

See "Drug-Drug Interaction Severity Levels" in the [Concepts](#) section for more information on the severity level column descriptions.

1. Select the Drug-Drug Interaction Severity Level ([DDI_SL](#)) value from the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR) where the DDI_CODEX column equals a selected DDI_CODEX value that participates in the above interaction.

DDI_CODEX	DDI_SL
00119	3

Both DDI_CODEX values link to the same DDI_SL value, so you may use either code to perform this step.

2. Select the Drug_Drug Interaction Severity Level Text ([DDI_SLTXT](#)) value from the [Drug-Drug Interaction Severity Levels Table](#) (RADIMSL1_SEVER_LEVEL) where the DDI_SL column equals the values from the previous step.

3. Display the Drug-Drug Interaction Severity Level to the end-user in the order indicated in the Drug-Drug Interaction Severity Level Text Sequence Number ([DDI_SL](#)).

For example:

SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient and take action as needed.

Displaying the Drug-Drug Interaction Clinical Effects Description

See "Drug-Drug Interaction Clinical Effect Code" in the [Concepts](#) section for more information on the clinical effects column descriptions.

1. Select the Drug-Drug Interaction Clinical Effect Code ([ADI_EFFTC](#)) value from the [Drug-Drug Interaction/Clinical Effects Relation Table](#) (RADIMIE4_CLIN_EFFECTS_LINK) where the DDI_CODEX column equals a selected DDI_CODEX value that participates in the above interaction.

DDI_CODEX	ADI_EFFTC
00119	INL

2. Select the Drug-Drug Interaction Clinical Effect Text ([ADI_EFFTXT](#)) value from the [Drug-Drug Interaction Clinical Effects Description Table](#) (RADIMEF0_CLIN_EFFECT) where the ADI_EFFTC column equals the values from the previous step.
3. Display the drug-drug interaction clinical effect description to the end-user.

For example:

CLINICAL EFFECTS: INL-Increased effect of the latter drug.

Displaying the Drug-Drug Interaction Description and EDI Reference Page Numbers

1. Select the Drug-Drug Interaction Description ([DDI_DES](#)) and the Drug-Drug Interaction Page References EDI ([DDI_PGEDI](#)) values from the from the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR) where the DDI_CODEX column equals a selected DDI_CODEX value that participates in the above interaction.

DDI_CODEX	DDI_DES	DDI_PGEDI
00119	NSAIDS/LITHIUM	10/047.00

2. Display the drug-drug interaction information to the end-user.

Interaction Drugs:
NSAIDs
Lithium
Evaluation of Drug Interaction Page Reference:
10/047.00

DDIM Listing Interacting Agents

This application illustrates how to generate a list of interacting agents for a given interaction.

For purposes of demonstrating this application, the following scenario is used: A clinician wishes to view ingredients that relate to the following interaction:

DDI_CODEX	DDI_DES
00251	TRIAMTERENE; AMILOLIDE/SELECTED NSAIDS
31749	SELECTED NSAIDS/TRIAMTERENE; AMILOLIDE

1. Select the Drug-Drug Interaction Agent Description Sequence Number ([DDI_AGSN](#)) values and the Drug-Drug Interaction Agent Description ([DDI_AGD](#)) values from the [Drug-Drug Interaction Agent Description Table](#) (RDDIMAG0_AGENT) where the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) column equals the [DDI_CODEX](#) values that participate in the interaction.

Any agents related to [DDI_CODEX](#) 00251 react unfavorably with any agents related to [DDI_CODEX](#) 31749.

DDI_CODEX	DDI_AGSN	DDI_AGD
00251	001	TRIAMTERENE
00251	002	AMILOLIDE

DDI_CODEX	DDI_AGSN	DDI_AGD
31749	001	ACECLOFENAC
31749	002	ALMINOPROFEN
31749	003	ALMINOPROFEN
31749	004	BENZYDAMINE
31749	005	DEXIBUPROFEN
31749	006	DICLOFENAC
31749	007	FLURBIPROFEN
31749	008	IBUPROFEN
31749	009	INDOMETHACIN

2. Display the list of interacting agents to the end-user.

Interacting Agents List**TRIAMTERENE: AMILOLIDE/SELECTED NSAIDS: SELECTED NSAIDS/TRIAMTERENE: AMILOLIDE:**

Amiloride	Aceclofenac
Triamterene	Acemetacin
	Alminoprofen
	Benzydamine
	Dexibuprofen
	Diclofenac
	Flurbiprofen
	Ibuprofen
	Indomethacin

DDIM Using DDIM as a Reference Tool

This application illustrates how to use DDIM to display clinical interaction information about a given drug without going through a patient profile and entering a new order.

For purposes of demonstrating this application, the following scenario is used: A clinician wishes to view all interaction information about *A-Hydrocort 500 MG univial* Clinical Formulation ID ([GCN_SEQNO](#) = 051560).

1. Select the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) values from the [GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#) (RADIMGC4_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the product to screen.

GCN_SEQNO	DDI_CODEX
051560	00021
051560	00023
051560	00065
051560	00121
051560	01058
051560	01502
051560	01503
051560	29966
051560	30001
051560	30112
051560	30401
051560	30557
051560	30591
051560	30654
051560	30702
051560	30735
051560	30916
051560	31802
051560	31869
051560	31914
051560	31915

2. Select the Drug-Drug Interaction Description (**DDI_DES**) values from the **Drug-Drug Interaction Master Table** (RADIMMA5_MSTR) where the **DDI_CODEX** column equals the values from the previous step.

DDI_CODEX	DDI_DES
00021	CORTICOSTEROIDS/HORMONAL CONTRACEPTIVES; ESTROGENS
00023	CORTICOSTEROIDS/CARBAMAZEPINE; HYDANTOINS
00065	CORTICOSTEROIDS/RIFAMYCINS
00121	CORTICOSTEROIDS/SELECTED MACROLIDE ANTIBIOTICS
01058	CORTICOSTEROIDS/GLYCRRHIZA (LICORICE)
01502	SYSTEMIC CORTICOSTEROIDS/LIVE VACCINES
01503	SELECTED CORTICOSTEROIDS/ITRACONAZOLE; KETOCONAZOLE
29966	GLUCOCORTICOIDS/QUETIAPINE
30001	CORTICOSTEROIDS/MIFAMURTIDE
30112	CORTICOSTEROIDS/ERLOTINIB
30401	CORTICOSTEROIDS; CORTICOTROPIN (ACTH)/AMPHOTERICIN B
30557	CORTICOSTEROIDS/QUINOLONES
30591	IMMUNOSUPPRESSIVES; IMMUNOMODULATORS/EFALIZUMAB; NATALIZUMAB
30654	STEROIDS/BUPROPION
30702	GLUCOCORTICOIDS/ALDESLEUKIN
30735	CORTICOSTEROIDS/ANTICOAGULANTS
30916	CORTICOSTEROIDS/MIFEPRISTONE
31802	CORTICOSTEROIDS/SELECTED ANTICHOLINESTERASE
31869	CORTICOSTEROIDS/BARBITURATES
31914	CORTICOSTEROIDS/SALICYLATES
31915	CORTICOSTEROIDS/INDOMETHACIN

3. Display the drug-drug interactions to the end-user.

Interaction 1 of 21

Corticosteroids & Hormonal Contraceptives; Estrogens

(Click for more information)

Interaction 2 of 21

Corticosteroids & Carbamazepine; Hydantoins

(Click for more information)

Interaction 3 of 21

Corticosteroids & Rifamycins

(Click for more information)

Interaction 4 of 21

Corticosteroids & Selected Macrolide Antibiotics

(Click for more information)

Interaction 5 of 21

Corticosteroids & Glycyrrhiza (Licorice)

(Click for more information)

...etc

4. Display interaction information for the end-user. See the [Displaying Drug-Drug Interaction Screening Messages](#) application for display options. For example:

Interaction Number 2 of 21

Interaction Drugs:

Corticosteroids

Carbamazepine; Hydantoins

Severity Level:

3 - Moderate Interaction: Assess the risk to the patient and take action as needed.

Evaluation of Drug Interaction Page Reference:

05/043.00

DDIM Examples that use DDIM

This section provides four examples of drug interactions for assisted learning, demonstrations, and testing purposes.

- Example 1: Standard Drug Interaction Example
- Example 2: Route-Specific Example
- Example 3: Combination Product Example, First Ingredient
- Example 4: Combination Product Example, Second Ingredient

These examples use the following DINs:

DIN	GCN	GCN_SEQNO	Brand Name	Used in Example(s)
02010526	16720	004381	Aspirin	1
01918354	25793	006562	Coumadin	1, 4
00872520	26650	006696	Hydrocortisone Sod Succinate	2
02297884	99927	064221	Priorix-Tetra	2
00502197	30951	007547	Cortate	2
02297825	47075	029929	Levofloxacin	3
00743518	14331	003788	Chlorpromazine HCL	3
02309785	63101	034068	Codofen	4

Example 1: Standard Drug Interaction Example

This example illustrates a basic drug-drug interaction alert. DDIM codes the interaction between aspirin and warfarin as aspirin and anticoagulants.

Interaction codes exist for all appropriate DINs.

Key DDI_CODEX Code Combination: 31999 + 00001 = 32000

Key DDI_MONOX Code Match: 00001 = 00001 for DDI_CODEX 00001 and 31999

DDIM Data

DIN	Descriptive Information
02010526	Label Name: ASPIRIN 325 MG TABLET EC Route: ORAL Generic Name - Long Version: ACETYLSALICYLIC ACID DDI_CODEX values: 00086 ... 31825 31888 31908 31999 DDI_MONOX values: 00086 ... 00175 00112 00092 00001

01918354	Label Name: COUMADIN 5 MG TABLET Route: ORAL Generic Name - Long Version: WARFARIN SODIUM DDI_CODEX values: 00001 ... 00114 00140 00141 00145 31973 31982 DDI_MONOX values: 00001 ... 00114 00140 00141 00145 00027 00018
----------	--

Specific Interaction Data

DDI_CODEX	DDI_DES	ADI_EFFTC	DDI_SL
00001	ANTICOAGULANTS/SALICYLATES	INF	2
31999	SALICYLATES/ANTICOAGULANTS	INL	2

Testing Notes

This example tests whether the first master table record can be found. If the DINs are reversed, it tests whether the last master table record can be found.

Demonstration Notes

This example demonstrates that new package sizes and generics from new labelers still have clinical interaction data, because DDIM maintains drug interaction data at the appropriate ingredient or therapeutic level.

Example 2: Route-Specific Example

This example illustrates DDIM's route-specific alert system.

Priorix-Tetra (DIN 02297884) interacts with injection Hydrocortisone SS (DIN 00872520) but does not interact with topical Cortate (DIN 00502197).

Key DDI_CODEX Code Combination: 01502 + 30498 = 32000

Key DDI_MONOX Code Match: 01502 = 01502 for DDI_CODEX 01502 and 30498

DDIM Data

DIN	Descriptive Information
00872520	Label Name: HYDROCORTISONE SS 100 MG VIAL Route: INJECTION Generic Name - Long Version: HYDROCORTISONE SODIUM SUCCINATE DDI_CODEX values: 00021 00023 00121 01058 01502 ... 31915 DDI_MONOX values: 00021 00023 00121 01058 01502 ... 00085

02297884	Label Name: PRIORIX-TETRA Route: INJECTION Generic Name - Long Version: MEASLES, MUMPS, RUBELLA, AND VARICELLA VACCINE/PF DDI_CODEX Values: 01304 01437 01588 01993 02065 02119 30007 30498 DDI_MONOX values: 01304 01437 01588 01993 02065 02119 01993 01502
00502197	Label Name: CORTATE 1% OINTMENT Route: TOPICAL Generic Name - Long Version: HYDROCORTISONE DDI_CODEX values: (None) DDI_MONOX values: (None)

Specific Interaction Data

DDI_CODEX	DDI_DES	ADI_EFFTC	DDI_SL
01502	Systemic Corticosteroids/Live Vaccines	CIS	2
30498	Live Vaccines/Systemic Corticosteroids	CIS	2

Testing Notes

This example tests your algorithm with an NDCa DIN that has no Drug-Drug Expanded Interaction Code values.

Demonstration Notes

This example demonstrates that DDIM is route-specific and does not generate alerts based solely on ingredients.

Example 3: Combination Product Example, First Ingredient

This example illustrates how DDIM generates alerts for a multi-ingredient product.

The first ingredient of Levofloxacin, levofloxacin, interacts with the chlorpromazine found in Chlorpromazine HCL.

Key DDI_CODEX Code Combination: 01507 + 30493 = 32000

Key DDI_MONOX Code Match: 01507 = 01507 for DDI_CODEX 01507 and 30493

DDIM Data

DIN	Descriptive Information

02297825	Label Name: LEVOFLOXACIN 500 MG/100 ML D5W Route: INTRAVENOUS Generic Name - Long Version: LEVOFLOXACIN/DEXTROSE 5%-WATER DDI_CODEX values: 01443 01444 01507 ... 31685 DDI_MONOX values: 01443 01444 01507 ... 00315
00743518	Label Name: CHLORPROMAZINE 25 MG/ML AMP Route: INJECTION Generic Name - Long Version: CHLORPROMAZINE HCL DDI_CODEX value: 00454 01330 ... 30493 ... 31965 DDI_MONOX values: 00454 01330 ... 01507 ... 00035

Specific Interaction Data

DDI_CODEX	DDI.Des	ADI_EFFTC	DDI_SL
01507	Levofloxacin/QT Prolonging Agents	ADD	3
30493	QT Prolonging Agents/Levofloxacin	ADD	3

Testing Notes

This example tests the ability of your algorithm to compare both the first Interaction Code (01507) and the sixth (30493) and checks that not just the first Interaction Codes in each product are being compared. Testing the DINs in reverse order will also ensure that your algorithm is not order-of-DIN specific (that is, screens drugs in both A-B and B-A order).

Demonstration Notes

This example demonstrates ingredient specificity in a combination drug.

Example 4: Combination Product Example, Second Ingredient

This example illustrates how DDIM generates alerts for a multi-ingredient product.

The second ingredient of Codofen, Ibuprofen, interacts with the warfarin sodium found in a Coumadin tablet.

Key DDI_CODE Code Combination: 00496 + 31504 = 32000

Key DDI_MONOX Code Match: 00496 = 00496 for DDI_CODEX 31504 and 00496

DDIM Data

DIN	Descriptive Information

02309785	Label Name: CODOFEN TABLET Route: ORAL Generic Name - Long Version: HYDROCODONE/IBUPR OFEN DDI_CODEX values: 00103 00119 00162 00473 ... 31504 31569 ... DDI_MONOX values: 00103 00119 00162 00473 ... 00496 00431 ...
01918354	Label Name: COUMADIN 5 MG TABLET Route: ORAL Generic Name - Long Version: WARFARIN SODIUM DDI_CODEX values: 00001 ... 00465 00470 00494 00495 00496 ... 31982 DDI_MONOX values: 00001 ... 00465 00470 00494 00495 00496 ... 00018

Specific Interaction Data

DDI_CODEX	DDI_DES	ADI_EFFTC	DDI_SL
00496	Anticoagulants/NSAIDs	INF	3
31504	NDSAIDs/Anticoagulants	INL	3

Testing Notes

None.

Demonstration Notes

This example demonstrates ingredient specificity in a combination drug.

Displaying Coadministration Text

This application illustrates how to display coadministration text for a drug pair.

For purposes of demonstrating this application, the following scenario is used: A physician prescribes the following drug products.

GCN_SEQNO	Clinical Formulation Description
9218	Doxycycline hyclate 100 mg
2142	Calcium carbonate 500 mg

Following the screening logic highlighted in the [Screening for Active Ingredient Drug-Drug Interactions](#) application, Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#) 69) for Tetracyclines/Divalent & Trivalent Cations is returned.

1. Select the Coadministration Dosing Text ([COADMIN_DOSING_TEXT](#)) from the [Drug-Drug Interaction Clinical Formulation Exception Table](#) ([RADIGE0_DDI_GCNSEQNO_EXCEPT](#)) where:
 - Drug-Drug Interaction Side A Clinical Formulation ID ([SIDE_A_GCN_SEQNO](#)) is equal to 9218 or 2142.
 - Drug-Drug Interaction Side B Clinical Formulation ID ([SIDE_B_GCN_SEQNO](#)) is equal to 9218 or 2142.
 - Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) is equal to 69.
2. Display the Coadministration Dosing Text ([COADMIN_DOSING_TEXT](#)) information to the end-user:

Administer tetracyclines at least two hours before or after medications containing magnesium, aluminum, calcium, zinc and iron.

Screening Drugs with a Washout Period

This application demonstrates the ability to screen previously discontinued drugs for drug-drug interactions within a given washout period. An interaction exists between a discontinued drug and an active drug:

- If the number of days since discontinuation of the drug is less than the specified washout period and the sum of any two Drug-Drug Expanded Interaction Codes ([DDI_CODEX](#)) equals 32,000.
- If the number of days since discontinuation is less than the specified washout period and the Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) values of any two drug products match and the [DDI_CODEX](#) values do not match.

For purposes of demonstrating this application, the following scenario is used: A physician orders selegine 5 mg tablet (GCN_SEQNO 12070) to a patient on February 16, 2016. The patient has previously discontinued fluoxetine HCL 10 mg tablet (GCN_SEQNO 18765) on February 1, 2016.

Part 1: Determine the [DDI_CODEX](#) Values

1. Select the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) values from the [GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#) (RADIMGC4_GCNSEQNO_LINK) where the [GCN_SEQNO](#) column equals the values from the order. Only the first few related [DDI_CODEX](#) values are shown below for illustrative purposes.

GCN_SEQNO	DDI_CODEX
12070	31806
12070	31833
12070	31858
12070	31912
12070	31970
18765	194
18765	1045
18765	1046
18765	1399

Part 2: Find a Drug-Drug Interaction

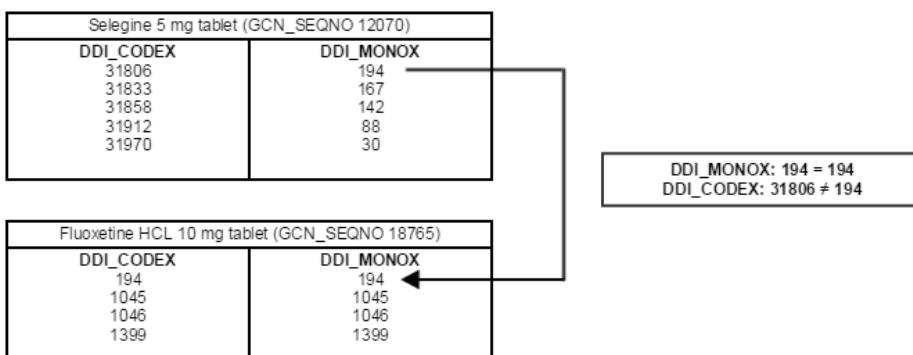
Depending on your business needs, use either the [DDI_CODEX](#) sum value method or the [DDI_MONOX](#) equal value method to determine if there is an interaction.

Part 2A: [DDI_MONOX](#) equal value method

1. Select the Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) values from the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR) where the [DDI_CODEX](#) column equals the values from the previous step.

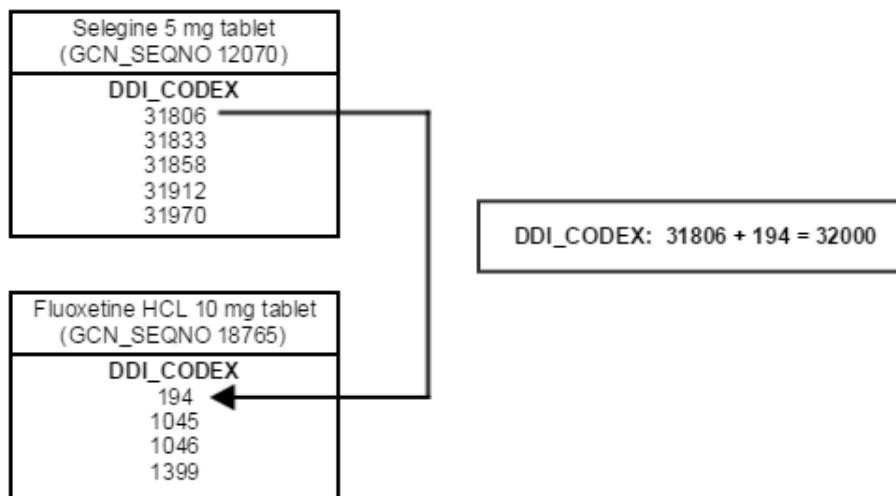
DDI_CODEX	DDI_MONOX
31806	194
31833	167
31858	142
31912	88
31970	30
194	194
1045	1045
1046	1046
1399	1399

2. Compare all the associated DDI_MONOX values of each drug product to locate matching DDI_MONOX values that correspond to different DDI_CODEX values, which indicates that the two drugs interact.



Part 2B: DDI_CODEX sum value method

1. For each of the drug product's Drug-Drug Expanded Interaction Code (DDI_CODEX) values, add the value to each DDI_CODEX value for the other drug products you are screening to locate pairs whose sum equals 32,000, which indicates that the two drugs interact.



Part 3: Check Washout period

With drug-drug interaction identified from the previous step and the drug discontinuation date from the scenario, the presence of a washout period for that drug and drug-drug interaction shall be evaluated.

1. Select the Drug-Drug Interaction Discontinued Medication Screening Amount ([DDI_DC_DAYS_SCREEN_AMOUNT](#)) from the [Drug-Drug Interaction Discontinued Clinical Formulation Screening Table](#) (RADIDC0_DDI_DC_GCNSEQNO_SCREEN) where:
 - The Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#)) matches the value from the previous step and
 - The Clinical Formulation ID ([GCN_SEQNO](#)) matches the value of the discontinued drug.

DDI_MONOX	GCN_SEQNO	DDI_DC_DAYS_SCREEN_AMO UNT
194	18765	35

2. Select the difference in days from the date the order is being placed, in this example February 16, 2016, and the date the drug was discontinued, in this example February 1, 2016. In this example, there is a 16 day difference between the order date and the drug discontinuation date.
3. Compare the difference between the order date and drug discontinuation date to the Drug-Drug Interaction Discontinued Medication Screening Amount ([DDI_DC_DAYS_SCREEN_AMOUNT](#)) value.
 - If the difference from the previous step is less than or equal to the Drug-Drug Interaction Discontinued Medication Screening Amount ([DDI_DC_DAYS_SCREEN_AMOUNT](#)), then present the drug-drug interaction to the physician as the washout period has not yet completed.
 - If the difference from the previous step is greater than the Drug-Drug Interaction Discontinued Medication Screening Amount ([DDI_DC_DAYS_SCREEN_AMOUNT](#)), then do not present the drug-drug interaction to the physician as the washout period has been met.

In this scenario, the 16 day difference from Step 2 is less than the 35 day Drug-Drug Interaction

Discontinued Medication Screening Amount (DDI_DC_DAYS_SCREEN_AMOUNT) value.

Therefore, drug-drug interaction information for Drug-Drug Interaction Expanded Monograph Number (DDI_MONOX) 194 should be displayed to the physician.

Part 4: Display the Drug-Drug Interaction Information to End-User

1. Display the drug-drug interaction information to the end-user. See the [Displaying Drug-Drug Interaction Screening Messages](#) application for display options.

DDIM ERD and Technical Specifications

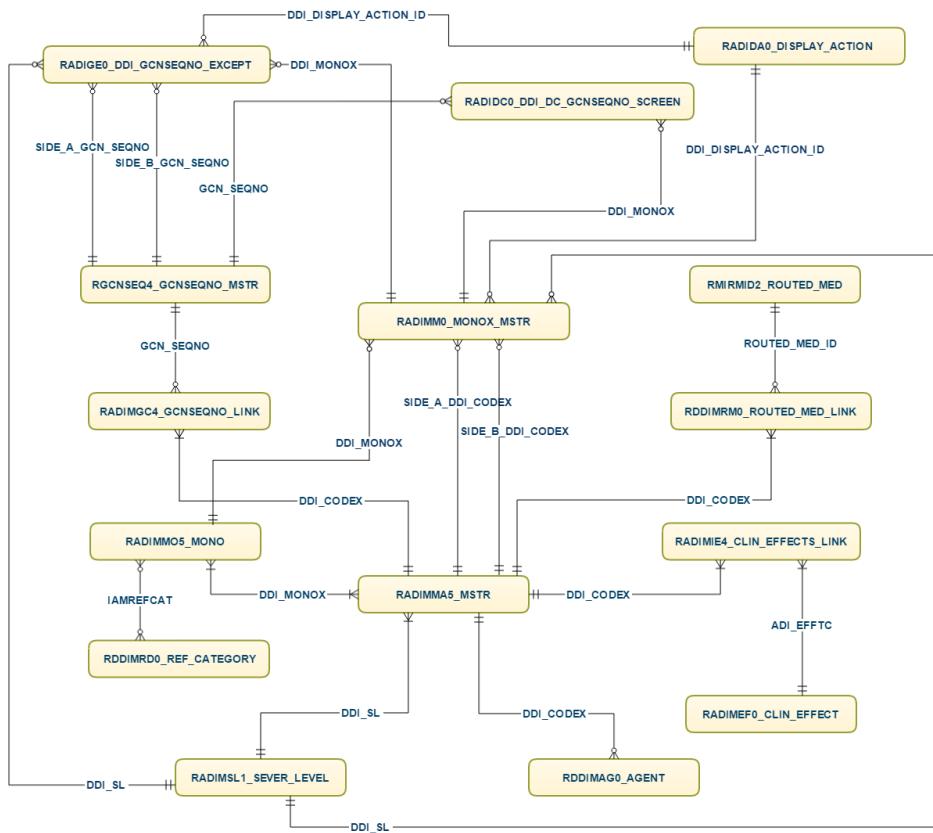
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- [DDIM Tables](#)
- [DDIM ERD](#)

DDIM Tables

- [DDIM Routed Medication Table](#)
- [Drug-Drug Interaction Agent Description Table](#)
- [Drug-Drug Interaction Clinical Effects Description Table](#)
- [Drug-Drug Interaction/Clinical Effects Relation Table](#)
- [Drug-Drug Interaction Clinical Formulation Exception Table](#)
- [Drug-Drug Interaction Discontinued Clinical Formulation Screening Table](#)
- [Drug-Drug Interaction Display Action Table](#)
- [Drug-Drug Interaction Master Table](#)
- [Drug-Drug Interaction Monograph Master Table](#)
- [Drug-Drug Interaction Monograph Text Table](#)
- [Drug-Drug Interaction Severity Levels Table](#)
- [Drug-Drug Reference Category Description Table](#)
- [GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#)

DDIM ERD



DDIM Routed Medication Table

Table Name	RDDIMRM0_ROUTED_MED_LINK				
Revision Activity	ADD.07-01-2002				
Purpose	Links a routed medication to a drug interaction.				
Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	DDI_CODEX	Drug-Drug Expanded Interaction Code	N	5	9(5)

Drug-Drug Interaction Agent Description Table

Table Name	RDDIMAG0_AGENT
Revision Activity	add.05-01-1999
Purpose	Relates the Drug-Drug Expanded Interaction Code to the specific agents involved in the interaction.

Key	Column Name	Column Description	Format	Length	Picture
P	DDI_CODEX	Drug-Drug Expanded Interaction Code	N	5	9(5)
P	DDI_AGSN	Drug-Drug Interaction Agent Description Sequence Number	N	3	9(3)
	DDI_AGD	Drug-Drug Interaction Agent Description	AN	41	X(41)
	DDI_AGD_T	Drug-Drug Interaction Agent Description (Translated)	AN	60	X(60)

Drug-Drug Interaction Clinical Effects Description Table

Table Name	RADIMEF0_CLIN_EFFECT				
Revision Activity	add.05-20-1993				
Purpose	Relates the Clinical Effect Code to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
P	ADI_EFFTC	Drug-Drug Interaction Clinical Effect Code	AN	3	X(3)
	ADI_EFFTCT	Drug-Drug Interaction Clinical Effect Text	AN	50	X(50)

Drug-Drug Interaction-Clinical Effects Relation Table

Table Name	RADIMIE4_CLIN_EFFECTS_LINK				
Revision Activity	rev.05-01-1999				
Purpose	Links the drug interaction to the clinical effect of the interaction.				

Key	Column Name	Column Description	Format	Length	Picture
PF	DDI_CODEX	Drug-Drug Expanded Interaction Code	N	5	9(5)
PF	ADI_EFFTC	Drug-Drug Interaction Clinical Effect Code	AN	3	X(3)

Drug-Drug Interaction Clinical Formulation Exception Table

Table Name	RADIGE0_DDI_GCNSEQNO_EXCEPT				
Revision Activity	add.04-14-2016				
Purpose	Provides a list of all clinical formulation pairs related to a drug-drug interaction which have coadministration dosing information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	DDI_MONOX	Drug-Drug Interaction Expanded Monograph Number	N	5	9(5)
PF	SIDE_A_GCN_EQNO	Drug-Drug Interaction Side A Clinical Formulation ID	N	6	9(6)
PF	SIDE_B_GCN_EQNO	Drug-Drug Interaction Side B Clinical Formulation ID	N	6	9(6)
F	DDI_SL	Drug-Drug Interaction Severity Level	AN	1	X(1)
F	DDI_DISPLAY_ACTION_ID	Drug-Drug Interaction Display Action Identifier	N	8	9(8)
	COADMIN_DOSING_TEXT	Coadministration Dosing Text	AN	255	X(255)
	DDI_EXCEPT_ADD_DT	Drug-Drug Interaction Exception Add Date	N	8	9(8)

Drug-Drug Interaction Discontinued Clinical Formulation Screening Table

Table Name	RADIDC0_DDI_DC_GCNSEQNO_SCREEN
Revision Activity	add.04-14-2016
Purpose	Relates a clinical formulation to a time duration to continue screening the drug after administration has been discontinued for drug-drug interactions.

Key	Column Name	Column Description	Format	Length	Picture
PF	DDI_MONOX	Drug-Drug Interaction Expanded Monograph Number	N	5	9(5)
PF	GCN_SEQNO	Clinical Formulation ID	N	6	9(6)
	DDI_DC_DAYS_SCREEN_AMOUNT	Drug-Drug Interaction Discontinued Medication Screening Amount	N	5	9(5)

Drug-Drug Interaction Display Action Table

Table Name	RADIDA0_DISPLAY_ACTION		
Revision Activity	add.04-14-2016		
Purpose	Provides the recommended alerting level of a drug-drug interaction such as interrupt, halt, or informative.		

Key	Column Name	Column Description	Format	Length	Picture
P	DDI_DISPLAY_ACTION_ID	Drug-Drug Interaction Display Action Identifier	N	8	9(8)
	DDI_DISPLAY_ACTION_DESC	Drug-Drug Interaction Display Action Description	AN	50	X(50)

Drug-Drug Interaction Master Table

Table Name		RADIMMA5_MSTR			
Revision Activity		rev.05-01-1999			
Purpose		Provides attributes of a drug interaction.			
Key	Column Name	Column Description	Format	Length	Picture
P	DDI_CODEX	Drug-Drug Expanded Interaction Code	N	5	9(5)
	DDI_DES	Drug-Drug Interaction Description	AN	60	X(60)
F	DDI_SL	Drug-Drug Interaction Severity Level	AN	1	X(1)
F	DDI_MONOX	Drug-Drug Interaction Expanded Monograph Number	N	5	9(5)
	DDI_PGEDI	Drug-Drug Interaction Page References EDI	AN	9	X(9)
	DDI_TREE	This column is not currently being used.	N	5	9(5)
	DDI_MFGI	Drug-Drug Interaction Reference Category Indicator - Manufacturer Info	AN	1	X(1)
	DDI_TRIALI	Drug-Drug Interaction Reference Category Indicator - Human Clinical Trial	AN	1	X(1)
	DDI_CASEI	Drug-Drug Interaction Reference Category Indicator - Case Reports	AN	1	X(1)
	DDI_ABSI	Drug-Drug Interaction Reference Category Indicator - Meeting Abstract	AN	1	X(1)

	DDI_IVASI	Drug-Drug Interaction Reference Category Indicator - In Vitro/Animal Study	AN	1	X(1)
	DDI_REV1	Drug-Drug Interaction Reference Category Indicator - Review	AN	1	X(1)

Drug-Drug Interaction Monograph Master Table

Table Name	RADIMM0_MONOX_MSTR				
Revision Activity	add.04-14-2016				
Purpose	Provides a master list of all drug-drug interaction monographs.				

Key	Column Name	Column Description	Format	Length	Picture
PF	DDI_MONOX	Drug-Drug Interaction Expanded Monograph Number	N	5	9(5)
	MONOX_TITLE	Drug-Drug Interaction Monograph Title	AN	255	X(255)
F	DDI_SL	Drug-Drug Interaction Severity Level	AN	1	X(1)
F	DDI_DISPLAY_ACTION_ID	Drug-Drug Interaction Display Action Identifier	N	8	9(8)
F	SIDE_A_DDI_CODEX	Drug-Drug Expanded Interaction Code for Side A	N	5	9(5)
F	SIDE_B_DDI_CODEX	Drug-Drug Expanded Interaction Code for Side B	N	5	9(5)
	DDI_PHARMACO_DYNAMIC_IND	Drug-Drug Interaction Pharmacodynamic Indicator	AN	1	X(1)
	DDI_PHARMACO_KINETIC_IND	Drug-Drug Interaction Pharmacokinetic Indicator	AN	1	X(1)
	MONOX_END_DATE	Drug-Drug Interaction Monograph End Date	N	8	9(8)

Drug-Drug Interaction Monograph Text Table

Table Name	RADIMMO5_MONO				
Revision Activity	rev.05-01-1999				
Purpose	Provides the text for the professional drug interaction monograph.				

Key	Column Name	Column Description	Format	Length	Picture
P	DDI_MONOX	Drug-Drug Interaction Expanded Monograph Number	N	5	9(5)
P	ADI_MONOSN	Drug-Drug Interaction Monograph Text Sequence Number	N	3	9(3)
	IAMIDENTN	Drug-Drug Interaction Monograph Line Identifier	AN	1	X(1)
	IAMTEXTN	Drug-Drug Interaction Monograph Text	AN	76	X(76)
F	IAMREFCAT	Drug-Drug Interaction Reference Category Line Identifier	AN	1	X(1)

Drug-Drug Interaction Severity Levels Table

Table Name	RADIMSL1_SEVER_LEVEL				
Revision Activity	rev.05-01-1999				
Purpose	Relates the Drug-Drug Interaction Severity Level to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	DDI_SL	Drug-Drug Interaction Severity Level	AN	1	X(1)
P	DDI_SLSN	Drug-Drug Interaction Severity Level Text Sequence Number	N	2	9(2)
	DDI_SLTXT	Drug-Drug Interaction Severity Level Text	AN	70	X(70)

Drug-Drug Reference Category Description Table

Table Name	RDDIMRD0_REF_CATEGORY
Revision Activity	add.05-01-1999
Purpose	Relates the Drug-Drug Interaction Reference Category Line Identifier to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	IAMREFCAT	Drug-Drug Interaction Reference Category Line Identifier	AN	1	X(1)
	IAMREFCATD	Drug-Drug Interaction Reference Category Description	AN	40	X(40)

GCN_SEQNO Drug-Drug Interaction Code Relation Table

Table Name	RADIMGC4_GCNSEQNO_LINK				
Revision Activity	rev.05-01-1999				
Purpose	Links drugs or drug classes to the drug interactions in which they participate.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	DDI_CODEX	Drug-Drug Expanded Interaction Code	N	5	9(5)

Drug-Drug Interaction Module for Consumers

Drug-Drug Interaction Module for Consumers™ (DDIM-C™) 3.2

- General Information
- Drug-Drug Interaction Module for Consumers Editorial Policies
- Application: Displaying Drug-Drug Interaction Messages for Consumers
- ERD and Technical Specifications

DDIM-C General Information

The General Information section contains high-level information about the module.

- [Overview](#)
- [Concepts](#)

Overview

The Drug-Drug Interaction Module for Consumers (DDIM-C) provides text-based monographs of drug-drug interaction information for consumer use. The module is based upon the content of the Drug-Drug Interaction Module (DDIM), a clinically reviewed module that reports only the most clinically significant interactions. DDIM provides, among other things, a professional monograph detailing the interaction between two drugs when used in combination. Consumer versions of the professional monograph provide the drug-drug interaction information in consumer-friendly language.

The consumer-based module shares the DDIM Master Table with the professional module. In other words, once a drug interaction is identified, the interaction code serves as an index into the Master Table. Access to the consumer tables for severity level and monograph text occurs via the Master Table. The Master Table allows access to both the professional monograph and the consumer monograph, provided you are licensed to receive both sets of monograph text.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within the DDIM monograph for the interaction.

Concepts

This section describes concepts and database elements that are important for understanding the module.

Understanding Monograph for Consumer Elements

Each DDIM-C monograph consists of the following sections, described in detail below:

- title
- medical warning
- how the interaction occurs
- what might happen
- what you should do about this interaction
- references

TITLE: includes the drugs or drug classes involved in the interaction. This is included in a format identical to the professional monograph.

 For consumer monographs, it is recommended that the names of the specific drugs that resulted in the

interaction be placed just above or just below the monograph title.

MEDICAL WARNING: provides a brief description of the severity of the interaction. This section is based upon the Severity Level in the professional monograph for DDIM version 3.2. A separate Severity Level table for the consumer-based monographs is provided. Depending upon which of the four severity levels is assigned to a drug-drug interaction, one of the following warnings is provided to the consumer:

Severity Levels

Value	Description
1	Severe; These medicines may interact and cause very harmful effects and are usually not taken together. Contact your healthcare professional (e.g., doctor or pharmacist) for more information.
2	Serious; These medicines may interact and cause very harmful effects. Contact your healthcare professional (e.g., doctor or pharmacist) for more information.
3	Moderate; These medicines may cause some risk when taken together. Contact your healthcare professional (e.g., doctor or pharmacist) for more information.
9	Unknown; Alternative Therapy Interaction. <i>Warning:</i> These medications may cause some risk when taken together. Contact your healthcare professional (e.g., doctor or pharmacist) for more information.

HOW THE INTERACTION OCCURS: describes the manner in which the two drugs interact, if known. The mechanism by which the interaction is purported to occur is explained in consumer language.

WHAT MIGHT HAPPEN: describes possible physiologic (therapeutic and toxic as applicable) effects of the interaction on the patient.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: guides the patient regarding action they should take relative to the interaction. In situations where the drug combination is generally contraindicated (severity level 1), the patient is instructed to immediately contact their healthcare professional. In cases where a drug combination may result in symptoms that a patient may recognize, these symptoms are listed in patient-friendly terms, with a referral to a healthcare professional. In the event that specific monitoring of the interaction may be warranted, the patient is provided with this information.

REFERENCES: lists all reference source data found in the reference section of the professional monograph.

The professional monographs also include Predisposing Factors and Discussion sections. The Predisposing Factors section describes situations in which the drug-drug interaction may be more likely to occur or more severe in occurrence. The Discussion section describes the findings as reported in the cited references. While the consumer monograph does not include specific sections corresponding to Predisposing Factors or Discussion, applicable information from these sections of the professional monograph is incorporated into the consumer monograph in one or more of the sections described above.

Displaying Disclaimers

When using DDIM-C, one or more disclaimers are required. Use of each disclaimer, along with its specific text, is described below. Refer to your licensing agreement for information regarding the disclaimers required in your specific environment or application(s).

Monograph Disclaimer

Each consumer monograph includes a disclaimer. This disclaimer must be provided with the monograph in all developer applications, regardless of whether the monograph is electronically displayed or printed as a document. The monograph disclaimer reads as follows:

Monograph Disclaimer

This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug or commencing any course of treatment.

The monograph disclaimer is assigned to print code Z.

Terms of Use (Terms and Conditions) Disclaimer

The Terms of Use Disclaimer must be implemented in all web environments for consumers and healthcare professionals. The Terms of Use Disclaimer reads as follows:

You agree not to commercialize or redistribute the contents of this web site.

This site is designed to offer you general health information for educational purposes only. The health information furnished on this site and the interactive responses is not intended to be professional advice and is not intended to replace personal consultation with a qualified physician, pharmacist, or other healthcare professional. You must always seek the advice of a professional for questions related to your disease, disease symptoms, and appropriate therapeutic treatments. If you have or suspect that you have a medical problem or condition, please contact a qualified healthcare provider immediately. *You should never disregard medical advice or delay in seeking it because of something you have read on this site.* We do not make any warranty that the content on this site satisfies government regulations requiring disclosure of information on prescription drug products. The content was developed for use in the United States, and neither we nor our content providers make any representation concerning the content when used in any other country. While information on this site has been obtained from sources believed to be reliable, neither we nor our content providers warrant the accuracy of codes, prices or other data contained on this site.

We do not give medical advice, nor do we provide medical or diagnostic services. Medical information changes rapidly. Neither we nor our content providers guarantee that the content covers all possible uses, directions, precautions, drug interactions, or adverse effects that may be associated with any therapeutic treatments.

Your reliance upon information and content obtained by you at or through this site is solely at your own risk. Neither we nor our content providers assume any liability or responsibility for damage or injury (including death) to you, other persons or property arising from any use of any product, information, idea or instruction contained in the content or services provided to you.

Click Through Agreement (Conditions of Use)

The Conditions of Use must be implemented as a “click through” agreement in all web environments for consumers and healthcare professionals. The Conditions of Use reads as follows:

CONDITIONS OF USE: The information in this database is intended to supplement, not substitute for, the expertise and judgment of your healthcare professional. The information is not intended to cover all possible uses, directions, precautions, drug interactions or adverse effects, nor should it be construed to indicate that use of a particular drug is safe, appropriate or effective for you. You should consult your healthcare professional before taking or discontinuing any drug or commencing any course of treatment.

Drug-Drug Interaction Module for Consumers Editorial Policies

The policies and criteria that apply to the scope and processes of the DDIM-C module are provided in the following sections:

Scope

DDIM-C is intended to provide a text-based monograph targeted to the consumer audience. This monograph may be generated by the healthcare professional and distributed to the patient. Alternately, the monographs may be incorporated into a system providing access directly to the consumer for use in self-care and ambulatory medical care. This may include, but is not limited to, the Internet, stand-alone kiosks, or other systems. DDIM-C provides monographs directed to patients, in language they can understand.

Editorial Process

The following section describes the processes and criteria the clinical editors use to add or review database elements.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health Canada
- MedWatch Safety Alerts

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review data is a new Clinical Formulation ID (GCN_SEQNO).

Module Maintenance

This module is updated and expanded regularly by FDB. As content additions, changes, and enhancements are identified, both professional and consumer monographs are developed or modified as appropriate. Our policy is to stay current and dynamic with changing drug information. However, all decisions regarding drug therapy must be based on independent judgement due to the dynamic nature of drug information and changing medical practice.

Inclusion Criteria

Clinical severity, as well as the quantity and quality of documentation, are some of the criteria considered when determining the inclusion of a drug interaction in DDIM. If a professional monograph is deemed warranted, a corresponding consumer monograph will be developed.

Monograph Readability

All efforts are made to enhance the readability of the monograph by the consumer public. Each monograph is evaluated for consistency in wording and phrasing when compared to existing monographs. In addition, sentence structure and grammar are constructed for maximum reading ease.

Application: Displaying Drug-Drug Interaction Messages for Consumers

This application illustrates the generation of display options for consumer drug-drug interaction messages for consumers.

Consider the following when developing applications for consumer drug-drug monographs:

- provide access to all four severity levels during drug-food interaction screening
- supplement the monograph title with the name of the specific drug that resulted in the interaction by including the drug name directly above or directly below the title
- identify the section header (for example, Medical Warning, How the Interaction Occurs) with bold text

The following application begins at the Clinical Formulation level with the Clinical Formulation ID ([GCN_SEQNO](#)) and assumes familiarity with the various drug concepts and their identifiers. See [Multiple Access Points™ \(MAPs™\)](#) for more information.

1. Select the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) column from the [GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#) (RADIMGC4_GCNSEQNO_LINK) where the GCN_SEQNO column equals the GCN_SEQNO value of the drug product.
2. Select the following columns from the [Drug-Drug Interaction Master Table](#) (RADIMMA5_MSTR) where the DDI_CODEX column equals the DDI_CODEX value from the previous step.
 - a. Drug-Drug Interaction Description ([DDI_DES](#))
 - b. Drug-Drug Interaction Severity Level ([DDI_SL](#))
 - c. Drug-Drug Interaction Expanded Monograph Number ([DDI_MONOX](#))
3. Display the Drug-Drug Interaction details to the end-user.
4. Select the following columns from the [Consumer Drug Interaction Monograph Text Table](#) (RDDICMO5_CONSUMER_MONO) where the DDI_MONOX column equals the DDI_MONOX value from step 1.
 - a. Drug-Drug Interaction Monograph Text Sequence Number (Consumer) ([DDC_MONOSN](#))
 - b. Drug-Drug Interaction Monograph Line Identifier (Consumer) ([IACIDENTN](#))
 - c. Drug-Drug Interaction Monograph Text (Consumer) ([IACTEXTN](#))
 - d. Drug-Drug Interaction Reference Category Line Identifier ([IAMREFCAT](#))
5. Display the monograph details to the end-user in the order indicated by the DDC_MONOSN column.

Example—Displaying Drug-Drug Interaction Messages for Consumers

A clinician wishes to generate all available drug-drug interaction documentation for the consumer when screening for drug-drug interactions. The example below demonstrates the generation of these messages for the drug product Ansaid (Clinical Formulation ID [GCN_SEQNO] 008363).

1. Select the Drug-Drug Expanded Interaction Code ([DDI_CODEX](#)) column from the

GCN_SEQNO/Drug-Drug Interaction Code Relation Table (RADIMGC4_GCNSEQNO_LINK) where the GCN_SEQNO column equals the GCN_SEQNO value of the drug product.

GCN_SEQNO	LN	DDI_CODEX
008363	ANSAID 100 MG CAPSULE	00119

2. Select the following columns from the **Drug-Drug Interaction Master Table** (RADIMMA5_MSTR) where the DDI_CODEX column equals the DDI_CODEX value from the previous step.
 - a. Drug-Drug Interaction Description (**DDI_DES**)
 - b. Drug-Drug Interaction Severity Level (**DDI_SL**)
 - c. Drug-Drug Interaction Expanded Monograph Number (**DDI_MONOX**)

DDI_DES	NSAIDS/LITHIUM
DDI_SL	3
DDI_MONOX	00119

3. Display the Drug-Drug Interaction details to the end-user.

NSAIDs/Lithium Interaction
 Severity Level: 3 - Moderate. These medicines may cause some risk when taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.

4. Select the following columns from the **Consumer Drug Interaction Monograph Text Table** (RDDICMO5_CONSUMER_MONO) where the DDI_MONOX column equals the DDI_MONOX value from step 1.
 - a. Drug-Drug Interaction Monograph Text Sequence Number (Consumer) (**DDC_MONOSN**)
 - b. Drug-Drug Interaction Monograph Line Identifier (Consumer) (**IACIDENTN**)
 - c. Drug-Drug Interaction Monograph Text (Consumer) (**IACTEXTN**)
 - d. Drug-Drug Interaction Reference Category Line Identifier (**IAMREFCAT**)

DDC_MONOSN	IACIDENTN	IACTEXTN	IAMREFCAT
001	Z	This information is generalized and not intended as specific medical advice.	
002	Z	Consult your healthcare professional before taking or discontinuing any drug	
003	Z	or commencing any course of treatment.	

004	B		
005	T	Monograph Title	
006	T	NSAIDs/Lithium	
007	B		
008	L	Medical Warning	
009	L	Moderate. These medicines may cause some risk when taken together.	
010	L	Contact your healthcare professional (e.g. doctor or pharmacist) for	
011	L	more information	
012	B		
013	A	How The Interaction Occurs	
014	A	When these two medicines are taken together, your body may not process	
015	A	lithium properly.	
016	B		
017	E	What Might Happen	
018	E	Your blood levels of lithium may increase and cause toxic effects.	
019	B		
020	M	What You Should Do About This Interaction	
021	M	If you experience diarrhea, nausea, vomiting, muscle weakness, trembling	
022	M	of the hands, slurred speech, or unsteady walking, contact your doctor.	

023	M	Your doctor may want to check your blood levels of lithium and adjust your	
024	M	dose.	
025	M	Your healthcare professionals (e.g. doctor or pharmacist) may already be	
026	M	aware of this drug interaction and may be monitoring you for it. Do not	
027	M	start, stop, or change the dosage of any medicine before checking with them	
028	M	first.	
029	B		
030	R	References	
031	B		
032	R	1. Frolich JC, Leftwich R, Ragheb M, Oates JA, Reimann I, Buchanan D.	2
033	R	Indomethacin increases plasma lithium. Br Med J 1979 Apr 28;1(6171):1115-6	2
034	R	2. Ragheb M, Ban TA, Buchanan D, Frolich JC. Interaction of indomethacin and	2
035	R	ibuprofen with lithium in manic patients under a steady-state lithium	2
036	R	level. J Clin Psychiatry 1980 Nov;41(11):397-8.	2
...

5. Display the monograph details to the end-user in the order indicated by the DDC_MONOSN column. The example below displays partial results.

This information is generalized and not intended as specific medical advice. Consult your healthcare professional before taking or discontinuing any drug or commencing any course of treatment.

DRUG PRODUCT: Ansaid

MONOGRAPH TITLE: NSAIDS/Lithium

MEDICAL WARNING: Moderate. These medicines may cause some risk when taken together.
Contact your healthcare professional (e.g. doctor or pharmacist) for more information.

HOW THE INTERACTION OCCURS: When these two medicines are taken together, your body may not process lithium properly.

WHAT MIGHT HAPPEN: Your blood levels may increase and cause toxic effects.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: If you experience diarrhea, nausea, vomiting, muscle weakness, trembling of the hands, slurred speech, or unsteady walking, contact your doctor. Your doctor may want to check your blood levels of lithium and adjust your dose.

Your healthcare professionals (e.g. doctor or pharmacist) may already be aware of this interaction and may be monitoring you for it. Do not start, stop, or change the dosage of any medicine before checking with them first.

REFERENCES:

1. Frolich JC, Leftwich R, Ragheb M, Oats JA, Reimann I, Buchanan D. Indomethacin increases plasma lithium. Br Med J 1979 Apr;1(6171):1115-6.
2. Ragheb M, Ban TA, Buchanan D, Forlich JC. Interaction of indomethacin and ibuprofen with lithium in manic patients under a steady-state lithium-level. J Clin Psychiatry 1980 Nov; 41(11):397-8

DDIM-C ERD and Technical Specifications

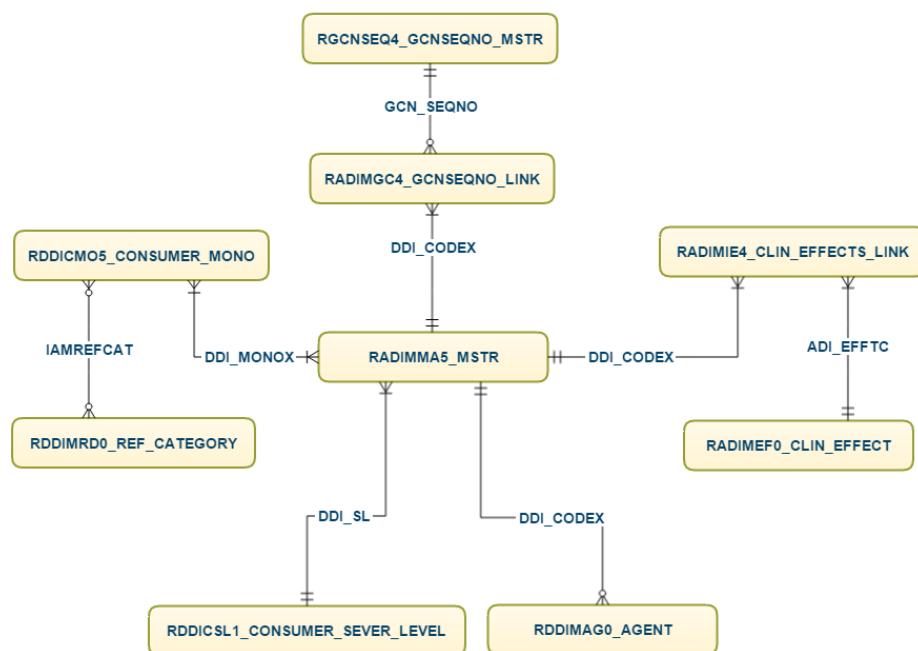
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- DDIM-C Tables
- DDIM-C ERDs

DDIM-C Tables

- Consumer Drug Interaction Monograph Text Table
- Consumer Drug Interaction Severity Levels Table

DDIM-C ERDs



Consumer Drug Interaction Monograph Text Table

Table Name	RDDICMO5_CONSUMER_MONO				
Revision Activity	add.02-25-2000				
Purpose	Provides the text, in consumer language, for the drug interaction monograph.				

Key	Column Name	Column Description	Format	Length	Picture
P	DDI_MONOX	Drug-Drug Interaction Expanded Monograph Number	N	5	9(5)
P	DDC_MONOSN	Drug-Drug Interaction Monograph Text Sequence Number	N	3	9(3)
	IACIDENTN	Drug-Drug Interaction Monograph Line Identifier	AN	1	X(1)
	IACTEXTN	Drug-Drug Interaction Monograph Text	AN	76	X(76)
F	IAMREFCAT	Drug-Drug Interaction Reference Category Line Identifier	AN	1	X(1)

Consumer Drug Interaction Severity Levels Table

Table Name	RDDICSL1_CONSUMER_SEVER_LEVEL
Revision Activity	add.02-25-2000
Purpose	Relates the Drug-Drug Interaction Severity Level to its text description, worded for the consumer.

Key	Column Name	Column Description	Format	Length	Picture
P	DDI_SL	Drug-Drug Interaction Severity Level	AN	1	X(1)
P	DDC_SEVSN	Drug-Drug Interaction Severity Level Text Sequence Number (Consumer)	N	2	9(2)
	DDC_SEVTXT	Drug-Drug Interaction Severity Level Text (Consumer)	AN	70	X(70)

Drug-Food Interaction Module (DFIM)

- General Information
- Drug-Food Interaction Module Editorial Policies
- Application: Displaying Drug-Food Interaction Messages
- ERD and Technical Specifications

DFIM General Information

The General Information section contains high-level information about the module.

- Overview
- Concepts
 - Understanding Professional Monograph Elements
 - Accessing DFIM Data

Overview

The Drug-Food Interaction Module (DFIM) was designed to provide alerts on the potential of interactions occurring between certain drugs and foodstuffs or food components when used in combination. In addition, the DFIM provides the capability for generating cautions and other advisory information specific to each potential drug-food interaction.

The specific cautions and advisories are linked to a Drug-Food Interaction Food Code (FDCDE). The code, in turn, is linked to a hierarchical pair of data sets that respectively define the broad nature of the drug-food interaction. The data sets also provide the facility to produce condensed hard copy messages and complete monograph information on the nature of the drug-food interaction.

The DFIM can operate in a stand-alone pharmacy system environment with no electronic link to a patient's dietary status, but if such a link is available, the use of DFIM will enhance the system's operation.

i It should be noted that the body of evidence available on drug-food interactions is limited and not nearly as extensive, for example, as drug-drug interactions.

i Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)), Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within the DFIM monograph for the interaction.

Concepts

This section describes concepts and database elements that are important for understanding the module.

Understanding Professional Monograph Elements

The information for each monograph is stored in a text format. Each line of text consists of 80 columns of data.

Each DFIM monograph consists of the following sections, described in detail below:

- title
- significance level
- mechanism of action
- clinical effects

- management
- discussionreference

TITLE: includes the drug or drug class and the interacting food.

SIGNIFICANCE LEVEL: More precisely, this section has evolved into a severity level, with a documentation statement standardized for all sections. Level 1 is the most severe, and level 3 the least severe. The levels are as follows:

Significance Levels

Value	Description
1	Most Significant; Documented (more clinical data may be needed): Action to reduce risk of adverse interaction usually required
2	More Significant; Documented (more clinical data may be needed): Assess risk to patient and take action as needed.
3	Significant; Documented (more clinical data may be needed): Conservative measures are recommended until more is known

The MECHANISM OF ACTION section describes the drug-food interaction from a molecular, cellular, or physicochemical perspective if known. The mechanism by which the interaction is purported to occur is explained.

The CLINICAL EFFECTS section describes the expected physiologic (therapeutic and adverse as applicable) effects upon the patient.

The PATIENT MANAGEMENT section discusses strategies to minimize the effects of the interaction, and/or appropriate monitoring parameters to be instituted. Patient-specific information is presented as appropriate, with consideration for specific patient populations as necessary.

The DISCUSSION section describes, when available, the clinical studies or other relevant data related to the interaction. This detailed data will enhance and clarify the recommendations and facts in the other sections noted.

The REFERENCES section lists all reference source data.

Accessing DFIM Data

DFIM uses the Drug-Food Interaction Food Code ([FDCDE](#)) to identify drug-food interactions, reference interaction monographs, and supply additional interaction information. The FDCDE column and its attributes reside in the [Drug-Food Interaction Master Table](#) ([RDFIMMA0_MSTR\(\)](#)). Five occurrences are allowed for each record and blanks are the default.

FDCDE values are associated with drugs at the following MedKnowledge concept levels using the following tables:

- The Clinical Formulation ID ([GCN_SEQNO](#)) in the [GCN_SEQNO/Drug-Food Code Relation Table](#) ([RDFIMGC0_GCNSEQNO_LINK](#))

- The MED Routed Medication ID (**ROUTED_MED_ID**) in the **DFIM Routed Medication Table** (**RDFIMRM0_ROUTED_MED_LINK**)

Drug-Food Interaction Module Editorial Policies

The policies and criteria that apply to the scope and processes of the Drug-Food Interaction Module are provided in the following sections:

- Scope
- Editorial Process
 - External Triggers for Clinical Review
 - Internal Triggers for Clinical Review
 - Module Maintenance
 - Inclusion Criteria

Scope

The Drug-Food Interaction Module is intended to provide professional-level decision support for healthcare professionals, including physicians, pharmacists, dietitians, and nurses. The Joint Commission (TJC) and community practice standards include provision of drug-food interaction information to patients and caregivers. As self-care and ambulatory medical care are emphasized more and more, the importance of a well-educated patient and caregiver is evident. DFIM information aids in the process of establishing and implementing safe diet-drug regimens.

Use of DFIM does not require a patient's specific dietary regimen or history. DFIM is used to provide advisory information to the healthcare professional and/or patient at the system user's discretion. Whenever a drug product with a potential drug-food interaction is dispensed, the application system can automatically alert the user that the particular drug product has this potential. The application system should then allow for operator discretion in deciding whether to instruct the system to provide additional information on the detected drug-food interaction or to the generation of monographs. Typically, a system

- provides an alert that the potential for drug-food interaction exists with a particular drug product.
- generates essential drug-food interaction documentation for the detected interaction. Most systems will allow for automatic or passive override of this capability and leave it to the operator's discretion on whether to continue.
- generates Drug-Food Interaction Monographs.

The Drug-Food Interaction Module consists of interactions with accompanying concise narrative-style clinical "results," a two-line message intended for prescription label printing and complete professional monographs. A concise (45-byte) summary of the clinical result of the interaction in question is provided.

Secondly, the label messages identify the most important "take home message" about the medication being dispensed or administered. This two-line (54-byte) message contains key points the pharmacist would ideally want the user to address.

Editorial Process

The following section describes the processes and criteria editors use to add or review database elements.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health Canada
- MedWatch Safety Alerts

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review data is a new Clinical Formulation ID ([GCN_SEQNO](#)).

Module Maintenance

This module is updated and expanded regularly by FDB staff. Content is exhaustively and critically reviewed. Of course, all decisions regarding drug therapy must be based on independent judgment due to the dynamic nature of drug information and changing medical practice. Our policy is to stay current and dynamic with changing drug information.

Inclusion Criteria

The inclusion criteria for interactions includes severity and documentation of the interaction and complexity of patient management. If an interaction is effectively managed by taking the drug with food, for example, then it is more appropriate to address the issue with a prioritized label warning. A drug-food interaction monograph would not be generated. The more complex interactions (for example, cytochrome P450 enzyme inhibition by grapefruit juice constituents) are included in DFIM.

Current criteria also address severity. Interactions generally require some patient monitoring, if not proactive dose adjustments, in order to be included in the module.

Application: Displaying Drug-Food Interaction Messages

This application illustrates the automated generation of display options for end-user drug-food interaction messages. However, a DFIM application program should allow for operator discretion in deciding whether to instruct the system to provide additional information on the detected drug-food interaction or to the generation of monographs.

The following application begins at the Clinical Formulation level with the Clinical Formulation ID ([GCN_SEQNO](#)) and assumes familiarity with the various drug concepts and their identifiers. See [Multiple Access Points™ \(MAPs™\)](#), page 42 for more information.

1. Select the Drug-Food Interaction Food Code ([FDCDE](#)) column from the [GCN_SEQNO/Drug-Food Code Relation Table](#) ([RDFIMGC0_GCNSEQNO_LINK](#)) where the GCN_SEQNO column equals the GCN_SEQNO value of the drug product.
2. Select the following columns from the [Drug-Food Interaction Master Table](#) ([RDFIMMA0_MSTR](#)) where the FDCDE column equals the FDCDE value from the previous step.
 - Drug-Food Interaction Drug Name ([DNAME](#))
 - Drug-Food Severity Level ([FD_SL](#))
 - Drug-Food Interaction - Result ([RESULT](#))
 - Drug-Food Interaction - First Line Message ([FDMSG1](#))
 - Drug Food Interaction - Second Line Message ([FDMSG2](#))
3. Display the Drug-Food Interaction details to the end-user.
4. Display the Drug-Food Interaction message for label printing by placing the FDMSG2 information directly under the FDMSG1 information.
5. Select the following columns from the [Drug-Food Interaction Monograph Text Table](#) ([RDFIMMO0_MONO](#)) where the FDCDE column equals the FDCDE value from step 1.
 - Drug-Food Interaction Monograph Text Sequence Number ([FDCDE_SN](#))
 - Drug-Food Interaction Text Code ([TTCODE](#))
 - Drug-Food Interaction Data ([FTXTXT](#))
6. Display monograph details to the end-user in the order indicated by the FDCDE_SN column.

Example—Displaying Drug-Food Interaction Messages

A clinician wishes to generate all available drug-food interaction documentation when screening for drug-food interactions. The example below demonstrates the generation of these messages for the drug product Allegra (Clinical Formulation ID ([GCN_SEQNO](#)) 027475).

1. Select the Drug-Food Interaction Food Code ([FDCDE](#)) column from the [GCN_SEQNO/Drug-Food Code Relation Table](#) ([RDFIMGC0_GCNSEQNO_LINK](#)) where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug product.

GCN_SEQNO	LN	FDCDE
---------------------------	--------------------	-----------------------

027475	ALLEGRA 60MG CAPSULE	075
--------	----------------------	-----

2. Select the following columns from the **Drug-Food Interaction Master Table** (RDFIMMA0_MSTR) where the FDCDE column equals the FDCDE value from the previous step.

- Drug-Food Interaction Drug Name (**DNAME**)
- Drug-Food Severity Level (**FD_SL**)
- Drug-Food Interaction - Result (**RESULT**)
- Drug-Food Interaction - First Line Message (**FDMMSG1**)
- Drug Food Interaction - Second Line Message (**FDMMSG2**)

FDCDE	075
DNAME	FEXOFENADINE
FD_SL	3
RESULT	FRUIT JUICES MAY IMPAIR ABSORPTION.
FDMMSG1	AVOID APPLE, GRAPEFRUIT
FDMMSG2	AND ORANGE JUICE.

3. Display the Drug-Food Interaction details to the end-user.

Fexofenadine/Fruit Juices Interaction
 Severity Level: 3 - Significant. Documented; (more clinical data may be needed). Conservative measures are recommended until more is known.
 Result: Fruit juices may impair absorption.

4. Display the Drug-Food Interaction message for label printing by placing the FDMMSG2 information directly under the FDMMSG1 information. For example:

Avoid Apple, Grapefruit
 and Orange Juice.

5. Select the following columns from the **Drug-Food Interaction Monograph Text Table** (RDFIMMO0_MONO) where the FDCDE column equals the FDCDE value from step 1.

- Drug-Food Interaction Monograph Text Sequence Number (**FDCDE_SN**)
- Drug-Food Interaction Text Code (**TXTCDE**)
- Drug-Food Interaction Data (**FDTXT**)

FDCDE	FDCDE_SN	TXTCDE	FDTXT
075	001	T	MONOGRAPH TITLE: Fexofenadine/Fruit Juices

075	002	B	
075	003	L	SIGNIFICANCE LEVEL: 3-Possibly Significant; some/little available:
075	004	L	Conservative measures are recommended until more is known.
075	005	B	
075	006	A	MECHANISM OF ACTION: Apple, grapefruit, and orange juice may inhibit
075	007	A	fexofenadine uptake by organic anion transporting polypeptides (OATP).(1)
075	008	B	
075	009	E	CLINICAL EFFECTS: Administration of fexofenadine with apple, grapefruit,
075	010	E	or orange juice may result in decreased levels and effectiveness of
075	011	E	fexofenadine.(1,2)
075	012	B	
075	013	M	PATIENT MANAGEMENT: Suggest that patients avoid taking fexofenadine
075	014	M	with apple, grapefruit, or orange juice. The manufacturer of fexofenadine
075	015	M	recommends that fexofenadine be taken with water.(2)
075	016	B	

075	017	D	DISCUSSION: In a five-way cross-over study in 10 subjects, each subject
075	018	D	received fexofenadine (120 mg) with 300 ml of water, apple juice, orange
075	019	D	juice, grapefruit juice, and 25% grapefruit juice. There was a one-week
075	020	D	wash-out period between phases. Apple juice decreased the fexofenadine
075	021	D	area-under-curve (AUC) and maximum concentration (Cmax) by 73% and by 72%,
075	022	D	respectively. Orange juice decreased the fexofenadine AUC and Cmax by 69%
075	023	D	and by 67%, respectively. Grapefruit juice at 100% decreased fexofenadine
075	024	D	AUC and Cmax by 63% and by 62%, respectively. Grapefruit juice at 25%
075	025	D	decreased fexofenadine AUC by 23%. (1)
075	026	D	Three clinical studies using histamine induced skin wheals and flares
075	027	D	indicate that wheal and flare responses were larger when fexofenadine was
075	028	D	administered with either grapefruit juice or orange juices and fexofenadine

075	029	D	bioavailability was decreased by 36%. Literature indicates similar results
075	030	D	can be expected from apple juice.(2)
075	031	B	
075	032	R	REFERENCES:
075	033	B	
075	034	R	1. Dresser GK, Bailey DG, Leake BF, Schwarz UI, Dawson PA, Freeman DJ, Kim
075	035	R	RB: Fruit juices inhibit organic anion transporting polypeptide-mediated
075	036	R	drug uptake to decrease the oral availability of fexofenadine. Clin
075	037	R	Pharmacol Ther 2002;71:11-20.
075	038	R	2. Allegra (fexofenadine hydrochloride) US prescribing information. Sanofi-
075	039	R	Aventis U.S. LLC. October, 2006.

You can choose to include or exclude monograph sections by listing or excluding values from the Drug-Food Interaction Text Code (**TXTCDE**) column. For example:

Patient Management:

Suggest that patients avoid taking fexofenadine with apple, grapefruit, or orange juice. The manufacturer of fexofenadine recommends that fexofenadine be taken with water.(2)

6. Display the monograph details to the end-user in the order indicated by the FDCDE_SN column.

MONOGRAPH TITLE: Fexofenadine/Fruit Juices

SEVERITY LEVEL: 3 - Possibly Significant; some/little available: Conservative measures are recommended until more is known.

MECHANISM OF ACTION: Apple, grapefruit, and orange juice may inhibit fexofenadine uptake by organic anion transporting polypeptides (OATP).⁽¹⁾

CLINICAL EFFECTS: Administration of fexofenadine with apple, grapefruit, or orange juice may result in decreased levels and effectiveness of fexofenadine. ^(1,2)

PATIENT MANAGEMENT: Suggest that patients avoid taking fexofenadine with apple, grapefruit, or orange juice. The manufacturer of fexofenadine recommends that fexofenadine be taken with water.⁽²⁾

DISCUSSION: In a five-way cross-over study in 10 subjects, each subject received fexofenadine (120 mg) with 300 ml of water, apple juice, orange juice, grapefruit juice, and 25% grapefruit juice. There was a one-week wash-out period between phases. Apple juice decreased the fexofenadine area-under-curve (AUC) and maximum concentration (Cmas) by 73% and by 72%, respectively. Orange juice decreased the fexofenadine AUC and Cmas by 69% and by 67%, respectively. Grapefruit juice at 100% decreased fexofenadine AUC and Cmax by 63% and by 62%, respectively. Grapefruit juice at 25% decreased fexofenadine AUC by 23%.⁽¹⁾

Three clinical studies using histamine induced skin wheals and flares indicate that wheal and flare responses were larger when fexofenadine was administered with either grapefruit juice or orange juices and fexofenadine bioavailability was decreased by 36%. Literature indicates similar results can be expected from apple juice.⁽²⁾

REFERENCES:

- 1.Dresser GK, Bailey DG, Leake BF, Schwarz UI, Dawson PA, Freeman DJ, Kim RB: Fruit juices inhibit organic anion transporting polypeptide-mediated drug uptake to decrease the oral availability of fexofenadine. Clin Pharmacol Ther 2002;71:11-20.
- 2.Allegra (fexofenadine hydrochloride) US prescribing information. Sanofi-Aventis U.S. LLC. October, 2006.

DFIM Technical Specifications

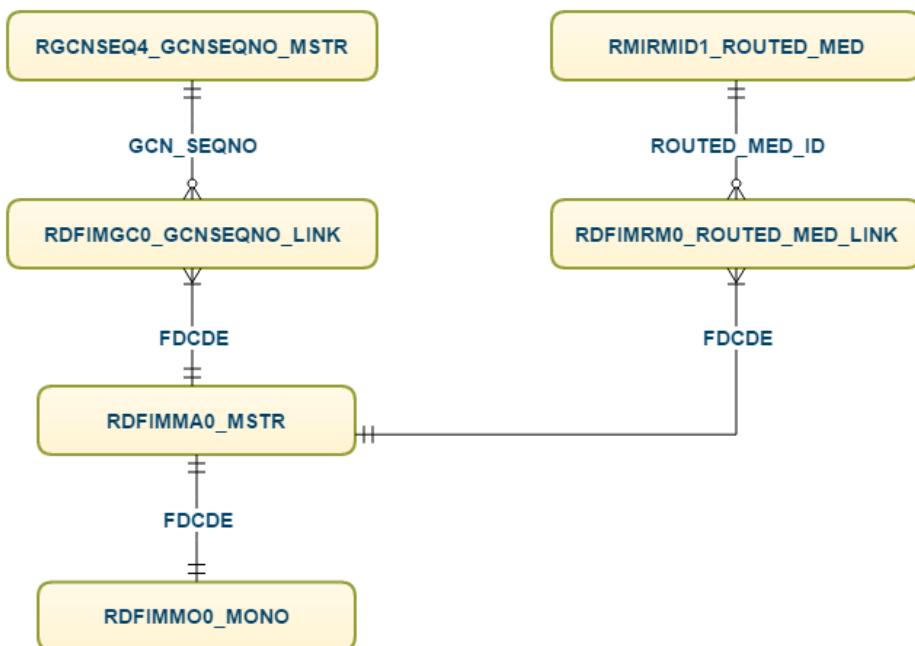
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Drug-Food Interaction Module Tables
- Drug-Food Interaction Module ERD

Drug-Food Interaction Module Tables

- DFIM Routed Medication Table
- Drug-Food Interaction Master Table
- Drug-Food Interaction Monograph Text Table
- GCN_SEQNO/Drug-Food Code Relation Table

Drug-Food Interaction Module ERD



DFIM Routed Medication Table

Table Name	RDFIMRM0_ROUTED_MED_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links a routed medication to a drug-food interaction.				
Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	FDCDE	Drug-Food Interaction Food Code	N	3	9(3)

Drug-Food Interaction Master Table

Table Name	RDFIMMA0_MSTR
Revision Activity	original
Purpose	Provides attributes of the drug-food interaction, including a professional message describing the result of the interaction.

Key	Column Name	Column Description	Format	Length	Picture
P	FDCDE	Drug-Food Interaction Food Code	N	3	9(3)
	DNAME	Drug-Food Interaction Drug Name	AN	21	X(21)
	FD_SL	Drug-Food Severity Level	AN	1	X(1)
	RESULT	Drug-Food Interaction - Result	AN	45	X(45)
	FDMSG1	Drug-Food Interaction - First Line Message	AN	27	X(27)
	FDMSG2	Drug-Food Interaction - Second Line Message	AN	27	X(27)

Drug-Food Interaction Monograph Text Table

Table Name	RDFIMMO0_MONO
Revision Activity	original
Purpose	Provides the text for the drug-food interaction professional monograph.

Key	Column Name	Column Description	Format	Length	Picture
PF	FDCDE	Drug-Food Interaction Food Code	N	3	9(3)
P	FDCDE_SN	Drug-Food Interaction Monograph Text Sequence Number	N	3	9(3)
	TXTCDE	Drug-Food Interaction Text Code	AN	1	X(1)
	FDTXT	Drug-Food Interaction Data	AN	76	X(76)

GCN_SEQNO - Drug-Food Code Relation Table

Table Name	RDFIMGC0_GCNSEQNO_LINK				
Revision Activity	original				
Purpose	Links clinical formulations to food interactions.				
Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	FDCDE	Drug-Food Interaction Food code	N	3	9(3)

Drug-Food Interaction Module for Consumers (DFIM-C) 1.0

- General Information
- Drug-Food Interaction for Consumers Module Editorial Policies
- Application: Displaying Drug-Food Interaction Messages for Consumers
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- [Overview](#)
- [Concepts](#)

Overview

The Drug-Food Interaction Module for Consumers (DFIM-C) provides text-based monographs of drug-food interaction information for consumer use. The module is based upon the content of the Drug-Food Interaction Module (DFIM), a clinically reviewed module that reports only the most clinically significant interactions. DFIM provides, among other things, a professional monograph detailing the interaction between certain drugs and foods when ingested together. Consumer versions of the monograph provide the drug-food interaction information in text created for consumer use.

The consumer-based module shares the DFIM Master Table with the professional module. In other words, the Drug-Food Interaction Food Code (FDCDCE) allows access to both the professional monograph and the consumer monograph via the Master Table, provided you are licensed to receive both sets of monograph text.

-  Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within the DFIM monograph for the interaction.

Concepts

This section describes concepts and database elements that are important for understanding the module.

Understanding Consumer Monograph Elements

Each DFIM-C monograph consists of the following sections, described in detail below:

- title
- medical warning
- how the interaction occurs
- what might happen
- what you should do about this interaction
- references

TITLE: includes the drug or drug class and the interacting food. This is included in a format identical to the professional monograph.

-  For consumer monographs, it is recommended that the name of the specific drug that resulted in the interaction be placed just above or just below the monograph title.

MEDICAL WARNING: provides a brief description of the significance of the interaction. This section is based

upon the Significance Level in the professional monograph. The interaction between a drug and food may be potentially harmful or beneficial to the patient. The Medical Warning outlines possible action the physician may deem warranted based upon the significance of the interaction and its resultant effect. Depending upon which of the three significance levels is assigned to a drug-food interaction, one of the following messages is provided to the consumer:

Significance Levels

Level	Warning
1	Most important. A change in your diet, medicine, or dosage is likely to be necessary. Promptly consult your doctor or pharmacist.
2	Very important. A change in your diet, medicine, or dosage may be necessary. Promptly consult your doctor or pharmacist
3	Important. Possible changes in your diet, medicine, or dosage should be discussed with your doctor or pharmacist.

HOW THE INTERACTION OCCURS: describes the manner in which the drug and food interact, if known. The mechanism by which the interaction is purported to occur is explained in consumer language.

WHAT MIGHT HAPPEN: describes possible physiologic (therapeutic and toxic, as applicable) effects of the interaction on the patient.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: discusses methods to avoid or counteract the effects of the drug-food interaction. In situations where the drug-food interaction may be a beneficial one, the patient is provided with information on methods to maximize the benefit. In cases where a drug-food combination may result in symptoms that a patient may recognize, these symptoms are listed in patient-friendly terms, with a referral to a healthcare professional. In the event that specific monitoring of the interaction may be warranted, the patient is provided with this information. As applicable, a specific food list relevant to the interaction is also included.

REFERENCES: lists all reference source data found in the reference section of the professional monograph.

- i** Discussion information, which describes the findings as reported in the cited references, is not included within a specific section of the consumer monograph. Applicable information from this section of the professional monograph is incorporated into the consumer monograph in one or more of the sections described above.

Displaying Disclaimers

Each consumer monograph includes a disclaimer. This disclaimer must be provided with the monograph in all developer applications, regardless of whether the monograph is electronically displayed or printed as a document. The monograph disclaimer reads as follows:

Example—This information is generalized and not intended as specific medical advice. Consult your healthcare

professional before taking or discontinuing any drug, changing your diet, or commencing any course of treatment.

The monograph disclaimer is assigned to print code Z. Refer to [Understanding Consumer Monograph Elements](#) for more information about DFIM-C print codes.

Monograph Disclaimer

When using DFIM-C, one or more disclaimers are required. Use of each disclaimer, along with its specific text, is described below. Refer to your licensing agreement for information regarding the disclaimers required in your specific environment or application(s).

Terms of Use (Terms and Conditions) Disclaimer

The Terms of Use Disclaimer must be implemented in all web environments for consumers and healthcare professionals. The Terms of Use Disclaimer reads as follows:

Use Restrictions

You agree not to commercialize or redistribute the contents of this web site.

Medical Disclaimers

This site is designed to offer you general health information for educational purposes only. The health information furnished on this site and the interactive responses is not intended to be professional advice and is not intended to replace personal consultation with a qualified physician, pharmacist, or other healthcare professional. You must always seek the advice of a professional for questions related to your disease, disease symptoms, and appropriate therapeutic treatments. If you have or suspect that you have a medical problem or condition, please contact a qualified healthcare provider immediately. You should never disregard medical advice or delay in seeking it because of something you have read on this site.

We do not make any warranty that the content on this site satisfies government regulations requiring disclosure of information on prescription drug products. The content was developed for use in the United States, and neither we nor our content providers make any representation concerning the content when used in any other country. While information on this site has been obtained from sources believed to be reliable, neither we nor our content providers warrant the accuracy of codes, prices or other data contained on this site.

We do not give medical advice, nor do we provide medical or diagnostic services. Medical information changes rapidly. Neither we nor our content providers guarantee that the content covers all possible uses, directions, precautions, drug interactions, or adverse effects that may be associated with any therapeutic treatments.

Your reliance upon information and content obtained by you at or through this site is solely at your own risk. Neither we nor our content providers assume any liability or responsibility for damage or injury (including death) to you, other persons or property arising from any use of any product, information, idea or instruction contained in the content or services provided to you.

This disclaimer text is provided in a separate table. Refer to [Technical Specifications](#) for more information.

Click Through Agreement (Conditions of Use)

The Conditions of Use must be implemented as a “click through” agreement in all web environments for consumers and healthcare professionals. The Conditions of Use reads as follows:

CONDITIONS OF USE: The information in this database is intended to supplement, not substitute for, the expertise and judgment of your healthcare professional. The information is not intended to cover all possible uses, directions, precautions, drug interactions or adverse effects, nor should it be construed to indicate that use of a particular drug is safe, appropriate or effective for you. You should consult your healthcare professional before taking or discontinuing any drug or commencing any course of treatment.

Drug-Food Interaction for Consumers Module Editorial Policies

The policies and criteria that apply to the scope, processes, and sources of the Drug-Food Interaction for Consumers Module are provided in the following sections.

Scope

DFIM-C is intended to provide a text-based monograph targeted to the consumer audience. This monograph may be generated by the healthcare professional and distributed to the patient. Alternately, the monographs may be incorporated into a system providing access directly to the consumer for use in self-care and ambulatory medical care. This may include, but is not limited to, the Internet, stand-alone kiosks, or other systems. DFIM-C can assist healthcare professionals in meeting Joint Commission (TJC) and community practice standards regarding the provision of drug-food interaction information. DFIM-C aids in the process by providing monographs directed to patients, in language they can understand.

As with the DFIM module, the DFIM-C module can operate in a stand-alone system environment with no electronic link to a patient's medication list. However, if such a link is available, the use of DFIM-C will enhance the system's operation.

-  It should be noted that the body of evidence available on drug-food interactions is limited and not nearly as extensive, for example, as drug-drug interactions.

Editorial Process

The following section describes the processes and criteria the clinical editors use to add or review database elements.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health Canada
- MedWatch Safety Alerts
- Changes to government approved prescribing information
- Primary medical literature

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review data is a new Clinical Formulation ID ([GCN_SEQNO](#)).

Module Maintenance

This module is updated and expanded regularly by First Databank (FDB). As content additions, changes, and enhancements are identified, both professional and consumer monographs are developed or modified as appropriate. FDB's policy is to stay current and dynamic with changing drug information. However, all decisions regarding drug therapy must be based on independent judgement due to the dynamic nature of drug information and changing medical practice.

Inclusion Criteria

Clinical severity, quantity and quality of documentation, and complexity of patient management are some of the criteria considered when determining the inclusion of an interaction in DFIM. If a professional monograph is deemed warranted, a corresponding consumer monograph will be developed.

Monograph Readability

All efforts are made to enhance the readability of the monograph by the consumer public. Each monograph is evaluated for consistency in wording and phrasing when compared to existing monographs. In addition, sentence structure and grammar are constructed for maximum reading ease.

Application: Displaying Drug-Food Interaction Messages for Consumers

This application illustrates the generation of display options for consumer drug-food interaction messages for consumers.

Consider the following when developing applications for consumer drug-food monographs:

- provide access to all three significance levels during drug-food interaction screening
- supplement the monograph title with the name of the specific drug that resulted in the interaction by including the drug name directly above or directly below the title
- identify the section header (for example, Medical Warning, How the Interaction Occurs) with bold text

The following application begins at the Clinical Formulation level with the Clinical Formulation ID ([GCN_SEQNO](#)) and assumes familiarity with the various drug concepts and their identifiers. See [Multiple Access Points \(MAPs\)](#) for more information.

1. Select the Drug-Food Interaction Food Code ([FDCDE](#)) column from the [GCN_SEQNO/Drug-Food Code Relation Table](#) ([RDFIMGC0_GCNSEQNO_LINK](#)) where the GCN_SEQNO column equals the GCN_SEQNO value of the drug product.
2. Select the following columns from the [Drug-Food Interaction Master Table](#) ([RDFIMMA0_MSTR](#)) where the FDCDE column equals the FDCDE value from the previous step.
 - a. Drug-Food Interaction Drug Name ([DNAME](#))
 - b. Drug-Food Severity Level ([FD_SL](#))
 - c. Drug-Food Interaction - Result ([RESULT](#))
 - d. Drug-Food Interaction - First Line Message ([FDMSG1](#))
 - e. Drug Food Interaction - Second Line Message ([FDMSG2](#))
3. Display the Drug-Food Interaction details to the end-user.
4. Display the Drug-Food Interaction message for label printing by placing the FDMSG2 information directly under the FDMSG1 information.
5. Select the following columns from the [Consumer Food Interaction Monograph Text Table](#) ([RDFICMO0_CONSUMER_MONO](#)) where the FDCDE column equals the FDCDE value from step 1.
 - a. Drug-Food Interaction Monograph Text Sequence Number (Consumer) ([FDCCDE_SN](#))
 - b. Drug-Food Interaction Text Code (Consumer) ([TXTCDEC](#))
 - c. Drug-Food Interaction Data (Consumer) ([FDCTXT](#))
6. Display monograph details to the end-user in the order indicated by the FDCCDE_SN column.

Example—Displaying Drug-Food Interaction Messages for Consumers

A clinician wishes to generate all available drug-food interaction documentation for the consumer when screening for drug-food interactions. The example below demonstrates the generation of these messages for the drug

product Matulane (Clinical Formulation ID [GCN_SEQNO] 008836).

- Select the Drug-Food Interaction Food Code (**FDCDE**) column from the **GCN_SEQNO/Drug-Food Code Relation Table** (RDFIMGC0_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) value of the drug product.

GCN_SEQNO	LN	FDCDE
008836	MATULANE 50 MG CAPSULE	012

- Select the following columns from the **Drug-Food Interaction Master Table** (RDFIMMA0_MSTR) where the Drug-Food Interaction Food Code (**FDCDE**) column equals the FDCDE value from the previous step.
 - Drug-Food Interaction Drug Name (**DNAME**)
 - Drug-Food Severity Level (**FD_SL**)
 - Drug-Food Interaction - Result (**RESULT**)
 - Drug-Food Interaction - First Line Message (**FDMSG1**)
 - Drug Food Interaction - Second Line Message (**FDMSG2**)

FDCDE	012
DNAME	MAOI'S
FD_SL	1
RESULT	FOOD CONTAINING TYRAMINE CAN INCREASE BP.
FDMSG1	AVOID HIGH TYRAMINE FOODS.
FDMSG2	...

- Display the Drug-Food Interaction details to the end-user.

MAOI's/Tyramine-containing Foods Interaction
 Severity Level: 1 - Most significant. Documented; (more clinical data may be needed). Action to reduce risk of adverse interaction usually required.
 Result: Food containing tyramine can increase BP.

- Display the Drug-Food Interaction message for label printing by placing the FDMSG2 information directly under the FDMSG1 information, when applicable. For example:

Avoid High Tyramine Foods.

- Select the following columns from the **Drug-Food Interaction Monograph Text Table** (RDFIMMO0_MONO) where the FDCDE column equals the FDCDE value from step 1.

- Drug-Food Interaction Monograph Text Sequence Number (Consumer) (**FDCCDE_SN**)

- b. Drug-Food Interaction Text Code (Consumer) (**TXTCDEC**)
- c. Drug-Food Interaction Data (Consumer) (**FDCTXT**)

FDCDE	FDCCDE_SN	TXTCDEC	FDCTXT
012	001	Z	This information is generalized and not intended as specific medical advice.
012	002	Z	Consult your healthcare professional before taking or discontinuing any
012	003	Z	drug, changing your diet or commencing any course of treatment.
012	004	B	
012	005	T	Monograph Title
012	006	T	MAOI's/Tyramine-containing Foods
012	007	B	
012	008	L	Medical Warning
012	009	L	Most important. A change in your diet, medicine, or dosage is likely to
012	010	L	be necessary. Promptly consult your doctor or pharmacist.
012	011	B	
012	012	A	How the Interaction Occurs
012	013	A	Tyramine is normally broken down in your body by an enzyme called MAO
012	014	A	(monoamine oxidase). When MAO inhibitor (MAOI) medicines are taken,

012	015	A	excessive amounts of tyramine enter the bloodstream, leading to the release
012	016	A	of adrenaline-like substances (norepinephrine) in the body. Increased blood
012	017	A	pressure then occurs.
012	018	B	
012	019	E	What Might Happen
012	020	E	Large increases in blood pressure may occur, which could lead to very
012	021	E	serious problems such as strokes or chest pain/heart attacks.
012	022	B	
012	023	M	What You Should Do About This Interaction
012	024	M	It is very important that you follow special dietary restrictions in
012	025	M	order to limit the amount of tyramine in your diet while you are taking
012	026	M	this medicine.
012	027	M	Foods and beverages high in tyramine should be avoided (see list below).
012	028	M	Excessive amounts of coffee, chocolate, sour cream, or avocados have also
012	029	M	produced symptoms of high blood pressure in some cases. The following is a
012	030	M	tyramine food list:

012	031	M	High tyramine level foods include aged cheeses (cheddar, camembert,
012	032	M	emmenthaler, brie, stilton blue, gruyere, gouda, brick, bleu, roquefort,
012	033	M	boursault, parmesan, romano, provolone, liederkranz, colby, edam); aged,
012	034	M	dried, fermented, salted, smoked, pickled and processed meats and fish
012	035	M	(includes bacon, summer sausage, liverwurst, hot dogs, corned beef,
012	036	M	pepperoni, salami, bologna, ham, mortadella, pickled or dried herring);
012	037	M	banana peel; beef and chicken liver (stored, not fresh); bouillon cubes,
012	038	M	commercial gravies; concentrated yeast extracts (marmite); fava beans,
012	039	M	Italian green beans, broad beans, fermented bean curd, homemade yeast-
012	040	M	leavened bread; kim chee (Korean fermented cabbage); miso, orange pulp;
012	041	M	overripe or spoiled fruits; packaged soups, red wine, sauerkraut, sherry,
012	042	M	snow pea pods, sourdough bread, soy sauce, soya bean, soya bean paste; tap

012	043	M	beer and ale; vermouth.
012	044	M	Moderate-to-low tyramine level foods include alcohol-free beer,
012	045	M	avocados, bananas; bottled beer and ale; chocolate and products made
012	046	M	with chocolate; coffee, cola; cultured dairy products (e.g., buttermilk,
012	047	M	yogurt, sour cream); distilled spirits, eggplant, canned figs, fish roe
012	048	M	(caviar), green bean pods, pate, peanuts, port wine, raisins, raspberries,
012	049	M	red plums, spinach, tomatoes, white wine.
012	050	M	Tell your doctor or pharmacist immediately if you notice symptoms of high
012	051	M	blood pressure such as fast or slow heartbeat, vomiting, sweating or
012	052	M	headache, chest pain, sudden vision changes, one-sided weakness or slurred
012	053	M	speech.
012	054	M	Contact your healthcare professional (e.g., doctor, pharmacist or
012	055	M	dietitian) for more information, including recommendations for your diet.

012	056	M	Your healthcare professionals may be aware of this interaction and may
012	057	M	be monitoring you for it. Do not start, stop, or change your medicine or
012	058	M	diet before checking with them first.
012	059	B	
012	060	R	References
012	061	B	
012	062	R	1. Pare CM, Al Mousawi M, Sandler M, Glover V. Attempts to attenuate the
012	063	R	'cheese effect'. Combined drug therapy in depressive illness. J Affect
012	064	R	Disord 1985;9:137-41.
012	065	R	2. Shulman KI, Walker SE, MacKenzie S, Knowles S. Dietary restriction,
012	066	R	tyramine, and the use of monoamine oxidase inhibitors. J Clin
012	067	R	Psychopharmacol 1989;9:397-402.
...

6. Display the monograph details to the end-user in the order indicated by the FDCCDE_SN column. The example below provides a sample of the monograph text.

DRUG PRODUCT: Matulane**MONOGRAPH TITLE:** MAOI's/Tyramine-containing Foods

MEDICAL WARNING: Most important. A change in your diet, medicine, or dosage is likely to be necessary. Promptly consult your doctor or pharmacist.

HOW THE INTERACTION OCCURS: Tyramine is normally broken down in your body by an enzyme called MAO (monoamine oxidase). When MAO inhibitor (MAOI) medicines are taken, excessive amounts of tyramine enter the bloodstream, leading to the release of adrenaline-like substances (norepinephrine) in the body. Increased blood pressure then occurs.

WHAT MIGHT HAPPEN: Large increases in blood pressure may occur, which could lead to very serious problems such as strokes or chest pain/heart attacks.

WHAT YOU SHOULD DO ABOUT THIS INTERACTION: It is very important that you follow special dietary restrictions in order to limit the amount of tyramine in your diet while you are taking this medicine.

Foods and beverages high in tyramine should be avoided (see list below). Excessive amounts of coffee, chocolate, sour cream, or avocados have also produced symptoms of high blood pressure in some cases. The following is a tyramine food list:

High tyramine level foods include aged cheeses (Cheddar, Camembert, Emmenthaler, brie, Stilton blue, Gruyere, Gouda, brick, Bleu, Roquefort, Boursault, Parmesan, Romano, Provolone, Liederkranz, Colby, Edam); aged, dried, fermented, salted, smoked, pickled and processed meats and fish (includes bacon, summer sausage, liverwurst, hot dogs, corned beef, pepperoni, salami, bologna, ham, Mortadella, pickled or dried herring); banana peel; beef and chicken liver (stored, not fresh); bouillon cubes, commercial gravies; concentrated yeast extracts (marmite); fava beans, Italian green beans, broad beans, fermented bean curd, homemade yeast-leavened bread; Kim Chee (Korean fermented cabbage); miso, orange pulp; overripe or spoiled fruits; packaged soups, red wine, Sauerkraut, Sherry, snow pea pods, sourdough bread, soy sauce, soya bean, soya bean paste; tap beer and ale; vermouth.

Moderate-to-low tyramine level foods including alcohol-free beer, avocados, bananas; bottled beer and ale; chocolate and products made with chocolate; coffee, cola; cultured dairy products (e.g., buttermilk, yogurt, sour cream); distilled spirits, eggplant, canned figs, fish roe (caviar), green bean pods, pate, peanuts, port wine, raisins, raspberries, red plums, spinach, tomatoes, white wine.

Tell your doctor or pharmacist immediately if you notice symptoms of high blood pressure such as fast or slow heartbeat, vomiting, sweating or headache, chest pain, sudden vision changes, one-sided weakness or slurred speech.

Contact your healthcare professional (e.g., doctor, pharmacist or dietitian) for more information, including recommendations for your diet.

Your healthcare professionals may be aware of this interaction and may be monitoring you for it. Do not start, stop or change your medicine or diet before checking with them first.

REFERENCES:

1. Pare CM, Al Mousawi M, Sandler M, Glover V. Attempts to attenuate the 'cheese effect'. Combined drug therapy in depressive illness. *J Affect Disord* 1985;9:137-41.
2. Shulman KI, Walker SE, MacKenzie S, Knowles S. Dietary restriction, tyramine, and the use of monoamine oxidase inhibitors. *J Clin Psychopharmacol* 1989;9:397-402.

DFIM-C ERD and Technical Specifications

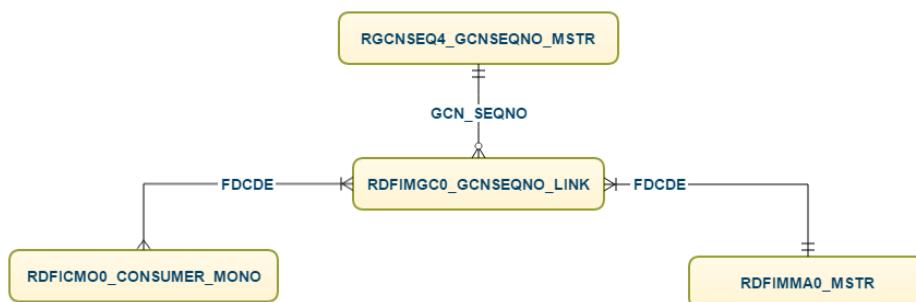
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- DFIM-C Tables
- DFIM-C ERD

DFIM-C Tables

- Consumer Food Interaction Monograph Text Table

DFIM-C ERD



Consumer Food Interaction Monograph Text Table

Table Name	RDFICMO0_CONSUMER_MONO				
Revision Activity	add.02-25-2000				
Purpose	Provides the text for the drug-food interaction consumer monograph.				

Key	Column Name	Column Description	Format	Length	Picture
PF	FDCDE	Drug-Food Interaction Food Code	N	3	9(3)
P	FDCCDE_SN	Drug-Food Interaction Monograph Text Sequence Number	N	3	9(3)
	TXTCDEC	Drug-Food Interaction Text Code (Consumer)	AN	1	X(1)
	FDCTXT	Drug-Food Interaction Data (Consumer)	AN	76	X(76)

Intravenous Module (IVM) 1.0

- General Information
- Intravenous Module Editorial Policies
- Applications
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- Overview
- Definitions
- Concepts

Overview

The Intravenous Module (IVM) provides information from the *Handbook of Injectable Drugs* by the American Society of Health-System Pharmacists (ASHP) to enable screening of intravenous drug preparations for physicochemical compatibility or incompatibility.

IVM is unique in its comprehensiveness and convenience. It helps avoid compatibility problems frequently encountered in the compounding and dispensing of IV (intravenous) preparations, decreases the time spent investigating compatibilities manually, and eliminates speculation. This improves management of IV preparation. Additionally, IVM reduces waste of time and materials on physically or chemically incompatible IV mixtures.

Due to continually advancing technology in drug delivery, it is necessary to provide compatibility and incompatibility data for multiple intravenous drug delivery methods. The four methods of intravenous drug delivery described in IVM are:

- single drug-in-solution
- multiple drugs-in-solution
- multiple drugs-in-syringe
- Y-site

All four of these IV delivery modes can affect both the nature and extent of drug stability and compatibility.

Because the reverse is also true, attention must be paid to a drug's compatibility and stability when selecting a particular delivery system. It is possible, then, that IVM can assist the healthcare professional in choosing alternative administration systems.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module may also be defined.

Compatibility (C)

Compatibility is determined from the specific study or studies referenced in the text. Compatibility is defined as either physical compatibility (no visible incompatibility) or stability of the drugs or solutions in each study for at

least 24 hours (or less if stated in the study) with less than 10% decomposition. IV mixtures determined to be compatible are noted with a value of **C** in the IVM Study Group Test Result Code (**IVMRSLT**) column.

Incompatibility (I)

Various criteria are considered in determining the incompatibility of an IV mixture. IV mixtures determined to be incompatible are noted with a value of **I** in the IVM Study Group Test Result Code (**IVMRSLT**) column.

- Physical Incompatibility (such as precipitation, haze, color change, etc.) — Both visible and non-visible incompatibilities are included in IVM. Many studies evaluate only “physical incompatibility.” Visibly observable effects, such as color change or haze, are definite incompatibilities.
- Chemical Incompatibility (such as decomposition) — An IV mixture may exhibit more than 10% decomposition within 24 hours, but may still be useful during a shorter period. Factors that influence decomposition, such as the amount of decomposition, temperature, contact time, and pH, are included in the remarks associated with IVM compatibility test results.
- Instability — Instability defines a chemical reaction that is not reversible and results in degradation products that may be toxic and therapeutically inactive. Examples include hydrolysis and oxidative reactions. Hydrolysis is a common mechanism of chemical decomposition causing the majority of drug instability cases.

Equivocal Compatibility (?)

The Handbook on Injectable Drugs notes compatibility as equivocal in situations in which compatibility results are transient (such as turbidity that is resolved during a short time period), uncertain, or inconsistent. These results do not fit generally accepted criteria for compatibility or incompatibility. In the IVM Module, such results are assigned an IVM Study Group Test Result Code (**IVMRSLT**) value of **?**.

Concepts

This section describes concepts and database elements that are important for understanding the module.

IVM Codes

IVM Component, IVM Admixture, IVM Study Group, and IVM Remark codes are not stable and can change over time, for example, a value might change with a new edition of the Handbook on Injectable Drugs. Reference the table below for a list of these and other IVM codes with their descriptions.

Code	Description	Description
IVMCOMP	IVM Component	Assigned to a drug, solution, or total parenteral nutrition solution (TPN). All IVM components are assigned component codes.
IVMADMIX	IVM Admixture	One or more IVM components as a unit being tested in an IVM Study Group. An admixture groups one or more IVM components together in a “non-test” condition.

IVMSGRP	IVM Study Group	A unique combination of IVM admixtures.
IVMTESTSN	IVM Study Group Test	An individual compatibility investigation performed on the admixtures of an IVM Study Group.
IVMRSLT	IVM Study Group Test Result	Denotes whether the mixture is compatible, incompatible, or equivocal.
IVMTTYPE	IVM Study Group Test Type	This value denotes whether the study type is a single drug in solution (solution study), multiple drugs in a solution (additive study), drugs in syringe (syringe study), or a Y-site study.
IVMRMK	IVM Remarks	Additional information regarding a study which may include time, temperature, stability, container, and other variables used in determining compatibility.
IVMMFG	IVM Manufacturer	Abbreviations assigned to manufacturers per the Handbook on Injectable Drugs.

Intravenous Module Editorial Policies

The policies and criteria that apply to the processes and sources of the Intravenous Module are provided in the following sections:

- Scope
- Editorial Process
- Sources

Scope

The Intravenous Module enables the automatic screening of intravenous drug preparations for physicochemical compatibility or incompatibility. A system utilizing IVM data is typically capable of the following:

- providing an alert if there is an incompatibility
- allowing screening for all incompatibilities
- allowing screening for all compatibilities with possible alternatives to any incompatibilities
- allowing screening by mode of administration to eliminate extraneous or irrelevant data
- allowing screening based upon specific products or upon formulation level attributes of the Clinical Formulation ID ([GCN_SEQNO](#))

Editorial Process

The following section describes the processes and criteria for adding database elements.

Inclusion and Exclusion Criteria

Information in the IVM Module is based on the most current information available from the publishers of the Handbook on Injectable Drugs by the American Society of Health-System Pharmacists (ASHP). The specific data compiled in IVM reflects all the information presented in tabular format in the handbook reference. Other information that resides in the text format of this handbook are not usually included in the data content of IVM. The information compiled in this book represents the results of published reports from primary references of compatibility testing of intravenous drugs.

The IVM data is updated monthly and supplied to FDB by the American Society of Health-System Pharmacists® (ASHP). Only information supplied by ASHP is available in the IVM Module. FDB does not editorially adjust the data in any way. Upon request, information not included in the Handbook on Injectable Drugs may be added to IVM upon ASHP review and determination that the information is clinically significant and warrants inclusion. Please direct any inquiries or error reports to FDB Customer Service.

In addition to the description above, IVM may include/exclude the following other factors and exceptions.

Strength Specificity

Incompatibility studies are strength-specific. Therefore, both the Handbook on Injectable Drugs and IVM are also strength-specific regarding solutions. For instance, precipitation might occur for a given component in a D10W solution but not in D5W. However, for non-solutions, data is spread to all available strengths; the strength specificity for other components may be noted within the remarks associated with IVM compatibility test results.

Drugs-in-Syringe

IVM contains data for only intravenous administration. An exception to this, however, occurs when one or more drugs are in a syringe. The data for drugs-in-syringe can be applied to intramuscular and subcutaneous routes.

Diluents

The studies for drugs-in-syringe may not address diluents due to the fact that the diluents are not mentioned in the original studies.

Therapeutic Incompatibilities

Therapeutic incompatibilities have not been included. Although decomposition is noted, the therapeutic effect is not quantified.

Pre-made Solutions

IVM reflects the data as reported in the Handbook on Injectable Drugs; therefore, studies will include component codes for pre-made IV solutions if and when they are reported in the test.

IVM Update Information

Updated IVM data is supplied to FDB on a monthly basis by the American Society of Health-System Pharmacists® (ASHP). However, larger than normal updates may occur when ASHP globally applies maintenance and clarification changes (such as updated IVM code values) to the IVM content. Please be aware that these types of changes will occur during the months of March and October, unless a change is required that pertains to patient safety.

Sources

This section lists sources used by FDB to compile the information contained in the module.

- The IVM data is supplied to FDB by the American Society of Health-System Pharmacists® (ASHP).

IVM Applications

This section provides information about the practical application of data contained in this module.

[**IVM Application Overview**](#)

[**IVM Application Examples**](#)

[**IVM Programming Examples**](#)

IVM Application Overview

This application section offers a general description of the processes required to access normalized tables for retrieval of the data and demonstrates two of these processes. As you review each general example, refer to the [Intravenous Module ERD](#) for data sources and relationships. Also, please keep the following in mind:

Specific programming instructions for the retrieval of IVM data must take into account both the installation platform and the metrics of the desired processing. Therefore, such instructions are outside the scope of this manual. However, any navigation through IVM tables is dependent upon the basic IVM data design.

- Programming Logic
- Understanding the IVM Admixture Concept
- A Note on TPNs as Components

Programming Logic

The IVM module enables the automatic screening of intravenous drug preparations for physicochemical compatibility or incompatibility. A system utilizing IVM data is typically capable of the following:

- providing an alert if there is an incompatibility
- allowing screening for all incompatibilities
- allowing screening for all compatibilities with possible alternatives to any incompatibilities
- allowing screening by mode of administration to eliminate extraneous or irrelevant data
- allowing screening based upon specific products (such as byDIN) or upon formulation level attributes of the Clinical Formulation ID ([GCN_SEQNO](#))

IVM component codes are associated through the Clinical Formulation ID (GCN_SEQNO) to drugs having routes of **A** (intravenous), **2** (injection) or, in selected cases, **C** (intramuscular—only applies to syringe data), or **E** (epidural—only applies to syringe data). The Clinical Formulation ID (GCN_SEQNO) in turn provides linkage to specific manufacturer products.

 If IVM content does not exist for a given IVM Component Code, users should be alerted to consult alternative reference sources, such as the *Handbook on Injectable Drugs*.

Understanding the IVM Admixture Concept

Significant to the understanding of the IVM data model is the use of the IVM Admixture Code ([IVMADMIX](#)) to group one or more IVM components together in a “non-test” condition. IVM compatibility is reported for tests upon admixtures. The components of any one admixture are not examined for compatibility against one another in a reported study associated with that admixture. Their compatibility as stand-alone drugs may, however, be reported in a separate study performed upon single-component admixtures.

With this design, IVM data is able to distinguish between tests, for example, performed by adding Drug C to the combination of Drug A in Solution B from tests performed by adding Drug A to the combination of Drug C in Solution B. Yet another distinct test may be identified which gives the results of combining the admixture of Drug A in Solution B with the admixture of Drug C in Solution B.

A Note on TPNs as Components

Many IVM admixtures include Total Parenteral Nutrition (TPN) components. Conceptually, TPNs function as components in the IVM design and are shown as an IVM component subtype in the IVM data model.

As subtypes, these TPN components have attributes that distinguish them from the non-TPN components. TPNs do not exist as products identifiable by IDCs or other international product designation. They cannot be identified at the drug level using the Clinical Formulation ID (GCN_SEQNO).

For TPNs to be available to the end-user for selection or display in an IVM inquiry, the [Intravenous Module TPN Description Table](#) (RIVMTPN0_TPN_DESC) and [Intravenous Module TPN Ingredient Description Table](#) (RIVMTPI0_TPN_ING_DESC) must be accessible to the application. The individual ingredients of each TPN may have a manufacturer specified as well as a concentration, and these values are constant for every reference to that TPN. In contrast, these details may vary for non-TPN components in each individual investigation performed upon the admixtures containing them.

The RIVMTPN0_TPN_DESC table and the Non-TPN table, the [Intravenous Module Component Description Table](#) (RIVMCDS0_COMP_DESC), may be merged to form a single component description table. TPN component codes are distinguished from other IVM component codes by the presence of a value of **9** in the first byte.

IVM Application Examples

Four different examples demonstrating each mode of IV administration are presented in this section to show the flexibility and functionality of IVM data. Navigation through the various IVM tables is graphically illustrated in the [Intravenous Module ERD](#). For specific programming logic guidelines, refer to [Programming Logic](#) in the IVM Application Overview section.

- Example—A drug-in-solution compatibility and incompatibility
- Example—The compatibility of two drugs in solution
- Example—The incompatibility of two admixtures administered via Y-site
- Example—Compatibility of two drugs in a syringe

Example—A drug-in-solution compatibility and incompatibility

The Drug-in-Solution method of administration is selected. IDCs for specific products of Metoclopramide HCl and Dextrose 5% are known. These IDCs have associated Clinical Formulation ID ([GCN_SEQNO](#)) values that yield their IVM Component Code ([IVMCOMP](#)) values through the [GCN_SEQNO/Intravenous Module Component Code Relation Table](#) ([RIVMCGC0_COMP_GCNSEQNO_LINK](#)).

IDC	LN	GCN_SEQNO	IVMCOMP	Component Description
03000029747	METOCLOPRAMIDE 5MG/ML VIAL	005229	582129	Metoclopramide Hydrochloride
03000000945	DEXTROSE 5%-WATER IV SOLN	001972	250012	Dextrose 5%

For the purposes of the IVM, components are grouped conceptually into Admixtures which may contain several components or only one component. Admixtures are the items which are combined in a test situation to determine their compatibility.

For this example, we want to determine the compatibility test results of the two single-component admixtures that represent only the component Metoclopramide and only the component Dextrose 5%. The actual IVM Admixture Code ([IVMADMIX](#)) values returned are of no interest to the end-user. They are intermediate results used to find which investigations involve those Admixture codes.

In IVM terminology, we find all Drug-in-Solution tests involving the Study Group represented by the Metoclopramide-only and the Dextrose 5%-only Admixture Codes. IVM contains information for 27 such tests. The data associated with four of those tests appears below.

			Manufacturer	Concentration
TEST RESULT:	COMPATIBLE			
COMPONENT #1:	Dextrose 5%		TR	
COMPONENT #2:	Metoclopramide Hydrochloride		RB	200mg/1L
TEST REMARK #1:	Physically compatible with no loss in 24 hr at 25 DGC exposed to normal room light			

TEST REMARK #2:	Tested in PVC containers			
TEST RESULT:	COMPATIBLE			
COMPONENT #1:	Dextrose 5%		TR	
COMPONENT #2:	Metoclopramide Hydrochloride		RB	200mg/1L
TEST REMARK #1:	9% loss after 2 weeks and 14% loss after 4 weeks frozen at -20 DGC followed by 24 hr at room temperature			
TEST REMARK #2:	Tested in PVC containers			
TEST RESULT:	COMPATIBLE			
COMPONENT #1:	Dextrose 5%		TR	
COMPONENT #2:	Metoclopramide Hydrochloride		RB	3.2G/1L
TEST REMARK #1:	Physically compatible with 5% loss in 24 hr at 25 DGC exposed to normal room light			
TEST REMARK #2:	Tested in PVC containers			
TEST RESULT:	INCOMPATIBLE			
COMPONENT #1:	Dextrose 5%		TR	
COMPONENT #2:	Metoclopramide Hydrochloride		RB	3.2G/1L
TEST REMARK #1:	11% loss after 1 week and 37% loss after 4 weeks frozen at -20 DGC followed by 24 hr at room temperature			

Example—The compatibility of two drugs in solution

The Multiple Drugs-in-Solution method of administration is selected. Heparin Sodium, Penicillin G Potassium, and Dextrose 5% are selected by name. Their IVM Component Code (**IVMCOMP**) values are obtained from the [Intravenous Module Component Description Table](#) (RIVMCDS0_COMP_DESC). As in the example above ([A drug-in-solution compatibility and incompatibility](#)), all three components stand alone as single-component admixtures. Three tests are found for the Study Group representing all three admixtures, as shown in the table below. The results illustrate how different concentrations of the same solution can return various test results.

		Manufacturer	Concentration
TEST RESULT:	COMPATIBLE		
COMPONENT #1:	Heparin Sodium		1200u/1L
COMPONENT #2:	Penicillin G Potassium		1mmU/1L

COMPONENT #3:	Dextrose 5%		
TEST REMARK #1:	Physically compatible		
TEST RESULT:	COMPATIBLE		
COMPONENT #1:	Heparin Sodium	AB	20000u/1L
COMPONENT #2:	Penicillin G Potassium	SQ	1mmU/1L
COMPONENT #3:	Dextrose 5%		
TEST REMARK #1:	Penicillin potency retained for 24 hr at 25 DGC		
Penicillin potency retained for 24 hr at 25 DGC	INCOMPATIBLE		
COMPONENT #1:	Heparin Sodium	UP	4000u/1L
COMPONENT #2:	Penicillin G Potassium	SQ	20mmU/1L
COMPONENT #3:	Dextrose 5%		
TEST REMARK #1:	Physically incompatible		

In this example, we find an incompatible test result based on differences in the components' concentrations.

Example—The incompatibility of two admixtures administered via Y-site

This example shows how IVM is able to simplify a complex situation: one drug in a solution in one intravenous line coming into contact with another drug in a second solution. Through the Admixture concept, IVM data can distinguish a specific drug-solution combination as an aggregate item that is being tested against another aggregate drug-solution Admixture. This illustrates the capability of IVM to be highly selective and report only those studies that are relevant.

The Y-site method of administration is selected. Two combinations of drugs, Ondansetron in normal saline and Aminophylline in D5W, are specified by description. IVM Component Code (**IVMCOMP**) values are obtained from the [Intravenous Module Component Description Table \(RIVMCDS0_COMP_DESC\)](#).

Combination	Generic Name	IVMCOMP
1	ONDANSETRON HCL	591006
1	NORMAL SALINE	250023
2	AMINOPHYLLINE	582006
2	DEXTROSE 5%-WATER	250012

The Admixture concept allows the proper grouping of the drug-solution pairs. An IVM Admixture Code (**IVMADMIX**) that is associated with both the Component Code for Ondansetron HCl and the Component Code for

Sodium Chloride 0.9% is identified. Another IVMADMIX value that is associated with the IVMCOMP values for both Aminophylline and D5W is also identified.

As in first example above ([A drug-in-solution compatibility and incompatibility](#)), these IVMADMIX values are intermediate values and are not necessarily useful to the user. Making an inquiry to find all test results that are associated with the two identified IVMADMIX values yields:

			MANUFACTURER	CONCENTRATION
TEST RESULT:	INCOMPATIBLE			
Admixture #1:				
COMPONENT #1:	ONDANSETRON HCL		GL	1mg/1mL
COMPONENT #2:	NORMAL SALINE			
Admixture #2:				
COMPONENT #1:	AMINOPHYLLINE		AMR	2.5mg/1mL
COMPONENT #2:	DEXTROSE 5%-WATER			
TEST REMARK #1:	Immediate turbidity and precipitation			

Example—Compatibility of two drugs in a syringe

The Drugs in Syringe method of administration is selected. When Promethazine HCl and Morphine sulfate are selected by brand name, specific product records are retrieved (in this caseIDCs) with their associated Clinical Formulation ID ([GCN_SEQNO](#)) values. The Clinical Formulation IDs (GCN_SEQNOs) are used to retrieve IVM Component Code ([IVMCOMP](#)) values from the [Intravenous Module Component Description Table](#) ([\(RIVMCDS0_COMP_DESC\)](#)).

Brand Name	IDC	GCN_SEQNO	IVMCOMP
PROMETHAZINE HCL	03000008956	003866	582174
MORPHINE SULFATE	03000004916	004077	582136

Data retrieval proceeds using the same logic as the first example, [A drug-in-solution compatibility and incompatibility](#). All tests associated with the single-component IVM Admixture Code ([IVMADMIX](#)) values for Phenergan and for are retrieved with the following results:

		MANUFACTURER	CONCENTRATION
TEST RESULT:	COMPATIBLE		
COMPONENT #1:	Promethazine Hydrochloride	WY	50mg/2mL
COMPONENT #2:	Morphine Sulfate	WY	15mg/1mL
TEST REMARK #1:	Physically compatible for at least 15 min		

TEST RESULT:	COMPATIBLE		
COMPONENT #1:	Promethazine Hydrochloride	PO	50mg/2mL
COMPONENT #2:	Morphine Sulfate	ST	15mg/1mL
TEST REMARK #1:	Physically compatible for at least 15 min		
TEST RESULT:	INCOMPATIBLE		
COMPONENT #1:	Promethazine Hydrochloride	WY	8mg
COMPONENT #2:	Morphine Sulfate	WY	12.55mg
TEST REMARK #1:	Cloudiness develops		

IVM Programming Examples

This section provides programming examples for compatibility and incompatibility screening.

- Example—A drug-in-solution compatibility and incompatibility
- Example—The incompatibility of two admixtures administered via Y-site

Example—A drug-in-solution compatibility and incompatibility

In this example, the user elects to specify particular IDCs for metoclopramide HCl and dextrose 5% products and also has restricted the search to a Drug-in-Solution method of administration. The selected products are Reglan 5MG/ML vial (IDC 03000004809) and Dextrose 5% (IDC 03000000945). (For more information, review the example, A drug-in-solution compatibility and incompatibility, in [IVM Application Examples](#).)

1. The Clinical Formulation ID ([GCN_SEQNO](#)) values for the selected IDCs are retrieved from the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT). The Label Name ([LN](#)) shown in the sample data is also obtained from the RICAIDC1_DRUG_PRODUCT table.

IDC	LN	GCN_SEQNO
03000000945	DEXTROSE 5%-WATER IV SOLN	001972
03000004809	REGLAN 5 MG/ML VIAL	005229

2. Each Clinical Formulation ID (GCN_SEQNO) value is used to obtain the IVM Component Code ([IVMCOMP](#)) from the [GCN_SEQNO/IVM Component Code Relation Table](#) (RIVMCGC0_COMP_GCNSEQNO_LINK).

The retrieved IVMCOMP values correspond to all products associated with the Clinical Formulation ID (GCN_SEQNO) values from step 1, not merely the originally-selected IDCs. The IVMCOMP values in turn may be used to search the [Intravenous Module Component Description Table](#) (RIVMCDS0_COMP_DESC), returning the IVM Non-TPN Component Description ([IVMCOMPDSC](#)).

GCN_SEQNO	IVMCOMP	IVMCOMPDSC
001972	250012	Dextrose 5%
005229	582129	Metoclopramide Hydrochloride

3. Because IVM Study Group Tests are performed upon groups of admixtures, not components, we need to retrieve the IVM Admixture Code ([IVMADMIX](#)) values for the selected components as admixtures containing single drugs not in combination with any other IVM component; that is, we are seeking single-component admixtures.

This is a crucial concept for the correct retrieval of IVM data.

Select the IVMADMIX records from the [Intravenous Module Admixture/Component Code Relation Table](#) (RIVMACO0_ADMXTR_COMP_LINK) that match the IVMCOMP values retrieved in the previous step. Each of the IVMADMIX values in the retrieved records is compared to the [Intravenous Module Admixture](#)

Master Table (RIVMAMA0_ADMXTR_MSTR) to locate the IVMADMIX value that has an IVM Admixture Non-TPN Component Count (**IVMCCNT**) of **1** and an IVM Admixture TPN Component Count (**IVMTPNCNT**) of **0**. (If no such record is found within the RIVMAMA0_ADMXTR_MSTR table, the selected IVM component has not been reported in any study as a “stand-alone” drug but has only been studied in combination with another component.)

IVMCOMP	IVMADMIX	IVMCCNT	IVMTPNCNT
250012	000803	1	1
250012	000804	2	0
250012	250012	1	0
582129	582129	1	0
582129	000005	1	0

There may be multiple IVMADMIX codes associated with IVMCOMP **250012**. The search may be discontinued, however, as soon as the IVMCOMP record of **250012** with IVMCCNT value of **1** and IVMTPNCNT value of **0** is identified. The actual logic used to perform the above selections depends on your database and application software.

4. We wish to examine studies that report the compatibility of the two single-component admixtures identified in the previous step. In a process logically similar to that of the previous step, we now select from the **Intravenous Module Study Group/Admixture Relation Table** (RIVMSAD0_STDY_GRP_ADMXTR_LINK) the records that have an IVM Study Group Code (**IVMSGP**) associated with both IVMADMIX values of **250012** and **582129**.

At this point, we can obtain and report compatibility test results for any investigations involving the identified admixtures, including those in which additional admixtures are present. Large numbers of records may be retrieved in this step. In this example, there are multiple study groups associated only with IVMADMIX **250012** or only to IVMADMIX **582129**, and a few study groups associated with both of them.

To restrict the data, we must process the IVMSGP values now gathered should be restricted if possible to those studies involving only the desired two admixtures. To do this, we select from this set of IVMSGP values the one with a corresponding **Intravenous Module Study Group Master Table** (RIVMSMA0_STDY_GRP_MSTR) record that shows an IVM Study Group Admixture Count (**IVMADCNT**) of 2. A small sample of results is shown below.

IVMADMIX	IVMSGP	IVMADCNT
582129	012414	2
250012	012415	2
582129	012415	2
582129	012416	2

5. Every Study Group in IVM has at least one reported compatibility investigation. The basic information for each such test is the type of test, that is, the method of administration (drug-in-solution, Y-site, syringe) and the test result. This data resides on the [Intravenous Module Study Group Test Master Table](#) (RIVMTMA0_STDY_GRP_TST_MSTR).

In this example, four test records are identified by gathering all records from this table that have the two-admixture IVMSGP value of **012415**. All of these records show an IVM Study Group Test Type Code (**IVMTTYPE**) value of **1**, indicating the Drug-in-Solution method of administration, and thus all are candidates for display according to the user's selection criteria. Of the four test records, three have an IVM Study Group Test Result Code (**IVMRSLT**) value of **C**, indicating compatible, and one returns an IVMRSLT value of **I**, indicating incompatible.

IVMSGP	IVMTESTSN	IVMTTYPE	IVMRSLT
012415	1	1	C
012415	2	1	C
012415	3	1	C
012415	4	1	I

If only compatibility results are desired for display, the access of IVM data is completed at this step. Much more information is available, however, from other IVM tables. By accessing the remarks associated with these study group tests, text information may be found that clarifies the test conditions (such as lighting or temperature) or test results (for example, duration of compatibility, reason for incompatibility). Specific information regarding the concentration of components or manufacturers of the actual samples used in each test (these may vary in each investigation) may be retrieved from the test component detail tables. The remaining steps explain the data retrieval for these additional tables.

6. To retrieve textual remark information relating to each Study Group Test, we first use the IVMSGP code plus the IVM Study Group Test Number (**IVMTESTSN**) from each investigation to read the [Intravenous Module Study Group Test/Remarks Relation Table](#) (RIVMTRM0_STDY_GRP_TST_REMARK). IVM Remarks Code (**IVMRMK**) associated with each test are retrieved from this table with an IVM Study Group Test Remarks Sequence Number (**IVMRMKSN**), which indicates the order in which the remarks should be read for proper interpretation.

IVMSGP	IVMTESTSN	IVMRMKSN	IVMRMK
012415	1	1	000046
012415	1	2	003387
012415	2	1	000046
012415	2	2	003388
012415	3	1	000046
012415	3	2	003389

012415	4	1	000046
012415	4	2	003390

Note that all tests have two associated remarks codes.

7. The text fields for the remarks codes identified in step 6 are read from the [Intravenous Module Remarks Table](#) (RIVMRMK0_REMARKS) using the IVMRMK code. There may be more than one 70-byte text record for every IVM Remarks Code ([IVMRMK](#)) value. Continuation of text fields and correct sequencing may be determined using the IVM Remarks Continuation Sequence Number ([IVMRMKSEQ](#)) from this table.

The remarks for some of the compatibility tests for IVMSGRP **012415** are:

IVMTESTSN	IVMRMK	IVMRMKSEQ	IVMREMARK
1	000046	1	Tested in PVC containers
	003387	1	Physically compatible with no loss in 24 hr at 25 DGC exposed to
	003387	2	normal room light
2	000046	1	Tested in PVC containers
	003388	1	9% loss after 2 weeks and 14% loss after 4 weeks frozen at -20 DGC
	003388	2	followed by 24 hr at room temperature
3	000046	1	Tested in PVC containers
	003389	1	Physically compatible with 5% loss in 24 hr at 25 DGC exposed to
	003389	2	normal room light
4	000046	1	Tested in PVC containers
	003390	1	11% loss after 1 week and 37% loss after 4 weeks frozen at -20 DGC
	003390	2	followed by 24 hr at room temperature

Note that the remarks for the tests above continue onto a second and third record. All lines are part of the single remark code.

8. IVM provides test-specific data for each component of each admixture included in every study group. To access this information, we use the [Intravenous Module Study Group Test Component Detail Table/IVM Study Group Test/Component Relation Table](#) (RIVMTC00_STDY_GRP_TST_COMP_DT).

This table may be read with all or any subsets of the concatenated key comprised of study group + test + admixture + component. (The admixture specification is important because the same component may be present in more than one admixture within a study group, in each case returning different data from the table).

Fields on this table include the IVM Manufacturer Code ([IVMMFG](#)), IVM Strength Number ([IVMSTR](#)), and IVM Volume Units Code ([IVMVOLU](#)) data. In this example, the following records are retrieved for **IVMSGRP 012415**.

IVMTESTSN	IVMADMIX	IVMCOMP	Strength	Volume	IVMMFG
1	250012	250012	00000000v000	00000000n000	TR
1	582129	582129	00000200n000m g	00000001n000L	RB
2	250012	250012	00000000n000	00000000n000	TR
2	582129	582129	00000200n000m g	00000001n000L	RB
3	250012	250012	00000000n000	00000000n000	TR
3	582129	582129	00000003n200G	00000001n000L	RB
4	250012	250012	00000000n000	00000000n000	TR
4	582129	582129	00000003n200G	00000001n000L	RB

To retrieve the corresponding TJC-compliant unit descriptions for the given IVM units ([IVMVOLU](#) and [IVMSTRU](#)), query the [Units Description Table](#) (RUNITSD0_UNITS_DESC). Please be aware that the IVM unit values within the RIVMTC00_STDY_GRP_TST_COMP_DT table are provided in a mixed-case format. To retrieve the corresponding TJC-compliant unit descriptions, these values must be converted to upper-case.

9. The names of the component manufacturers indicated by the IVM Manufacturer Code Description ([IVMMFGD](#)) returned in step 8 may be accessed from the [Intravenous Module Manufacturer Description Table](#) (RIVMMFG0_MANUFACTURER_DESC).

IVMMFG	IVMMFGD
RB	Robbins
TR	Travenol

Example—The incompatibility of two admixtures administered via Y-site

In this example, the Drug/Solution admixtures Aminophylline in D5W and Ondansetron HCl in Sodium chloride (0.9%) are specified by description of their components and the Y-site method of administration is selected. (For

more information, review [The incompatibility of two admixtures administered via Y-site.](#))

1. The user selects the IVM Non-TPN Component Description ([IVMCOMPDSC](#)) values from the [Intravenous Module Component Description Table \(RIVMCDS0_COMP_DESC\)](#).

The system must provide a facility for the user to specify that these components are to be selected as a combined item (such as a single admixture).

—...
__AMINOHIPPURATE SODIUM
__AMINOPHYLLINE
__AMINOPHYLLINE/NORMAL SALINE
__AMIODARONE HYDROCHLORIDE
—...
__D5NS (DEXTROSE 5%-SODIUM CHLORIDE 0.9%)
__D5R (DEXTROSE 5%-RINGERS)
__D5W (DEXTROSE-WATER 5%)
__D5W-ELECTROLYTE B (IONOSOL)
—...

For each IVMCOMPDSC values selected above, the system retrieves the corresponding IVM Component Code ([IVMCOMP](#)) values from the RIVMCDS0_COMP_DESC table.

IVMCOMPDSC	IVMCOMP
Dextrose 5%	250012
Aminophylline	582006

2. When the user specifies the “select as Admixture” process for the components chosen, the system selects from the [Intravenous Module Admixture/Component Code Relation Table \(RIVMACO0_ADMXTR_COMP_LINK\)](#) the one IVM Admixture Code ([IVMADMIX](#)) code that is associated with both of the IVMCOMP codes in the previous step, and no other. (This search may be optimized by also using the [Intravenous Module Admixture Master Table \(RIVMAMA0_ADMXTR_MSTR\)](#) to determine which admixtures are associated with exactly two components).

In this example, the admixture representing Aminophylline in D5W is IVMADMIX is **000159**.

IVMCOMP	IVMADMIX	IVMCCNT	IVMTPNCNT
582006	000004	1	0
582006	000159	2	0
582006	000277	2	0
...			

250012	000091	2	0
250012	000108	2	0
250012	000159	2	0
250012	000184	2	0

3. The user repeats step 1 to select the components Ondansetron HCl and Sodium Chloride 0.9% (NS), again using the system's facility to specify them as components in combination in a single admixture.

.....
__OFLOXACIN HCL
__ONDANSETRON HCL/D5W
__ONDANSETRON HYDROCHLORIDE
__OPIUM
__ORPHENADRINE CITRATE
....
__SODIUM CHLORIDE 0.5%
__SODIUM CHLORIDE 0.9% (NS)
__SODIUM CHLORIDE 3%
__SODIUM CHLORIDE 5%
.....

The system retrieves from the RIVMCDS0_COMP_DESC table the corresponding IVMCOMP codes for the selected components.

IVMCOMPDESC	IVMCOMP
Ondansetron Hydrochloride	591006
Sodium chloride 0.9%	250023

4. Because the user specifies that these two components are to be selected as a single admixture, the system then selects the one IVMADMIX code from the RIVMACO0_ADMXTR_COMP_LINK table that is associated with both of these IVMCOMP values and no other (as in step 2). (This search may be optimized by also using the RIVMAMA0_ADXTR_MSTR table to determine which admixtures are associated with exactly two components).

The IVM admixture representing Ondansetron HCl in Sodium chloride 0.9% is **000071**.

IVMCOMP	IVMADMIX	IVMCCNT	IVMTPNCNT
591006	000071	2	0
591006	000296	2	0
591006	000767	2	0

...			
250023	000070	2	0
250023	000071	2	0
250023	000087	2	0
250023	000302	2	0

The search for IVM admixture code(s) will be more restricted if the set of admixture codes associated with the “non-solution” component(s) of an admixture are collected first. This subset of admixture codes is then examined to locate those codes that are also associated with the “solution” component. In general, there are many more admixture/component pairs for solution components than for non-solutions. In the example above, there are only three admixture codes associated with Ondansetron HCl, but there are multiple admixture codes associated with Sodium chloride 0.9%.

5. The system selects from the [Intravenous Module Study Group/Admixture Relation Table](#) (RIVMSAD0_STDY_GRP_ADMXTR_LINK) all of the IVM Study Group Code ([IVMSGP](#)) values that are associated with both IVMADMIX values **000159** and **000071**.

This process parallels that performed in step 4 of [A drug-in-solution compatibility and incompatibility](#) in the Programming Examples section.

We find that, as in Programming Example above, there are many study groups to review. The large number can be reduced somewhat by limiting the selection to a subset of study groups selected from the [Intravenous Module Study Group Master Table](#) (RIVMSMA0_STDY_GRP_MSTR) which show an IVM Study Group Admixture Count ([IVMADCNT](#)) value of **2**.

IVMADMIX	IVMSGP	IVMADCNT
...		
000159	000762	2
000159	000763	2
000159	000764	2
...		
000071	000170	2
000071	000509	2
000071	000763	2
000071	001142	2
...		

6. Selecting all records from the **Intravenous Module Study Group Test Master Table** (RIVMTMA0_STDY_GRP_TST_MSTR) that are associated with IVMSGP value of **000763** and that have a test type code IVM Study Group Test Type Code (**IVMTTYPE**) value of **4** (signifying Y-site), we find only one.

IVMSGP	IVMTESTSN	IVMTTYPE	IVMRSLT
000763	1	4	1

7. The only investigation combining the specified admixtures by the Y-site method found that they were incompatible. To retrieve further textual information regarding this test, the system retrieves from the **Intravenous Module Study Group Test/Remarks Relation Table** (RIVMTRM0_STDY_GRP_TST_REMARK) all IVM Remarks Code (**IVMRMK**) values associated with this test, in their indicated sequence. This selection process returns only one record.

IVMSGP	IVMTESTSN	IVMRMKSN	IVMRMK
000763	1	1	000309

8. The IVM Remarks Text (**IVMREMARK**) related to the identified IVMRMK value of **000309** is retrieved from the **Intravenous Module Remarks Table** (RIVMRMK0_REMARKS).

IVMRMK	IVRMKSEQ	IVMREMARK
000309	1	Immediate turbidity and precipitation

9. If information regarding the specific components used in this compatibility test is desired, the system accesses the **Intravenous Module Study Group Test/Component Relation Table** (RIVMTCO0_STDY_GRP_TST_COMP_DT) to select all records for IVMSGP **000763** and IVMTESTSN **1**.

IVMADMIX	IVMCOMP	Strength	Volume	IVMMFG
000071	591006	00000001000 mg	00000001v000 m	GL
000071	250023	000000000000	00000000v000	
000159	582006	00000002500 mg	00000001v000 mL	AMR
000159	250012	000000000000	00000000v000	

To retrieve the corresponding TJC-compliant unit descriptions for the given IVM units (**IVMVOLU** and **IVMSTRU**), query the **Units Description Table** (RUNITSD0_UNITS_DESC). Please be aware that the IVM unit values within the RIVMTCO0_STDY_GRP_TST_COMP_DT table are provided in a mixed-case format. To retrieve the corresponding TJC-compliant unit descriptions, these values must be converted to upper-case.

10. The names of the component manufacturers, indicated by the IVM Manufacturer Code Description (**IVMMFG**) values returned in the previous step, may be read from the **Intravenous Module Manufacturer**

Description Table (RIVMMFG0_MANUFACTURER_DESC).

IVMMFG	IVMMFGD
AMR	American Regent
GL	Glaxo

IVM ERD and Technical Specifications

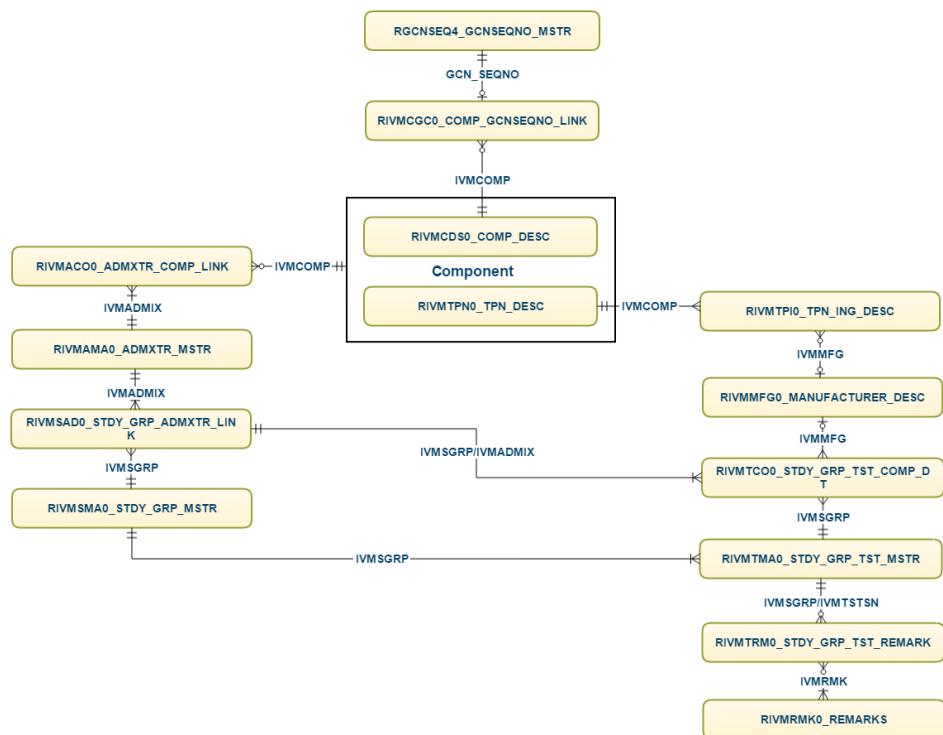
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- IVM Tables
- IVM ERD

IVM Tables

- GCN_SEQNO/Intravenous Module Component Code Relation Table
- Intravenous Module Admixture/Component Code Relation Table
- Intravenous Module Admixture Master Table
- Intravenous Module Component Description Table
- Intravenous Module Manufacturer Description Table
- Intravenous Module Remarks Table
- Intravenous Module Study Group/Admixture Relation Table
- Intravenous Module Study Group Master Table
- Intravenous Module Study Group Test/Component Relation Table
- Intravenous Module Study Group Test Master Table
- Intravenous Module Study Group Test/Remarks Relation Table
- Intravenous Module TPN Description Table
- Intravenous Module TPN Ingredient Description Table

IVM ERD



GCN_SEQNO Intravenous Module Component Code Relation Table

Table Name	RIVMCGC0_COMP_GCNSEQNO_LINK				
Revision Activity	rev.09-25-2008				
Purpose	Links a clinical formulation to a component.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
F	IVMCOMP	IVM Component Code	AN	6	X(6)

Intravenous Module Admixture Component Code Relation Table

Table Name	RIVMACO0 ADMXTR_COMP_LINK				
Revision Activity	rev.09-25-2008				
Purpose	Links components to an admixture.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IVMADMIX	IVM Admixture Code	AN	6	X(6)
PF	IVMCOMP	IVM Component Code	AN	6	X(6)

Intravenous Module Admixture Master Table

Table Name	RIVMAMA0 ADMXTR_MSTR				
Revision Activity	rev.09-25-2008				
Purpose	Provides attributes of an admixture.				

Key	Column Name	Column Description	Format	Length	Picture
P	IVMADMIX	IVM Admixture Code	AN	6	X(6)
	IVMCCNT	IVM Admixture Non-TPN Component Count	N	1	9(1)
	IVMTPNCNT	IVM Admixture TPN Component Count	N	1	9(1)

Intravenous Module Component Description Table

Table Name	RIVMCDS0_COMP_DESC
Revision Activity	rev.09-25-2008
Purpose	Relates the Component Code to its non-TPN component description.

Key	Column Name	Column Description	Format	Length	Picture
P	IVMCOMP	IVM Component Code	AN	6	X(6)
	IVMCOMPDESC	IVM Non-TPN Component Description	AN	50	X(50)

Intravenous Module Manufacturer Description Table

Table Name	RIVMMFG0_MANUFACTURER_DESC
Revision Activity	rev.09-25-2008
Purpose	Relates the Manufacturer Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	IVMMFG	IVM Manufacturer Code	AN	3	X(3)
	IVMMFGD	IVM Manufacturer Code Description	AN	50	X(50)

Intravenous Module Remarks Table

Table Name	RIVMRMK0_REMARKS
Revision Activity	rev.09-25-2008
Purpose	Relates the Remarks Code for a study group test to its text.

Key	Column Name	Column Description	Format	Length	Picture
P	IVMRMK	IVM Remarks Code	AN	6	X(6)
P	IVMRMKSEQ	IVM Remarks Continuation Sequence Number	N	3	9(3)
	IVMRMKTYP	This column is not currently being used	AN	1	X(1)
	IVMREMARK	IVM Remarks Text	AN	70	X(70)

Intravenous Module Study Group Admixture Relation Table

Table Name	RIVMSAD0_STDY_GRP_ADMXTR_LINK				
Revision Activity	rev.09-25-2008				
Purpose	Links admixtures to study groups.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IVMSGRP	IVM Study Group Code	AN	6	X(6)
PF	IVMADMIX	IVM Admixture Code	AN	6	X(6)

Intravenous Module Study Group Master Table

Table Name	RIVMSMA0_STDY_GRP_MSTR
Revision Activity	rev.09-25-2008
Purpose	Provides attributes of a study group.

Key	Column Name	Column Description	Format	Length	Picture
P	IVMSGRP	IVM Study Group Code	AN	6	X(6)
	IVMADCNT	IVM Study Group Admixture Count	N	2	9(2)

Intravenous Module Study Group Test Component Relation Table

Table Name	RIVMTCO0_STDY_GRP_TST_COMP_DT				
Revision Activity	rev.09-25-2008				
Purpose	Links the strength and/or volume information to a component within an admixture in a study group test.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IVMSGRP	IVM Study Group Code	AN	6	X(6)
P	IVMTESTSN	IVM Study Group Test Number	N	3	9(3)
PF	IVMADMIX	IVM Admixture Code	AN	6	X(6)
PF	IVMCOMP	IVM Component Code	AN	6	X(6)
	IVMSTR	IVM Strength Number	N	12	9(8).9(3)
	IVMSTRU	IVM Strength Units Code	AN	3	X(3)
	IVMVOL	IVM Volume Number	N	12	9(8).9(3)
	IVMVOLU	IVM Volume Units Code	AN	3	X(3)
F	IVMMFG	IVM Manufacturer Code	AN	3	X(3)

Intravenous Module Study Group Test Master Table

Table Name	RIVMTMA0_STDY_GRP_TST_MSTR
Revision Activity	rev.09-25-2008
Purpose	Provides attributes of a study group test.

Key	Column Name	Column Description	Format	Length	Picture
PF	IVMSGRP	IVM Study Group Code	AN		X(6)
P	IVMTESTSN	IVM Study Group Test Number	N	3	9(3)
	IVMTTYPE	IVM Study Group Test Type Code	AN	1	X(1)
	IVMRSLT	IVM Study Group Test Result Code	AN	1	X(1)

Intravenous Module Study Group Test Remarks Relation Table

Table Name	RIVMTRM0_STDY_GRP_TST_REMARK
Revision Activity	rev.09-25-2008
Purpose	Links textual remark information to a test within a study group.

Key	Column Name	Column Description	Format	Length	Picture
PF	IVMSGRP	IVM Study Group Code	AN	6	X(6)
P	IVMTESTSN	IVM Study Group Test Number	N	3	9(3)
P	IVMRMKSN	IVM Study Group Test Remarks Sequence Number	N	2	9(2)
	IVMRMK	IVM Remarks Code	AN	6	X(6)

Intravenous Module TPN Description Table

Table Name	RIVMTPN0_TPN_DESC
Revision Activity	rev.09-25-2008
Purpose	Relates the Component Code to its TPN component description.

Key	Column Name	Column Description	Format	Length	Picture
P	IVMCOMP	IVM Component Code	AN	6	X(6)
	IVMTPNDSC	IVM TPN Component Description	AN	50	X(50)

Intravenous Module TPN Ingredient Description Table

Table Name		RIVMTP10_TPN_ING_DESC			
Revision Activity		rev.09-25-2008			
Purpose		Relates the Component Code to the text description of a TPN ingredient within a component and provides attributes of that relationship.			
Key	Column Name	Column Description	Format	Length	Picture
PF	IVMCOMP	IVM Component Code	AN	6	X(6)
P	IVMTPNINGR	IVM TPN Ingredient Description	AN	50	X(50)
	IVMSTR	IVM Strength Number	N	12	9(8).9(3)
	IVMSTRU	IVM Strength Units Code	AN	3	X(3)
	IVMVOL	IVM Volume Number	N	12	9(8).9(3)
	IVMVOLU	IVM Volume Units Code	AN	3	X(3)
F	IVMMFG	IVM Manufacturer Code	AN	3	X(3)

Precaution Modules

- Geriatric Precautions Module™ (GERI) 2.0
- Lactation Precautions Module™ (LACT) 1.0
- Pediatric Precautions Module™ (PEDI) 2.0
- Pregnancy Precautions Module™ (PREG) 2.0

Geriatric Precautions Module (GERI) 2.0

- Geriatric Precautions Module Editorial Policies
- Applications
- ERD and Technical Specifications

Geriatric Precautions Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the module are provided in the following sections:

- Overview
- Definitions
- Inclusion/Exclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

Overview

The Geriatric Precautions Module™ (GERI) module contains precaution information for the use of drugs in a geriatric patient. Geriatric is a term that usually describes patients over the age of 65.

-  Geriatric age threshold is not intended to be absolute and might not be applicable to your practice environment. You may set a higher threshold age to trigger alerts.

The GERI module enables you to create warning messages about drug use in the geriatric patient population. These warnings allow healthcare professionals to make informed decisions about altering a patient's drug therapy when potential problems exist. Although system access to the patient's age and gender enhances the functionality of the product, it is not a requirement to achieve valuable results. The GERI module can work in a stand-alone pharmacy system or as part of an integrated system.

The GERI module is intended for use as a screening mechanism to detect geriatric drug precautions specific to the geriatric patient population. The precautions are clinically relevant and are generally well documented in the literature. Warnings may not be included if there is no data on a particular drug usage in the geriatric patient population.

Systems using GERI can provide the following information:

- Severity level of the precaution
- Indicators for select organ systems associated with the precaution
- Indicators to identify whether a Geriatric Precaution for a drug exists on the BEERS, HEDIS, or STOPP lists
- Geriatric precaution narrative (optional usage data field)

-  There are situations when geriatric dosing data exists in the dosing modules for a drug that is contraindicated in geriatric patients. Though this may seem like a conflict, clinically, drug

contraindications are rarely absolute and in these situations, the dosing modules may provide geriatric dosing data as a safety check. The presence of this data in the dosing modules shall not be construed as a recommendation from First Databank (FDB) that such use is acceptable.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also defined.

Geriatic

Geriatic is a term that usually describes patients over the age of 65.

Geriatic age threshold is not intended to be absolute and might not be applicable to your practice environment. You may set a higher threshold age to trigger alerts in your application of the Geriatrics Precautions Module.

Inclusion/Exclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

Inclusion - Drug Scope

- U.S. FDA-approved Rx product *ingredients* with New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologic License Application (BLA)
- U.S. over-the-counter (OTC) products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbal products enumerated in the FDB [Herbal Products Inclusion List](#)
- Select Rx products unavailable in the U.S.

Inclusion - Warnings Content Scope

Content pertains to drug use in the geriatric patient population. The following information is included for a given drug when available:

- Known risk in the geriatric population
- Adverse effect of a drug that is unique to the geriatric population
- Known severe adverse effect of drug with an increased frequency in the geriatric population
- Precaution statements where a drug is not recommended for use within the geriatric population
- Renal warnings for drug dose adjustment when CrCL is in the normal range for an elderly patient (40-90 mL/min)
- Common adverse drug events that may have a significant impact on the elder adult

Exclusion - Drug Scope

- Non-U.S. products that are exclusive to other countries
- Self-proclaimed Rx products without ANDA/NDA/BLA

- Rx drug products with 510K device approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products, except those enumerated in the FDB [Herbal Products Inclusion List](#)
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers
- Cosmetics
- Veterinary drugs
- Inactive ingredients

Exclusion - Warnings Content

- General dose selection warning in geriatrics when no evidence is presented to support the warning (for example, verbiage such as "In general, dose selection for the elderly patients should be cautious, keeping in mind the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy," is not considered evidence).
- Warnings that apply to disease conditions common in geriatrics but not exclusive to this population (for example, general heart failure warnings). These types of warnings are better handled by a patient-specific triggered alert such as is available with a Drug-Disease Contraindications Module (DDCM) implementation.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

Geriatic Precaution Code

The Geriatric Precaution Code ([GERI_CODE](#)) is a system-assigned six-character number unique for each drug group.

GERI codes are linked to the following FDB drug identifiers:

- Routed Medication ID ([ROUTED_MED_ID](#))
- Clinical Formulation ID ([GCN_SEQNO](#))

Geriatic Precaution Description

A single unique description ([GERI_DESC](#)) is assigned to each GERI code. This drug group description is usually ingredient-based but can be broader and include a collection of ingredients—for example, "CALCIUM SALTS"—or may be narrower and include only certain dose forms or routes—for example, "NIFEDIPINE (SHORT ACTING)."

Example—Geriatric Precautions Master Table (RGERIMA1_GERI_MSTR)

GERI_CODE	GERI_DESC
40	Dipyridamole (Long Acting)
49	Nifedipine (Short Acting)
56	Potassium Salts (Injectable)
57	Calcium Supplements

Geriatric Precaution Severity Level

Each GERI code is assigned one severity level (**GERI_SL**). There are two numeric valid values for severity level: 1 or 2.

GERI Severity Level Description Table (RGERISD0_GERI_SEVER_LEVEL_DESC)

GERI_SL	GERI_SL_DESC
1	Contraindication
2	Management or Monitoring Precaution

Geriatric Precautions Organ System Flag

Each GERI code may optionally have one or many specific organ system flag(s) associated with it. These flags identify that, with use of the drug in a geriatric patient, either the specific organ system is at increased risk for toxicity (for example, nephrotoxicity) or there is increased risk of adverse reactions with pre-existing organ impairment.

Specific Organ Flag Definitions

Geriatric Precaution Organ System Function - Renal (GERI_RNL)	Renal Organ System
Geriatric Precaution Organ System Function - Hepatic (GERI_HEP)	Hepatic Organ System
Geriatric Precaution Organ System Function - Cardiovascular (GERI_CARD)	Cardiac Organ System
Geriatric Precaution Organ System Function - Pulmonary (GERI_PULM)	Pulmonary Organ System
Geriatric Precaution Organ System Function - Neurologic/Psychiatric (GERI_NEUR)	Neurologic/Psychiatric System
Geriatric Precaution Organ System Function - Endocrine (GERI_END)	Endocrine Organ System

Valid Organ Flag Values and Definition

A one-character alphanumeric denoted by one of the following:

"Y"	Activated organ flag that indicates increased risk to the organ system or increased adverse reactions with pre-existing organ system impairment.
"N"	No known or expected increased risk to the organ system in geriatrics.

Geriatic Precautions Indicators

On BEERS List

The On BEERS List indicator (**GERI_BEERS_IND**) is a one-character alphanumeric value that indicates whether the drug is on the BEERS List, denoting higher risk drugs in the elderly.

GERI_BEERS_IND	Description
Y	On the BEERS List
N	Not on the BEERS List

On HEDIS List

The HEDIS List indicator (**GERI_HEDIS_IND**) is a one-character alphanumeric value that indicates whether the drug is on the HEDIS (Healthcare Effectiveness Data and Information Set) drug list, identifying high-risk medications in the elderly and developed and maintained by the National Committee for Quality Assurance (NCQA).

Valid Values Table

GERI_HEDIS_IND	Description
Y	On the HEDIS List
N	Not on the HEDIS List

On STOPP List

The STOPP List indicator (**GERI_STOPP_IND**) is a one-character alphanumeric value that indicates whether the drug is on the STOPP List, a subset of the STOPP/START screening tool criteria used to help identify inappropriate/appropriate drug use in the elderly.

Valid Values Table

GERI_STOPP_IND	Description
Y	On the STOPP List
N	Not on the STOPP List

Geriatic Precautions Narrative

The Geriatric Precaution Narrative (**GERI_NARRATIVE**) in v2.0 is an enhanced 500-character optional field used to provide additional details on the geriatric precaution information.

Example—Geriatric Precautions Master Table

GERI_CODE	492	845	51
GERI_DESC	Hydrochlorothiazide	Acetaminophen (oral,rectal)	Nicardipine
GERI_SL	2	2	2
GERI_RN	Y	N	Y
GERI_HEP	N	Y	Y
GERI_CARD	Y	N	Y
GERI_PULM	N	N	N
GERI_NEUR	N	N	N
GERI_END	Y	N	N
GERI_BEERS	N	N	Y
GERI_HEDIS	N	Y	N
GERI_STOPP	Y	N	Y
GERI_NARRATIVE	Cardiovascular-Increased sensitivity to effects on blood pressure. Metabolic-More likely to develop hypokalemia or hypomagnesemia. Endocrine-May worsen glucose control in diabetics. Renal-Less effective with severe renal impairment.	Hepatic-Elderly are more susceptible to hepatotoxicity. Strict adherence to a maximum daily dose of 3000mg is advised.	Renal-Elderly with moderate renal dysfunction may have elevated serum concentrations of nicardipine. Follow blood pressure closely. Hepatic-Elderly with hepatic dysfunction or decreased hepatic blood flow may have elevated serum concentrations of nicardipine. Follow blood pressure closely. Gastrointestinal-May cause constipation or exacerbation of pre-existing constipation.

Rule Sets

This section provides rules that the clinical team uses in regard to creating the module's data, both general rules and rules specific to data elements.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

Drug knowledge is aggregated at the drug group level (see Geriatric Precaution Code) and then linked to Clinical Formulation IDs and Routed Medication IDs in the FDB knowledge base. Linkage or assignment of GERI information to drugs is therefore not manufacturer-specific.

Non-U.S. drug Clinical Formulations may inherit U.S.-based GERI clinical data.

Rules for Geriatric Precaution Code Drug Groups: Description and Linking

Clinical Formulation IDs (**GCN_SEQNOs**) are linked to a GERI code drug group that is most commonly based on having identical ingredients, but can be broader to include a class of ingredients when there is a larger ingredient class effect—for example, "Calcium Salts"—or may be narrower to include only certain dose forms, routes, or strengths of a single ingredient—for example, "Nifedipine (Short Acting)."

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

Geriatric Precaution Severity Level Assignment

The severity level assignment is primarily determined by the geriatric warning content in FDA-approved manufacturer prescriber information. Other sources that may contribute to the severity level assignment also may include STOPP Criteria comments, BEERS List comments, and other comments as pertinent.

- Severity Level 1 is reserved for warnings that state there is known risk. There are stated severe adverse outcomes, or a potential for severe morbidity or mortality exists.

 Severity Level 1 may not be an "absolute" contraindication.

- Severity Level 2 is reserved for warnings that state there is a known risk or evidence of a potential adverse effect.

Evidence Schema

Severity Level 1

- Boxed Warning labeling with specific mention of avoidance in geriatric population
- Contraindicated labeling with any mention of the geriatric population in association with the contraindication
- Warnings or Precautions section with any bolded statements (or all capitalization format) regarding severe adverse reactions in geriatrics and recommended avoidance in this population
- Geriatric Use section of labeling states not recommended because use has demonstrated severe adverse effects

Severity Level 2

- Boxed Warning labeling with specific mention of adverse reaction risk in geriatric population, but the drug has indicated uses in geriatrics and monitoring adverse reactions is recommended.
- Contraindicated labeling in geriatrics only with an associated, specific co-morbid condition listed (for example, PALIPERIDONE; CONTRAINDICATED IN SENILE DEMENTIA DUE TO HIGHER RATES OF

DEATH).

- Non-bolded Warnings or Precautions labeling with specific mention of adverse reaction risk in geriatric population and also with a labeled indicated use in geriatrics.
- Geriatric Use section of labeling states:
 - No efficacy established in formal geriatric studies, and evidence of geriatric adverse reactions exists.
 - Safety and efficacy established, and known risk of adverse effects that can be monitored.
- Geriatric Use/Dosing sections state the drug is used in geriatrics, but specific dosing or monitoring is recommended (for example, CrCL-based dosing or specific laboratory monitoring).
- Geriatric Use/Dosing sections state that the drug is used commonly in geriatrics, but a specific population of geriatrics are at risk for adverse reactions (for example, calcium supplement use in geriatrics with chronic constipation).
- Warnings or Precautions labeling pertaining to common adverse drug reactions described in adult populations that may have a significant impact on geriatrics:
 - Nephrotoxicity
 - Effects on vestibular function
 - Effects on hearing
 - Effects on cognitive function
 - Effects on ability to ambulate or effects that increase fall risk (strongly sedative, orthostatic hypotension, effects on cerebellar function)
 - Effects on the urinary system (anticholinergic, sympathomimetic)

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health-Canada (except Non-U.S. product alerts exclusive to Canada). Available at: http://www.hc-sc.gc.ca/dhp-mps/medeff/advisories-avis/index_e.html.
- MedWatch Safety Alerts from FDA <http://www.fda.gov/medwatch>.
- FDA CDER NEW listserv emails.
- FDA CBER What's New listserv emails.
- FDA MedWatch Monthly Label Changes.
- Beers Drug List: *American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults*. Available at: <http://geriatricscareonline.org/tocamerican-geriatrics-society-updated-beers-criteria-for-potentially-inappropriate-medication-use-in-older-adults>
- STOPP Drug List: Gallagher, P et al. *STOPP (Screening Tool of Older Person's Prescriptions) and START (Screening Tool to Alert Doctors to Right Treatment). Consensus Validation*. Int J Clin Pharm Ther 2007;46:72-83.

- HEDIS® Drug List: The National Committee for Quality Assurance. *Drugs to be Avoided in the Elderly: as specified by NCQA's HEDIS® measure: Use of High-Risk Medications in the Elderly*. Available at: <http://www.ncqa.org/HEDISQualityMeasurement/HEDISMeasures/HEDIS2016/HEDIS2016NDCLicense/HE>

Internal Triggers for Clinical Review

The internal triggers that prompt the clinical editors to add or review GERI drug groups is a new Clinical Formulation (GCN_SEQNO) added to MedKnowledge and its product labeling.

References

This section lists sources used by First Databank to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions.

Additional sources include:

- Published by authority of the Board of Directors of the American Society of Health-System Pharmacists. AHFS Drug Information.

GERI Applications

This section provides information about the practical application of data contained in this module.

Screening a Drug for Geriatric Precautions

Screening a Drug for Geriatric Precautions

Systems can use the Geriatric Precautions Module to identify warnings that might impact drug ordering and dispensing decisions. This application illustrates how to screen a drug for geriatric precautions.

- Do one of the following:

- Select the Geriatric Precaution Code ([GERI_CODE](#)) from the [GERI GCN_SEQNO Link Table](#) ([RGERIGC0_GERI_GCNSEQNO_LINK](#)) where the Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) of the drug to screen.
- Select the [GERI_CODE](#) from the [GERI ROUTED_MED_ID Link Table](#) ([RGERIRM0_ROUTED_MED_LINK](#)) where the MED Routed Medication ID ([ROUTED_MED_ID](#)) column equals the [ROUTED_MED_ID](#) of the drug to screen.

If no records exist in a link table, the drug has no precautions in that module.



The system might need to perform additional navigation to access the [GERI_CODE](#) from the user-entered drug identifier. See [Multiple Access Points \(MAPs\)](#) for more information.

- Select GERI precautions information from the [Geriatric Precautions Master Table](#) ([RGERIMA1_GERI_MSTR](#)) where the [GERI_CODE](#) column equals the [GERI_CODE](#) value from the previous step.
- (Optional) Filter the results according to institution convention or user-entered criteria.
- Display the results to the user.

- [Example—Screening a Drug for Geriatric Precautions with the ROUTED_MED_ID](#)
- [Example—Screening a Drug for Geriatric Precautions with the Clinical Formulation ID](#)
- [Example—Filtering Geriatric Precaution Information on Severity Level](#)
- [Example—Filtering Geriatric Precaution Information on Severity Level and Indicator](#)

Example—Screening a Drug for Geriatric Precautions with the ROUTED_MED_ID

For the purposes of demonstrating this application, the following scenario is used: A physician screens Diazepam Rect (ROUTED_MED_ID 14541) for all possible GERI information. The MED Routed Medication ID ([ROUTED_MED_ID](#)) is in the [MED Routed Medication Table](#) ([RMIR MID2_ROUTED_MED](#)).

- Select the Geriatric Precaution Code ([GERI_CODE](#)) value from the [GERI ROUTED_MED_ID Link Table](#) ([RGERIRM0_ROUTED_MED_LINK](#)) where the [ROUTED_MED_ID](#) column equals the [ROUTED_MED_ID](#) value of the drug to screen.

ROUTED_MED_ID	14541
GERI_CODE	000217

2. Select the Geriatric Precaution Description (**GERI_DESC**), Geriatric Precaution Severity Level (**GERI_SL**), affected organ systems, indicators, and Geriatric Precaution Narrative (**GERI_NARRATIVE**) values from the **Geriatric Precautions Master Table** (RGERIMA1_GERI_MSTR) where the **GERI_CODE** column equals the value from the previous step.

GERI_CODE	000217
GERI_DESC	Diazepam
GERI_SL	2
GERI_RNL	Y
GERI_HEP	N
GERI_CARD	N
GERI_PULM	N
GERI_NEUR	Y
GERI_END	N
GERI_BEERS_IND	Y
GERI_HEDIS_IND	Y
GERI_STOPP_IND	Y
GERI_NARRATIVE	General-Due to the long drug half-life and active metabolites, the elderly are particularly predisposed to the neurological effects. Limit to short term usage and maximum of 5 mg/day. Neuro/Psych-Elderly have a much higher risk for sedation, depression, cognitive impairment and falls. Renal-Active metabolites are renally excreted. Use caution in renal impairment with initial dosing starting with 2 to 2.5 mg/day and titrate as tolerated.

3. Display the results to the user.

In this example, the system alert contains the drug name, the severity level, the precaution narrative, and the BEERS, HEDIS, and STOPP Indicators:

Example Geriatric Precaution Alert

Diazepam use has management or monitoring precaution(s) in geriatric patients.

General-Due to the long drug half-life and active metabolites, the elderly are particularly predisposed to the neurological effects. Limit to short term usage and maximum of 5 mg/day.

Neuro/Psych-Elderly have a much higher risk for sedation, depression, cognitive impairment and falls.

Renal-Active metabolites are renally excreted. Use caution in initial dosing starting with 2 to 2.5 mg/day and titrate as tolerated.

Diazepam is included in the following "potentially harmful drugs in the elderly" lists: BEERS, HEDIS, STOPP

Example—Screening a Drug for Geriatric Precautions with the Clinical Formulation ID

For the purposes of demonstrating this application, the following scenario is used: A pharmacist screens pseudoephedrine/acetaminophen (Clinical Formulation ID [GCN_SEQNO] 001112) for all possible GERI information. The Clinical Formulation ID (GCN_SEQNO) is in the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

1. Select the Geriatric Precaution Code (GERI_CODE) value from the [GERI GCN_SEQNO Link Table](#) (RGERIGC0_GERI_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) value of the drug to screen.

GCN_SEQNO	001112	001112
GERI_CODE	000389	000845

2. Select the Geriatric Precaution Description (GERI_DESC), Geriatric Precaution Severity Level (GERI_SL), affected organ systems, indicators, and Geriatric Precaution Narrative (GERI_NARRATIVE) values from the [Geriatric Precautions Master Table](#) (RGERIMA1_GERI_MSTR) where the GERI_CODE column equals the values from the previous step.

GERI_CODE	000389	000845
GERI_DESC	Pseudoephedrine	Acetaminophen (oral,rectal)
GERI_SL	2	2
GERI_RNL	Y	N
GERI_HEP	N	Y
GERI_CARD	Y	N
GERI_PULM	N	N
GERI_NEUR	Y	N
GERI_END	N	N
GERI_BEERS_IND	Y	N
GERI_HEDIS_IND	Y	N
GERI_STOPP_IND	N	N
GERI_NARRATIVE	Cardiovascular-Elderly are more sensitive to tachycardia and hypertensive effects. May exacerbate symptomatic coronary insufficiency. Genitourinary-May cause urinary retention. Neuro/Psych-May worsen cognitive impairment in some elderly with dementia. Insomnia risk.	Hepatic-Elderly are more susceptible to hepatotoxicity. Strict adherence to a maximum daily dose of 3000mg is advised.

3. Display the results to the user.

In this example, the system returned two GERI codes, both with a severity level of 2. The system alert contains a phrase associated with severity level 2, followed by the drug names, and the precaution narrative:

Example Geriatric Precaution Alert

SEVERITY LEVEL 2: Drug use has management or monitoring precaution(s) in geriatric patients.

PSEUDOEPHEDRINE

Cardiovascular-Elderly are more sensitive to tachycardia and hypertensive effects. May exacerbate symptomatic coronary insufficiency.

Genitourinary-May cause urinary retention.

Neuro/Psych-May worsen cognitive impairment in some elderly with dementia. Insomnia risk.

ACETAMINOPHEN (ORAL,RECTAL)

Hepatic-Elderly are more susceptible to hepatotoxicity. Strict adherence to a maximum daily dose of 3000mg is advised.

Example—Filtering Geriatric Precaution Information on Severity Level

For purposes of demonstrating this application, the following scenario is used: A nurse practitioner screens Cordarone 200MG Tablet (Clinical Formulation ID [GCN_SEQNO] 000266) for geriatric precautions, and the institution has decided to filter warnings to display only those with a severity level of 1. The Clinical Formulation ID is in the [Clinical Formulation ID Table](#)(RGCNSEQ4_GCNSEQNO_MSTR).

1. Select the Geriatric Precaution Code ([GERI_CODE](#)) value from the [GERI GCN_SEQNO Link Table](#) (RGERIGC0_GERI_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug to screen.

GCN_SEQNO	000266
GERI_CODE	000009

2. Select the Geriatric Precaution Description ([GERI_DESC](#)), Geriatric Precaution Severity Level ([GERI_SL](#)), affected organ systems, indicators, and Geriatric Precaution Narrative ([GERI_NARRATIVE](#)) values from the [Geriatric Precautions Master Table](#) (RGERIMA1_GERI_MSTR) where the GERI_CODE column equals the value from the previous step.

GERI_DESC	Amiodarone
GERI_SL	2
GERI_RNL	N
GERI_HEP	Y
GERI_CARD	Y
GERI_PULM	Y

GERI_NEUR	Y
GERI_END	Y
GERI_BEERS_IND	Y
GERI_HEDIS_IND	N
GERI_STOPP_IND	N
GERI_NARRATIVE	Cardiovascular-Risk for Torsades de pointes. Follow QTc intervals. Endocrine-Monitor for hyperthyroidism. Pulmonary-Toxicity has been reported days to weeks after drug initiation. Preexisting pulmonary disease incurs a poorer prognosis if toxicity develops. Monitor for cough and progressive dyspnea. Hepatic-Elevated hepatic transaminases are common. Neuro/Psych-Monitor for peripheral neuropathy, coordination and gait deficits. Optic neuropathy and neuritis has been reported.

3. Filter the results according to institution convention or user-entered criteria.

In this example, the institution convention is to display alerts for records with a severity level 1. In this example, the only returned record contains a value of 2 in the GERI_SL column, so it does not meet the criteria.

4. Display the results to the user. In this example, the system does not generate an alert because the returned record does not meet the criteria.

Example—Filtering Geriatric Precaution Information on Severity Level and Indicator

For purposes of demonstrating this application, the following scenario is used: A physician screens combination product atenolol and chlorthalidone (ROUTED_MED_ID 16214) for all possible geriatric precautions, and the institution decided to filter warnings to display all severity level 1 alerts, and only those with a severity level 2 that also have a BEERS indicator. The MED Routed Medication ID (**ROUTED_MED_ID**) is in the **MED Routed Medication Table** (RMIR MID2_ROUTED_MED).

1. Select the Geriatric Precaution Code (**GERI_CODE**) value from the **GERI ROUTED_MED_ID Link Table** (RGERIRM0_ROUTED_MED_LINK) where the ROUTED_MED_ID column equals the ROUTED_MED_ID value of the drug to screen.

ROUTED_MED_ID	16214	16214
GERI_CODE	000398	000892

2. Select the Geriatric Precaution Description (**GERI_DESC**), Geriatric Precaution Severity Level (**GERI_SL**), affected organ systems, indicators, and Geriatric Precaution Narrative (**GERI_NARRATIVE**) values from the **Geriatric Precautions Master Table** (RGERIMA1_GERI_MSTR) where the GERI_CODE column equals the value from the previous step.

GERI_CODE	000398	000892
GERI_DESC	Atenolol	Chlorthalidone
GERI_SL	2	2
GERI_RNL	Y	Y
GERI_HEP	N	N
GERI_CARD	Y	Y
GERI_PULM	N	N
GERI_NEUR	Y	N
GERI_END	N	N
GERI_BEERS_IND	N	N
GERI_HEDIS_IND	N	N
GERI_STOPP_IND	Y	Y
GERI_NARRATIVE	Cardiovascular-Minimize dose to decrease dizziness and falls. Renal-Renal elimination; use caution in starting dose and dose escalation.	More sensitive to blood pressure and electrolyte wasting. less effective in severe renal impairment.

3. Filter the results according to institution convention or user-entered criteria.

In this example, the institution convention is to display all severity level 1 alerts, and only those with a severity level 2 that also have a BEERS indicator. In this example, the returned records contain a value of 2 in the GERI_SL column, but they contain a value of N in the GERI_BEERS_IND column; therefore, they do not meet the criteria.

4. Display the results to the user. In this example, the system does not generate an alert because the returned records do not meet the criteria.

For an example of a scenario in which the filter criteria are met and the system generates an alert, consider the following.

For the purposes of demonstrating this application, the following scenario is used: A physician screens Diazepam Rect (ROUTED_MED_ID 14541) for all possible geriatric precautions, and the institution decided to filter warnings to display all severity level 1 alerts, and only those with a severity level 2 that also have a BEERS indicator. The MED Routed Medication ID (ROUTED_MED_ID) is in the MED Routed Medication Table (RMIRRID2_ROUTED_MED).

- Select the Geriatric Precaution Code (**GERI_CODE**) value from the **GERI ROUTED_MED_ID Link Table** (RGERIRM0_ROUTED_MED_LINK) where the ROUTED_MED_ID column equals the ROUTED_MED_ID value of the drug to screen.

ROUTED_MED_ID	14541
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GERI_CODE	000217
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2. Select the Geriatric Precaution Description (**GERI_DESC**), Geriatric Precaution Severity Level (**GERI_SL**), affected organ systems, indicators, and Geriatric Precaution Narrative (**GERI_NARRATIVE**) values from the **Geriatric Precautions Master Table** (RGERIMA1_GERI_MSTR) where the **GERI_CODE** column equals the value from the previous step.

GERI_CODE	000217
GERI_DESC	Diazepam
GERI_SL	2
GERI_RNL	Y
GERI_HEP	N
GERI_CARD	N
GERI_PULM	N
GERI_NEUR	Y
GERI_END	N
GERI_BEERS_IND	Y
GERI_HEDIS_IND	Y
GERI_STOPP_IND	Y
GERI_NARRATIVE	General-Due to the long drug half-life and active metabolites, the elderly are particularly predisposed to the neurological effects. Limit to short term usage and maximum of 5 mg/day. Neuro/Psych-Elderly have a much higher risk for sedation, depression, cognitive impairment and falls. Renal-Active metabolites are renally excreted. Use caution in renal impairment with initial dosing starting with 2 to 2.5 mg/day and titrate as tolerated.

3. Filter the results according to institution convention or user-entered criteria.

In this example, the institution convention is to display all severity level 1 alerts, and only those with a severity level 2 that also have a BEERS indicator. In this example, the only returned record contains a value of 2 in the **GERI_SL** column and a value of Y in the **GERI_BEERS_IND** column; therefore, it meets the criteria.

4. Display the results to the user.

In this example, the system alert contains the drug name, the severity level, the precaution narrative, and the BEERS, HEDIS, and STOPP Indicators:

Example Geriatric Precaution Alert

Diazepam use has management or monitoring precaution(s) in geriatric patients.

General-Due to the long drug half-life and active metabolites, the elderly are particularly predisposed to the neurological effects. Limit to short term usage and maximum of 5 mg/day.

Neuro/Psych-Elderly have a much higher risk for sedation, depression, cognitive impairment and falls.

Renal-Active metabolites are renally excreted. Use caution in initial dosing starting with 2 to 2.5 mg/day and titrate as tolerated.

Diazepam is included in the following "potentially harmful drugs in the elderly" lists: BEERS, HEDIS, STOPP

GERI ERD and Technical Specifications

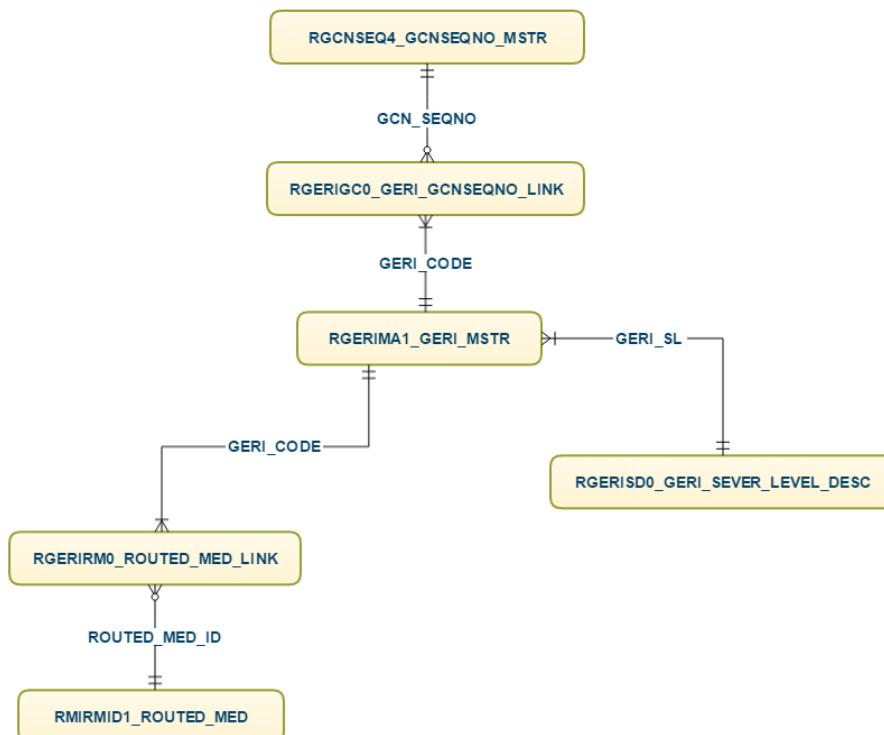
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module. These table names are listed below.

- [GERI Tables](#)
- [GERI ERDs](#)

GERI Tables

- Geriatric Precautions Master Table
- GERI GCN_SEQNO Link Table
- GERI ROUTED_MED_ID Link Table
- GERI Severity Level Description Table

GERI ERDs



Geriatic Precautions Master Table

Table Name	RGERIMA1_GERI_MSTR				
Revision Activity	rev.11-22-2011				
Purpose	Provides attributes of geriatric precaution information for a particular drug.				

Key	Column Name	Column Description	Format	Length	Picture
P	GERI_CODE	Geriatric Precaution Code	N	6	9(6)
	GERI_DESC	Geriatric Precaution Description	AN	41	X(41)
	GERI_SL	Geriatric Precaution Severity Level	AN	1	X(1)
	GERI_RNL	Geriatric Precaution Organ System Function - Renal	AN	1	X(1)
	GERI_HEP	Geriatric Precaution Organ System Function - Hepatic	AN	1	X(1)
	GERI_CARD	Geriatric Precaution Organ System Function - Cardiovascular	AN	1	X(1)
	GERI_PULM	Geriatric Precaution Organ System Function - Pulmonary	AN	1	X(1)
	GERI_NEUR	Geriatric Precaution Organ System Function - Neurologic/Psychiatric	AN	1	X(1)
	GERI_END	Geriatric Precaution Organ System Function - Endocrine	AN	1	X(1)
	GERI_BEERS_IND	On BEERS List	AN	1	X(1)

	GERI_HEDIS_IN D	On HEDIS List	AN	1	X(1)
	GERI_STOPP_IN D	On STOPP List	AN	1	X(1)
	GERI_NARRATIV E	Geriatric Precaution Narrative	AN	500	X(500)

GERI GCN_SEQNO Link Table

Table Name	RGERIGC0_GERI_GCNSEQNO_LINK				
Revision Activity	original				
Purpose	Links a clinical formulation to geriatric precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	GERI_CODE	Geriatric Precaution Code	N	6	9(6)

GERI ROUTED_MED_ID Link Table

Table Name	RGERIRM0_ROUTED_MED_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links a routed medication to geriatric precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	GERI_CODE	Geriatric Precaution Code	N	6	9(6)

GERI Severity Level Description Table

Table Name	RGERISD0_GERI_SEVER_LEVEL_DESC
Revision Activity	add.11-22-2011
Purpose	Relates the Geriatric Precaution Severity Level to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	GERI_SL	Geriatric Precaution Severity Level	AN	1	X(1)
	GERI_SL_DESC	Geriatric Precaution Severity Level Description	AN	255	X(255)

Lactation Precautions Module (LACT) 1.0

- Lactation Precautions Module Editorial Policies
- Applications
- ERD and Technical Specifications

Lactation Precautions Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the module are provided in the following sections:

- Overview
- Inclusion/Exclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

Lactation Precautions Module Overview

The Lactation Precautions Module™ (LACT) module contains precaution information for the use of drugs in a future lactating (for example, pregnant) or currently lactating patient who wishes to continue breast-feeding an infant.

The LACT module enables you to create warning messages about drug use in future or currently lactating women. These warnings allow healthcare professionals to make informed decisions about altering a patient's drug therapy when potential problems exist. Although system access to the patient's age and gender enhances the functionality of the product, it is not a requirement to achieve valuable results.

The LACT module is intended for use as screening mechanisms to detect drug precautions specific to future or currently lactating patients. The precautions are clinically relevant and are generally well documented in the literature. However, lactation information may not be as conclusive in the literature and inconclusive precautions or precautions based on very limited data may be presented. Warnings may not be included if there is no data on a particular drug usage in future lactating or currently lactating patients.

Systems using LACT can provide the following information:

- Severity level of the precaution
- Whether the drug is excreted into breast milk
- Whether the drug affects the nursing infant
- Lactation precaution narrative (this is an optional usage data field)

Lactation Precautions Module Inclusion-Exclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

This section includes the following topics:

- Inclusion - Drug Scope
- Inclusion - Warnings Content Scope
- Exclusion - Drug Scope

Inclusion - Drug Scope

- U.S. FDA-approved Rx product *ingredients* with New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologic License Application (BLA)
- U.S. over-the-counter (OTC) products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbal products enumerated in the FDB [Herbal Products Inclusion List](#)

Inclusion - Warnings Content Scope

Content pertains to safety of drug use in lactating women, and in pregnant women who may breastfeed after delivery. The following information is included for a given drug when available:

- Safety of the drug in the nursing infant and the lactating mother
- The excretion potential into breast milk for a given drug
- Effect of the drug on the nursing infant

The most severe warnings in the LACT precautions module are FDB Severity Level 1. These severe warnings are also included in the Drug Disease Contraindications Module (DDCM) and a Severity Level 1 is assigned to DXID 3452 (Lactating Mother).

Exclusion - Drug Scope

- Non-U.S. products that are exclusive to other countries
- Self-proclaimed Rx products without ANDA, NDA, or BLA
- Rx drug products with 510K device approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products, except those enumerated in the FDB [Herbal Products Inclusion List](#)
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers

- Cosmetics
- Veterinary drugs
- Inactive ingredients

Lactation Precautions Module Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

This section includes the following data elements:

- Lactation Precaution Code
- Lactation Precaution Code Description
- Lactation Precaution Severity Level
- Lactation Precaution Excretion Potential Code
- Lactation Precaution Effects on Infant Code
- Lactation Precaution Narrative

Lactation Precaution Code

The Lactation Precaution Code ([LACT_CODE](#)) is a system-assigned dumb number for each drug group.

Each ingredient in a multi-ingredient product will have its own LACT code and description.
LACT codes are linked to the following FDB drug identifiers:

- Routed Medication ID ([ROUTED_MED_ID](#))
- Clinical Formulation ID ([GCN_SEQNO](#))

Example 1 below shows clinical formulations with the same ingredient and therefore linked to the same LACT code.

Example 1

GCN_SEQNO	LACT_CODE	LACT_DESC
45131	1461	LINEZOLID
45132	1461	LINEZOLID
45133	1461	LINEZOLID
45134	1461	LINEZOLID
47821	1461	LINEZOLID

Example 2 below shows multi-ingredient clinical formulation with two LACT codes.

Example 2

GCN_SEQNO	LACT_CODE	LACT_DESC

374	31	CAPTOPRIL
374	539	HYDROCHLOROTHIAZIDE

Lactation Precaution Code Description

The description is assigned to the Lactation Precaution Code ([LACT_CODE](#)). This drug group description is usually ingredient-based but can be broader and include a collection of ingredients—for example, “ESTROGENS, CONJUGATED (ORAL/INJ)” —or may be narrower and include only certain dose forms or routes—for example, “OFLOXACIN (OPHTH/OTIC).”

Example 1 below shows a single ingredient drug group.

Example 1

LACT_CODE	LACT_DESC
1461	LINEZOLID

Example 2 below shows an ingredient break-out drug group.

Example 2

LACT_CODE	LACT_DESC	LACT_SL	LACT_EXCRT	LACT_LCTN	LACT_PRCTN
1017	OFLOXACIN (ORAL,IV)	2	1	2	INSUFFICIENT DATA AVAILABLE; REPORTS OF ARTHROPATHY IN ANIMAL STUDIES
1596	OFLOXACIN (OPHTH/OTIC)	2	2	2	INSUFFICIENT DATA AVAILABLE

Lactation Precaution Severity Level

There are three severity levels ([LACT_SL](#)) that can be assigned to a given LACT code. Each LACT code is assigned only one severity level. (See [Rule Set for Lactation Precaution Severity Level](#) ([LACT_SL](#)) description.)

Example

LACT_CODE	LACT_DESC	LACT_SL
916	ZIDOVUDINE	1
1739	HEPARIN	3
2056	SAXAGLIPTIN	2

Lactation Precaution Excretion Potential Code

There are three excretion values (**LACT_EXCRT**) that can be assigned to a given LACT code. Each LACT code is assigned only one excretion value. (See [Rule Set for Lactation Precaution Excretion Potential Code \(LACT_EXCRT\) descriptions.](#))

Example

LACT_CODE	LACT_DESC	LACT_SL	LACT_EXCRT
916	ZIDOVUDINE	1	1
1739	HEPARIN	3	3
2056	SAXAGLIPTIN	2	2

Lactation Precaution Effects on Infant Code

There are three values for "effect on infant" (**LACT_LCTN**) that can be assigned to a LACT code. Each LACT code is assigned only one value. (See [Rule Set for Lactation Precaution Effects on Infant Code \(LACT_LCTN\) descriptions.](#))

Example

LACT_CODE	LACT_DESC	LACT_SL	LACT_EXCRT	LACT_LCTN
916	ZIDOVUDINE	1	1	2
1739	HEPARIN	3	3	3
2056	SAXAGLIPTIN	2	2	2

- i** Each medication ordered or ingredient in a multi-ingredient clinical formulation will have a set of three values—that is, one value for severity level, one value for excretion, and one value for effect on infant. These set values may be sorted and evaluated in algorithms within an application.

Lactation Precaution Narrative

The narrative field, limited to 77 characters, offers space to provide additional details on a given severity level, excretion, or effect on infant value (**LACT_PRCTN**). This field is optional.

Example

LACT_CODE	LACT_DESC	LACT_SL	LACT_EXCRT	LACT_LCTN	LACT_PRCTN
916	ZIDOVUDINE	1	1	2	CDC DOES NOT RECOMMEND BREASTFEEDING IN HIV-POSITIVE WOMEN

2056	SAXAGLIPTIN	2	2	2	INSUFFICIENT HUMAN DATA; EXCRETED IN RATS
16	HYDRALAZINE	3	1	2	LIMITED DATA SUGGEST INFANT EXPOSURE IS MINIMAL WITH NO ADV EFFECTS

Lactation Precautions Module Rule Sets

This section provides rules that the clinical team uses in regard to creating the module's data, both general rules and rules specific to data elements.

- Rules of General Applicability
- Rules for Data Elements

Trigger content (for example, Sporadic MedWatch alerts) is reviewed and concepts applicable to LACT are identified. (See [Maintenance](#) for list of triggers.) Trigger content drug(s) are identified and LACT precautions coding is applied to all applicable LACT drug groups.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

Drug knowledge is aggregated at the drug group level (see Lactation Precaution Code ([LACT_CODE](#)) and then linked to Clinical Formulation IDs and Routed Medication IDs in the FDB knowledge base. Linkage or assignment of LACT information to drugs is therefore not manufacturer-specific.

Non-U.S. drug Clinical Formulations may inherit U.S.-based LACT clinical data.

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

Lactation Precaution Severity Level

The severity level assignment ([LACT_SL](#)) is primarily determined by the lactation warnings content in the FDA-approved manufacturer prescription information for a given drug.

Severity Level Descriptions

The [LACT Severity Level Description Table](#) (RLACTSD0_SEVER_LEVEL_DESC) contains the following Lactation Precaution Severity Levels ([LACT_SL](#)) and Lactation Precaution Severity Level Descriptions ([LACT_SL_DESC](#)):

1. Absolute contraindication (Human data usually available to support recommendations). This drug should not be given to breastfeeding mothers.
2. Precaution exists (No data or inconclusive human data). Use of this drug by breastfeeding mothers should be evaluated carefully.
3. No known risk. This drug has no known risks for nursing infants and does not adversely affect lactation.

Evidence Schema

Severity Level 1 - May be assigned for manufacturer labeling:

- Boxed warning labeling containing specific-to-breastfeeding-mothers warnings
- Contraindicated section labeling referring to mother or infant

- Warnings or Precautions labeling indicating adverse outcomes in nursing infant or mother
- Post-marketing human manufacturer labeling that indicates adverse outcomes in nursing infant

Severity Level 2 - May be assigned for either manufacturer or Briggs reference lactation warnings content:

- Warnings or Precautions mentioning adverse outcomes in nursing infant, but with limited outcome data
- Post-market human or animal data mentioning adverse outcomes in nursing infant, but with limited outcome data
- Specific mention of insufficient human or animal data that demonstrates safety during nursing

Severity Level 3 - May be assigned from manufacturer labeling:

- Specific mention indicating no known risk to nursing infant or mother

Lactation Precaution Excretion Potential Code

The excretion value assignment (**LACT_EXCRT**) is primarily determined by the lactation warnings content in the FDA-approved manufacturer prescription information for a given drug. In addition to the prescription label information, other expert opinion references are also consulted.

Excretion Value Descriptions

The **LACT Excretion Potential Code Description Table** (RLACTED0_EXCRT_POTENTIAL_DESC) contains the following Lactation Precaution Excretion Potential Codes (**LACT_EXCRT**) and Lactation Precaution Excretion Potential Code Descriptions (**LACT_EXCRT_DESC**):

1. Excreted. This drug is known to be excreted in human breast milk.
2. Unknown. It is unknown whether the drug is excreted in human breast milk.
3. Not excreted. This drug is known NOT to be excreted in human breast milk.

Evidence Schema

Excretion Value 1 - May be assigned for either manufacturer or Briggs reference content:

- Human data indicates drug excretion in breast milk.
- Post-marketing human data that indicates drug excretion in breast milk.

Excretion Value 2 - May be assigned for either manufacturer or Briggs reference content:

- Animal data indicates drug excretion in breast milk.
- Molecular weight for a given drug is less than 300, allowing for possible excretion into breast milk. This molecular weight threshold is established by authoritative sources.
- Human or animal data for a chemically similar drug that is known to be excreted in breast milk.
- Specific mention of insufficient human or animal data regarding excretion of drug in to breast milk.

Excretion Value 3 - May be assigned for either manufacturer or Briggs reference content:

- Specific mention indicating drug does not transfer to breast milk.

Lactation Precaution Effects on Infant Code

The effect on the infant value assignment ([LACT_LCTN](#)) is primarily determined by the lactation warnings content in the FDA-approved manufacturer prescription information for a given drug. In addition to the prescription label information, other expert opinion references are also consulted.

Effect on Infant Value Descriptions

The [LACT Effects on Infant Code Description Table](#) (RLACTID0_EFFECTS_INFANTS_DESC) contains the following Lactation Precaution Effects on Infant Codes ([LACT_LCTN](#)) and Lactation Precaution Effects on Infant Code Descriptions ([LACT_LCTN_DESC](#)):

1. This drug has been shown to have an adverse effect on the nursing infant.
2. It is not known whether this drug has an adverse effect on the nursing infant. (No data or inconclusive human data.)
3. This drug has been shown not to have an adverse effect on the nursing infant.

Evidence Schema

Effect on Infant Value 1 - May be assigned for either manufacturer or Briggs reference lactation warnings content:

- Human data indicates adverse effects in nursing infant
- Warnings or Precautions indicating adverse outcomes in nursing infant
- Post-marketing human or animal data that indicates adverse outcomes in nursing infant

Effect on Infant Value 2 - May be assigned for either manufacturer or Briggs reference lactation warnings content:

- Specific mention of insufficient human or animal data regarding effect on infant
- Warnings or Precautions mentioning adverse outcomes in nursing infant, but with limited outcome data
- Post-market human or animal data mentioning adverse outcomes in nursing infant, but with limited outcomes data

Effect on Infant Value 3 - May be assigned for either manufacturer or Briggs reference lactation warnings content:

- Specific mention indicating no known adverse effect risk to nursing infant

 This type of declaration is found rarely.

Lactation Precautions Module Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

- External Triggers for Clinical Review
- Internal Triggers for Clinical Review

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health-Canada (except Non-U.S. product alerts exclusive to Canada)
- MedWatch Safety Alerts from FDA
- FDA CDER NEW listserv emails
- FDA CBER What's New listserv emails
- FDA MedWatch Monthly Label Changes
- Briggs Pregnancy and Lactation Newsletter

Internal Triggers for Clinical Review

The internal triggers that prompt the clinical editors to add or review LACT drug groups is a new Clinical Formulation ([GCN_SEQNO](#)) added to MedKnowledge and its U.S. product labeling.

Lactation Precautions Module References

This section lists sources used by First Databank to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Briggs GG, Freeman RK, Yaffe SJ, eds. *Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk*.
- Briggs GG, Freeman RK, Yaffe SJ, eds. *Briggs Update* [Newsletter].
- National Library of Medicine – LactMed Database. Available at: <http://toxnet.nlm.nih.gov>.
- World Health Organization. *BREASTFEEDING AND MATERNAL MEDICATION Recommendations for Drugs in the Eleventh WHO Model List of Essential Drugs 2002*.
- Thomas W. Hale, R.Ph. Ph.D. Professor of Pediatrics. Available at: <http://www.infantrisk.com/content/drug-entry-human-milk>.
- American Congress of Obstetricians and Gynecologists. Available at: <http://www.acog.org/>.
- Drugs in Pregnancy and Breastfeeding. Available at: <http://www.perinatology.com>.
- Lawrence. *Breastfeeding: A Guide for the Medical Profession*.
- Hale TW, Ph.D. *Medications and Mothers' Milk*.

Lactation Precautions Module Applications

This section provides information about the practical application of data contained in this module.

Screening a Drug for Lactation Precautions

Screening a Drug for Lactation Precautions

Systems can use the Lactation Precautions Module to identify warnings that might impact drug ordering and dispensing decisions. This application illustrates how to screen a drug for precautions.

- Do one of the following:

- Select the **LACT_CODE** from the **LACT GCN_SEQNO Link Table** (RLACTGC0_LACT_GCNSEQNO_LINK) where the Clinical Formulation ID (**GCN_SEQNO**) column equals the Clinical Formulation ID (**GCN_SEQNO**) of the drug to screen.
 - Select the **LACT_CODE** from the **LACT ROUTED_MED_ID Link Table** (RLACTRM0_ROUTED_MED_LINK) where the MED Routed Medication ID (**ROUTED_MED_ID**) column equals the **ROUTED_MED_ID** of the drug to screen.
- If no records exist in a link table, the drug has no precautions in that module.



The system might need to perform additional navigation to access the **LACT_CODE** from the user-entered drug identifier. See [Multiple Access Points \(MAPs\)](#) for more information.

- Select LACT precautions information from the **Lactation Precautions Master Table** (RLACTMA0_LACT_MSTR) where the **LACT_CODE** column equals the **LACT_CODE** value from the previous step.
- (Optional) Filter the results according to institution convention or user-entered criteria.
- Display the results to the user.

- Example—Screening a Drug for Lactation Precautions with the **ROUTED_MED_ID**
- Example—Screening a Drug for Lactation Precautions with the Clinical Formulation ID
- Example—Filtering Lactation Precaution Information

Example—Screening a Drug for Lactation Precautions with the **ROUTED_MED_ID**

For the purposes of demonstrating this application, the following scenario is used: A physician screens Cipro XR Oral (ROUTED_MED_ID 064649) for all possible LACT information. The MED Routed Medication ID (**ROUTED_MED_ID**) is in the **MED Routed Medication Table** (RMIRMID2_ROUTED_MED).

- Select the Lactation Precaution Code (**LACT_CODE**) value from the **LACT ROUTED_MED_ID Link Table** (RLACTRM0_ROUTED_MED_LINK) where the **ROUTED_MED_ID** column equals the **ROUTED_MED_ID** value of the drug to screen.

ROUTED_MED_ID	064649
LACT_CODE	000860

- Select the Lactation Precaution Description (**LACT_DESC**), Lactation Precaution Severity Level (**LACT_SL**), Lactation Precaution Excretion Potential Code (**LACT_EXCRT**), Lactation Precaution Effects on Infant Code (**LACT_LCTN**), and Lactation Precaution Narrative (**LACT_PRCTN**) values from the **Lactation**

Precautions Master Table (RLACTMA0_LACT_MSTR) where the LACT_CODE column equals the value from the previous step.

LACT_CODE	000860
LACT_DESC	CIPROFLOXACIN (ORAL,IV)
LACT_SL	2
LACT_EXCRT	1
LACT_LCTN	2
LACT_PRCTN	INSUFFICIENT DATA AVAILABLE; LIMITED DATA SUGGEST MINIMAL AMOUNT EXCRETED.

- Display the results to the user.

In this example, the system alert is abbreviated and contains only the description and the severity level description:

Example Lactation Precaution Alert

CIPROFLOXACIN (ORAL,IV) - PRECAUTION EXISTS (NO DATA OR INCLUSIVE HUMAN DATA). USE OF THIS DRUG BY BREASTFEEDING MOTHERS SHOULD BE EVALUATED CAREFULLY.

Example—Screening a Drug for Lactation Precautions with the Clinical Formulation ID

For the purposes of demonstrating this application, the following scenario is used: A pharmacist screens Acetaminophen w/Codeine No. 3 (Clinical Formulation ID [GCN_SEQNO] 004165) for all possible LACT information. The Clinical Formulation ID (GCN_SEQNO) is in the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

- Select the Lactation Precaution Code (**LACT_CODE**) values from the [LACT GCN SEQNO Link Table](#) (RLACTGC0_LACT_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the drug to screen.

GCN_SEQNO	004165	004165
LACT_CODE	000293	000314

- Select the Lactation Precaution Description (**LACT_DESC**), Lactation Precaution Severity Level (**LACT_SL**), Lactation Precaution Excretion Potential Code (**LACT_EXCRT**), Lactation Precaution Effects on Infant Code (**LACT_LCTN**), and Lactation Precaution Narrative (**LACT_PRCTN**) values from the [Lactation Precautions Master Table](#) (RLACTMA0_LACT_MSTR) where the LACT_CODE column equals the values from the previous step.

LACT_CODE	000293	000314
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LACT_DESC	CODEINE	ACETAMINOPHEN
LACT_SL	2	3
LACT_EXCRT	1	1
LACT_LCTN	2	3
LACT_PRCTN	CNS/RESPIRATORY DEPRESSION,APNEA POSSIBLE;CAUTION W/ FAST CYP2D6 METABOLIZER	LOW LEVELS EXCRETED WITH LOW RISK FOR ADVERSE EFFECTS IN INFANT

3. Display the results to the user.

In this example, the system alert contains the descriptions of the severity levels, excretion potentials, and effect on infant codes. The descriptions are followed by the precaution narratives from the LACT_PRCTN field:

Example Lactation Precaution Alert

CODEINE

Severity Level 2: Use of this drug by breast feeding mothers should be evaluated carefully.

Excretion Potential: This drug is excreted in human breast milk

Effect on Infant: It is not known whether this drug has an effect on the nursing infant (no data or inconclusive human data)

Comment: CNS/RESPIRATORY DEPRESSION,APNEA POSSIBLE;CAUTION W/ FAST CYP2D6 METABOLIZER

ACETAMINOPHEN

Severity Level 3: Studies have shown this drug has no risks to nursing infants and does not affect lactation.

Excretion Potential: This drug is excreted in human breast milk

Effect on Infant: This drug has been shown to have no adverse effect on the nursing infant

Comment: LOW LEVELS EXCRETED WITH LOW RISK FOR ADVERSE EFFECTS IN INFANT

Example—Filtering Lactation Precaution Information

For purposes of demonstrating this application, the following scenario is used: A nurse practitioner screens Cefazolin Sodium IV (Clinical Formulation ID [GCN_SEQNO] 009065) for lactation precautions, and the institution has decided to filter warnings to display only those with a severity level of 1 or 2. The Clinical Formulation ID (GCN_SEQNO) is in the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

- Select the Lactation Precaution Code (LACT_CODE) value from the [LACT GCN_SEQNO Link Table](#) (RLACTGC0_LACT_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) value of the drug to screen.

GCN_SEQNO	009065
LACT_CODE	000644

2. Select the Lactation Precaution Severity Level (**LACT_SL**), Lactation Precaution Excretion Potential Code (**LACT_EXCRT**), Lactation Precaution Effects on Infant Code (**LACT_LCTN**), and Lactation Precaution Narrative (**LACT_PRCTN**) values from the [Lactation Precautions Master Table](#) (RLACTMA0_LACT_MSTR) where the LACT_CODE column equals the value from the previous step.

LACT_CODE	000644
LACT_SL	3
LACT_EXCRT	1
LACT_LCTN	2
LACT_PRCTN	LIMITED DATA SUGGEST MINIMAL EXCRETION; MONITOR INFANT FOR GI FLORA CHANGES

3. Filter the results according to institution convention or user-entered criteria.
In this example, filter the value in the LACT_SL column by the institution convention that the severity level be 1 or 2. In this example, the only returned record contains a value of 3 in the LACT_SL column, so it does not meet the criteria.
4. Display the results to the user. In this example, the system does not generate an alert because the returned record does not meet the criteria.

Lactation Precautions Module ERD and Technical Specifications

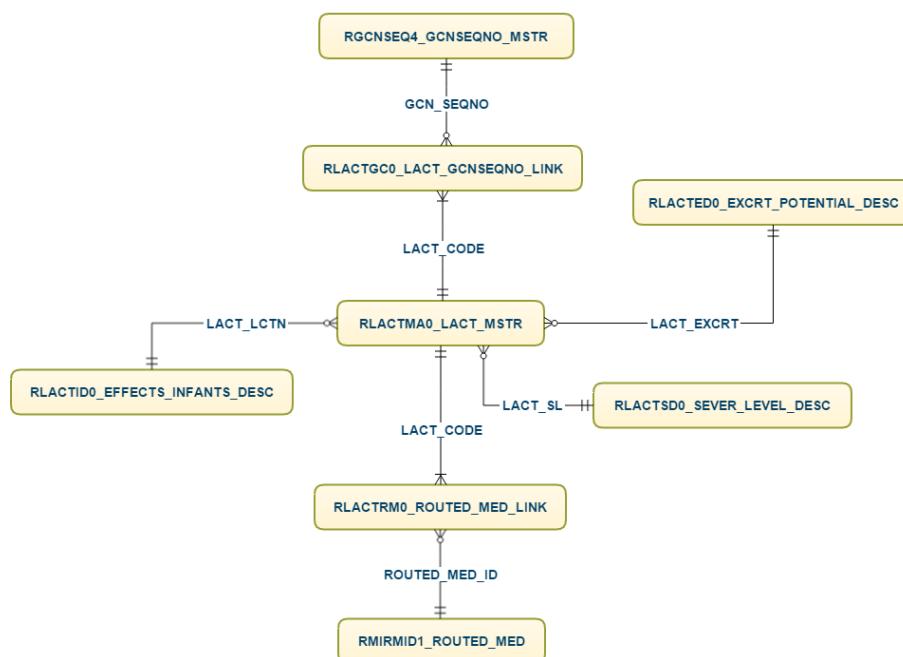
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- LACT Tables
- LACT ERD

LACT Tables

- LACT GCN_SEQNO Link Table
- LACT Effects on Infant Code Description Table
- LACT Excretion Potential Code Description Table
- LACT ROUTED_MED_ID Link Table
- LACT Severity Level Description Table
- Lactation Precautions Master Table

LACT ERD



Lactation Precautions Master Table

Table Name	RLACTMA0_LACT_MSTR				
Revision Activity	original				
Purpose	Provides attributes of lactation precaution information for a particular drug.				

Key	Column Name	Column Description	Format	Length	Picture
P	LACT_CODE	Lactation Precaution Code	N	6	X(6)
	LACT_DESC	Lactation Precaution Description	AN	40	X(40)
F	LACT_SL	Lactation Precaution severity Level - Indicates the general recommendation as to whether there are risks to breast feeding while taking a particular medication.	AN	1	X(1)
F	LACT_EXCRT	Lactation Precaution Excretion Potential Code - Indicates whether a given drug is excreted in breast milk.	AN	1	X(1)
F	LACT_LCTN	Lactation Precaution Effects on Infant Code - Designates whether or not the drug may affect the infant.	AN	1	X(1)
	LACT_PRCTN	Lactation Precaution Narrative	AN	77	X(77)

LACT Effects on Infant Code Description Table

Table Name	RLACTID0_EFFECTS_INFANTS_DESC				
Revision Activity	add.01-01-2003				
Purpose	Relates the Lactation Precaution effects on Infant code to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	LA ^T C _T _LCTN	Lactation Precaution Effects on Infant Code - Designates whether or not the drug may affect the infant.	AN	1	X(1)
P	LA ^T C _T _LCTNSN	Lactation Precaution Effects on Infant Description Text Sequence Number - Assigned to each line of text within a description to maintain proper order of the text.	N	2	9(2)
	LA ^T C _T _LCTN_DESC	Lactation Precaution Effects on Infant Code Description - Provides the text description for (LA ^T C _T _LCTN).	AN	60	X(60)

LACT Excretion Potential Code Description Table

Table Name	RLACTED0_EXCRT_POTENTIAL_DESC
Revision Activity	add.01-01-2003
Purpose	Relates the Lactation Precaution Excretion Potential Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	LACT_EXCRT	Lactation Precaution Excretion Potential Code - Indicates whether a given drug is excreted in breast milk.	AN	1	X(1)
P	LACT_EXCRTSN	Lactation Precaution Excretion Potential Description Text Sequence Number - Assigned to each line of text within a description to maintain proper order of the text.	N	2	9(2)
	LACT_EXCRT_D_ESC	Lactation Precaution Excretion Potential Code Description - Provides the text description for the Lactation Precaution Excretion Potential Code (LACT_EXCRT).	AN	60	X(60)

LACT GCN_SEQNO Link Table

Table Name	RLACTGC0_LACT_GCNSEQNO_LINKS				
Revision Activity	rev.03-15-1992				
Purpose	Links a clinical formulation to lactation precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	ACT_CODE	Lactation Precaution Code	N	6	9(6)

LACT ROUTED_MED_ID Link Table

Table Name	RLACTRM0_ROUTED_MED_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links the routed medication to lactation precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	ACT_CODE	Lactation Precaution Code	N	6	9(6)

LACT Severity Level Description Table

Table Name	RLACTSD0_SEVER_LEVEL_DESC
Revision Activity	add.01-01-2003
Purpose	Relates the Lactation Precaution Severity Level to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	LACT_SL	Lactation Precaution Severity Level - Indicates the general recommendation as to whether there are risks to breast feeding while taking a particular medication.	AN	1	X(1)
P	LACT_SLSN	Lactation Precaution Severity Level Description Text Sequence Number - Assigned to each line of text within a description to maintain proper order or the text.	N	2	9(2)
	LACT_SL_DESC	Lactation Precaution Severity Level Description - Provides the text description for LACT_SL.	AN	60	X(60)

Pediatric Precautions Module (PEDI) 2.0

- Pediatric Precautions Module Editorial Policies
- Application: Screening a Drug for Pediatric Precautions
- ERD and Technical Specifications

Pediatric Precautions Module Editorial Policies

- Overview
- Definitions
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- Resources

Overview

The Pediatric Precautions Module™ (PEDI) contains precaution information for the use of drugs in a pediatric patient. Pediatric is a term that classically describes a patient who is under 18 years old.

The PEDI module enables you to create warning messages about drug use in the pediatric patient population. These warnings allow healthcare professionals to make informed decisions about altering or monitoring a patient's drug therapy when potential problems exist. Although system access to the patient's age significantly enhances the utility of the product, it is not a requirement to achieve results. The PEDI module can work in a stand-alone pharmacy system or as part of an integrated system.

The PEDI module is intended for use as a screening mechanism to detect pediatric drug precautions specific to the pediatric patient population. The precautions are clinically relevant and are generally well documented. Warnings may not be included if there is no data on a particular drug's usage in the pediatric population.

Systems using PEDI can provide the following information:

- Severity level of the precaution
- The age range to which the precaution applies (this range can also be used as a filter)
- Pediatric precaution narrative (this is an optional usage data field)

Definitions

The Definitions section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also defined.

Pediatric

Pediatric is a term that classically describes a patient who is under 18 years old.

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

Inclusion - Drug Scope

- U.S. FDA-approved prescription (Rx) product ingredients with New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologic License Application (BLA)
- U.S. over-the-counter (OTC) products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbal products enumerated in the FDB [Herbal Products Inclusion List](#)

Inclusion - Warnings Content Scope

Content pertains to drug use in the pediatric patient population. The following information is included for a given drug when available:

- Growth or developmental problem or risk in the pediatric population
- Adverse effect of drug unique to pediatric population
- Severe adverse effect of drug with an increased frequency in the pediatric population
- Precaution statements where a drug is not recommended within the pediatric population
- Precaution statements where a drug is not yet clinically evaluated within the pediatric population (for example, "not indicated" or "no safety/efficacy data")

Exclusion - Drug Scope

- Non-U.S. products that are exclusive to other countries
- Self-proclaimed Rx products without ANDA/NDA/BLA
- Rx drug products with 510K device approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation, or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products, except those enumerated in the FDB [Herbal Products Inclusion List](#)
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers
- Cosmetics
- Veterinary drugs
- Inactive ingredients

Exclusion - Warnings Content

Warnings relating to drug use in premature infants are excluded.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

Pediatric Precaution Code

The Pediatric Precaution Code (PEDI code) is a system assigned number for each drug group and unique age range in days beginning with 1 day through 18 years (6,569 days).

PEDI Age Range

The pediatric age range consists of two fields that identify both the minimum and maximum ages associated with the precaution. The Pediatric Precaution Age Range Minimum Days (**PEDI_MINAG**) and Pediatric Precaution Age Range Maximum Days (**PEDI_MAXAG**) contain a numeric value in days.

- i Each ingredient in a multi-ingredient product may have its own PEDI code and description.

PEDI codes are linked to the following FDB drug identifiers:

- Routed Medication ID (**ROUTED_MED_ID**)
- Clinical Formulation ID (**GCN_SEQNO**)

Example 1 below shows that each PEDI code has a specified age range in days.

Example 1

PEDI_CODE	PEDI_MINAG	PEDI_MAXAG
525	1	2189
1169	1	6569
163	1	4379
1138	1	6569
1146	1	13
93	1	364

Example 2 below shows that a given multi-ingredient Clinical Formulation ID (**GCN_SEQNO**) may have several assigned PEDI codes and associated age ranges.

Example 2

GCN_SEQNO	PEDI_CODE	PEDI_MINAG	PEDI_MAXAG
61308	525	1	2189
61308	589	1	29
61308	1268	30	2189

Pediatric Precaution Description

A Pediatric Precaution Description is assigned to each PEDI code. This drug group description is usually ingredient-based but can be broader and include a collection of ingredients—for example,

"TETRACYCLINES"—or may be narrower and include only certain dose forms or route—for example, "FENTANYL (PATCH)."

Example

PEDI_CODE	PEDI_DESC	PEDI_MINAG	PEDI_MAXAG
1448	Fentanyl (Patch)	730	6569
1134	Pseudoephedrine (SR or High Dose)	1	4379
667	Tetracyclines	1	2919

Pediatric Precaution Severity Level

Each PEDI code is assigned one severity level. There are three numeric values (1, 2, or 3) for each severity level.

PEDI Severity Level Description Table (RPEDISD0_PEDI_SEVER_LEVEL_DESC)

PEDI_SL	PEDI_SL_DESC
1	Contraindication
2	Severe Precaution
3	Management or Monitoring Precaution

Pediatric Precaution Narrative

The Pediatric Precaution Narrative in v 2.0 is a 500-character optional field used to provide additional details on the precaution information.

Example

PEDI_CODE	PEDI_DESC	PEDI_SL	PEDI_MINAG	PEDI_MAXAG	PEDI_NARRATIVE
1619	Carbinoxamine (cough-cold)	1	730	2189	Risk of CNS excitation or depression and/or decreased mental alertness. Do not use for cough/cold age < 6 years without clinician consult.

1596	Diphenhydramine (Cough-Cold)	1	30	2189	Do not use unless as directed by clinician consultation. Risk of adverse CNS effects include sedation or paradoxical excitation.
1330	Certolizumab	2	1	6569	Possible lymphoma/malignancy risk. No safety and efficacy information. Not indicated in pediatrics.
1594	Diphenhydramine (Syst.antihist.)	2	30	364	Use with caution and with clinician consultation. Risk of adverse CNS effects includes sedation or paradoxical excitation.
1612	Diphth, aPertussis,Tet(Td ap <10 y)	2	1	3649	Use DTaP formulation for vaccination series to age 7 years. Tdap recommended for catch-up immunization when necessary.
1278	Doxycycline	2	1	2919	Permanent tooth discoloration and/or enamel hypoplasia may occur. Slowed growth possible secondary to calcium complex in bone tissue. Weigh risk-benefit. Limit duration of use.

Rule Sets

This section provides rules that the clinical team uses in regards to creating the module's data, both general rules and rules specific to data elements.

Trigger content (for example, Sporadic MedWatch alert text) is reviewed and warning information that is applicable to pediatric population are identified. Trigger content drug(s) are identified and PEDI precaution coding is applied to all applicable PEDI drug groups.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

Drug knowledge is aggregated at the drug group level and then linked to Clinical Formulation IDs and Routed Medication IDs in the FDB knowledge base. Linkage or assignment of PEDI information to drugs is therefore not manufacturer-specific.

Non-U.S. drug Clinical Formulations may inherit U.S.-based PEDI clinical data.

Rules for Pediatric Precaution Code (PEDI code) Drug Groups: Description and Linking

Clinical Formulation IDs ([GCN_SEQNO](#)s) are linked to a PEDI code drug group that is usually based on having a common ingredient, but can be broader to include a class of ingredients when there is a larger ingredient class effect (for example, "Tetracyclines"), or may be narrower to include only certain dose forms, routes, or strengths of a single ingredient (for example, "Fentanyl Patch").

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

Pediatric Precaution Severity Level (PEDI_SL) Assignment

The severity level assignment is primarily determined by the pediatric warning content in FDA-approved manufacturer prescriber information.

- **Severity Level 1:** "Contraindication" is reserved for warnings that state there is known risk. There exists known or potential for severe adverse outcomes or severe harm, or physical deformity, or lethality.
- **Severity Level 2:** "Severe Precaution" is reserved for warnings that state there is a known risk or evidence of a potential adverse effect.
- **Severity Level 3:** "Management or Monitoring Precaution" is reserved for precautions when a drug is to be monitored closely or stated to be not indicated or not recommended in pediatrics because of lack of information or studies in the pediatric population.

Evidence Schema

Severity Level 1

- Boxed Warning labeling with specific mention of avoidance in pediatric population
- Contraindicated labeling with any mention of the pediatric age range
- Warnings or Precautions section with any bolded statements (or all capitalization format) regarding severe adverse reactions in pediatric, and no indicated use or rare use in pediatrics
- Pediatric Use section of labeling states:

- No pediatric studies were done because of potential risk of severe or long-term adverse reaction sequelae
- Not recommended because use has demonstrated severe adverse effect

Severity Level 2

- Boxed Warning labeling with specific mention of adverse reaction risk in pediatric population, but indicated use in pediatrics and monitoring adverse reactions are mentioned
- Contraindicated labeling with mention of the pediatric age range and a specific pediatric condition (for example, hyperbilirubinemia)
- Warnings or Precautions labeling with specific mention of adverse reaction risk in pediatric population; also indicated use in labeling or in other reference source (that is, Harriet Lane)
- Pediatric Use section of labeling states:
 - No pediatric studies, but potential risk of adverse reaction
 - No efficacy established in formal pediatric studies, but evidence of pediatric adverse events exists
 - Safety and efficacy established, but known risk of adverse effects can be monitored
 - Formal pediatric studies failed to demonstrate efficacy

Severity Level 3

- Pediatric Use section states not studied in pediatric population (safety and efficacy studies) and labeling has no mention of other warnings or avoidance
- Pediatric Use section states not indicated in pediatric population and labeling has no mention of other warnings or avoidance
- Pediatric Use/Dosing sections state drug is used in pediatrics, but specific monitoring recommended (for example, weight-based dosing or lab monitoring)
- Pediatric Use/Dosing sections state drug is used commonly in pediatrics, but specific population of pediatrics is at risk for adverse reactions (for example, cardiac structural defect)
- Pediatric Use section states that the drug ingredient combination is inappropriate in pediatrics despite safety and efficacy for any of individual ingredients

PEDI Age Range Assignment

- Any age range between 1 day through 18 years (6,569 days).
- In the absence of a specified age range (for example, adolescent), the verbiage from pediatric warning content is translated into standardized age ranges in days. See the table below.
- Age range descriptions such as "1 year up to 12 years" are calculated in days based on formulas present in the table below.

Age Statements	Low Age	High Age
"up to age X years"	1 day	X years minus 1 day (for example, up to 12 years is 4379 days)

"under X years old"	1 day	X years minus 1 day (for example, under 6 years is 2189 days)
"up through X year"	1 day	X years plus 364 days (for example, up through 12 years is 4744 days)
"X and under years old"	1 day	X years times 365 days plus 364 days (for example, "3 years and under" is 1459 days)
"over X years old"	X years times 365 days	X years times 365 days 18 years (the pediatric limit) minus 1 day (6569 days)
"X to Y years old"	X years times 365 days	Y years times 365 days plus 364 days
Neonate	1 day	29 days
Infant	30 days (or 1 day depending on wording)	1 year minus 1 day (364 days)
Young Children	365 days	up to 6 years (6 years minus 1 day = 2189 days)
Child/Children	1 year or 365 days (1 day depending on wording)	12 years plus 364 days (4744 days)
Pre-pubertal Children	365 days	up to 11 years (11 years minus 1 day = 4014 days)
Adolescent	13 years or 4745 days	up to 18th birthday (18 years minus 1 day = 6569 days)
Pediatric (unspecified)	1 day	(18 years minus 1 day = 6569 days)

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health-Canada (except Non-U.S. product alerts exclusive to Canada). Available at: http://www.hc-sc.gc.ca/dhp-mps/medeff/advisories-avis/index_e.html.
- MedWatch Safety Alerts from FDA. Available at: <http://www.fda.gov/medwatch>.
- FDA CDER NEW listserv emails
- FDA CBER What's New listserv emails
- FDA MedWatch Monthly Label Changes

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review PEDI drug groups is a new Clinical Formulation ID (GCN_SEQNO) added to MedKnowledge and its U.S. product labeling.

Resources

This section lists sources used by FDB to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Food and Drug Administration New Pediatric Labeling Information Database. Available at: <http://www.accessdata.fda.gov/scripts/sda/sdNavigation.cfm?sd=labelingdatabase>.
- Custer J, Rau R, editors. The Harriet Lane Handbook.
- Published by authority of the Board of Directors of the American Society of Health-System Pharmacists. American Hospital Formulary Service (AHFS) Drug Information.
- American Academy of Pediatric recommendations and Pediatric Care online. Available at: <https://www.pediatriccareonline.org/pco/ub>.

Application: Screening a Drug for Pediatric Precautions

Systems can use the Pediatric Precautions Module to identify warnings that might impact drug ordering and dispensing decisions. This application illustrates how to screen a drug for precautions.

- Do one of the following:

- Select the Pediatric Precaution Code ([PEDI_CODE](#)) from the [PEDI GCN_SEQNO Link Table](#) ([RPEDIGC0_PEDI_GCNSEQNO_LINK](#)) where the Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) of the drug to screen.
- Select the [PEDI_CODE](#) from the [PEDI ROUTED_MED_ID Link Table](#) ([RPEDIRM0_ROUTED_MED_LINK](#)) where the MED Routed Medication ID ([ROUTED_MED_ID](#)) column equals the [ROUTED_MED_ID](#) of the drug to screen.

If no records exist in a link table, the drug has no precautions in that module.

The system might need to perform additional navigation to access the [PEDI_CODE](#) from the user-entered drug identifier. See [Multiple Access Points™ \(MAPs™\)](#) for more information.

- Select PEDI precautions information from the [Pediatric Precautions Master Table](#) ([RPEDIMA1_PEDI_MSTR](#)) where the [PEDI_CODE](#) column equals the [PEDI_CODE](#) value from the previous step.
- (Optional) Filter the results according to institution convention or user-entered criteria.
- Display the results to the user.

- Example—Screening a Drug for Pediatric Precautions with the [ROUTED_MED_ID](#)
- Example—Screening a Drug for Pediatric Precautions with the Clinical Formulation ID
- Example—Filtering Pediatric Precaution Information

Example—Screening a Drug for Pediatric Precautions with the [ROUTED_MED_ID](#)

For the purposes of demonstrating this application, the following scenario is used: A physician screens Chloromycetin IV ([ROUTED_MED_ID](#) 009076) for all possible PEDI information. The MED Routed Medication ID ([ROUTED_MED_ID](#)) is in the [MED Routed Medication Table](#) ([RMIR MID2_ROUTED_MED](#)).

- Select the Pediatric Precaution Code ([PEDI_CODE](#)) value from the [PEDI ROUTED_MED_ID Link Table](#) ([RPEDIRM0_ROUTED_MED_LINK](#)) where the [ROUTED_MED_ID](#) column equals the [ROUTED_MED_ID](#) value of the drug to screen.

ROUTED_MED_ID	144657
PEDI_CODE	001121

- Select the Pediatric Precaution Description ([PEDI_DESC](#)), Pediatric Precaution Severity Level ([PEDI_SL](#)),

Pediatric Precaution Age Range Minimum Days (**PEDI_MINAG**), Pediatric Precaution Age Range Maximum Days (**PEDI_MAXAG**), and Pediatric Precaution Narrative (**PEDI_NARRATIVE**) values from the **Pediatric Precautions Master Table** (RPEDIMA1_PEDI_MSTR) where the PEDI_CODE column equals the value from the previous step.

PEDI_CODE	001121
PEDI_DESC	Etanercept
PEDI_SL	3
PEDI_MINAG	0730
PEDI_MAXAG	6569
PEDI_NARRATIVE	Increased risk of infection, inflammatory bowel disease. Monitor for infection, lymphoma, leukemia, malignancy.

- Display the results to the user.

In this example, the system alert contains the description, severity level, affected age range, and precaution narrative:

Example Pediatric Precaution Alert

Etanercept has a severity level of 3 (Management or monitoring precaution) for use in patients between 730 and 6569 days old.

Increased risk of infection, inflammatory bowel disease. Monitor for infection, lymphoma, leukemia, malignancy.

Example—Screening a Drug for Pediatric Precautions with the Clinical Formulation ID

For the purposes of demonstrating this application, the following scenario is used: A pharmacist screens phenylephrine HCl/promethazine HCl (Clinical Formulation ID [GCN_SEQNO] 048495) for all possible PEDI information. The Clinical Formulation ID (**GCN_SEQNO**) is in the **Clinical Formulation ID Table** (RGCNSEQ4_GCNSEQNO_MSTR).

- Select the Pediatric Precaution Code (**PEDI_CODE**) values from the **PEDI GCN_SEQNO Link Table** (RPEDIGC0_PEDI_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID (**GCN_SEQNO**) value of the drug to screen.

GCN_SEQNO	048495	048495	048495
PEDI_CODE	000576	000991	000525

- Select the Pediatric Precaution Description (**PEDI_DESC**), Pediatric Precaution Severity Level (**PEDI_SL**), Pediatric Precaution Age Range Minimum Days (**PEDI_MINAG**), Pediatric Precaution Age Range Maximum Days (**PEDI_MAXAG**), and Pediatric Precaution Narrative (**PEDI_NARRATIVE**) values from the **Pediatric Precautions Master Table** (RPEDIMA1_PEDI_MSTR) where the PEDI_CODE column equals the values from the previous step.

PEDI_CODE	000576	000991	00525
PEDI_DESC	Promethazine	Promethazine	Phenylephrine (Oral,Rectal)
PEDI_SL	1	2	1
PEDI_MINAG	0001	0730	0001
PEDI_MAXAG	0729	6569	2189
PEDI_NARRATIVE	Potential for fatal respiratory depression age < 2 years. Avoid use.	Caution:use the lowest effective dose due to risk of respiratory depression.	Risk of CNS excitation. Do not use age <6 years without clinician consult.

3. Display the results to the user.

In this example, the system alert contains the description, the age range each applies to, the severity level descriptions, and the precaution narratives:

Example Pediatric Precaution Alert

Promethazine (0-2 years) - Contraindication

Potential for fatal respiratory depression age < 2 years. Avoid use.

Promethazine (2-18 years)- Serious Precaution

Caution: use the lowest effective dose due to risk of respiratory depression.

Phenylephrine (Oral,Rectal) (0-6 years)-Contraindication

Risk of CNS excitation. Do not use age <6 years without clinician consult.

Example—Filtering Pediatric Precaution Information

For purposes of demonstrating this application, the following scenario is used: A nurse practitioner screens Aminophylline (Clinical Formulation ID ([GCN_SEQNO] 000122) for pediatric precautions, and the institution has decided to filter warnings to display only those with a severity level of 1 or 2. The Clinical Formulation ID is in the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

1. Select the Pediatric Precaution Code (**PEDI_CODE**) value from the [PEDI GCN_SEQNO Link Table](#) where the GCN_SEQNO column equals the Clinical Formulation ID (**GCN_SEQNO**) of the drug to screen.

GCN_SEQNO	000122
PEDI_CODE	000785

2. Select the Pediatric Precaution Description (**PEDI_DESC**), Pediatric Precaution Severity Level (**PEDI_SL**), Pediatric Precaution Age Range Minimum Days (**PEDI_MINAG**), Pediatric Precaution Age Range Maximum Days (**PEDI_MAXAG**), and Pediatric Precaution Narrative (**PEDI_NARRATIVE**) values from the [Pediatric Precautions Master Table](#) (RPEDIMA1_PEDI_MSTR) where the PEDI_CODE column equals the value from the previous step.

PEDI_CODE	000785
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PEDI_DESC	Xanthines (select)
PEDI_SL	3
PEDI_MINAG	1
PEDI_MAXAG	364
PEDI_NARRATIVE	Clearance may be reduced age < 1 year. Administer with caution.

3. Filter the results according to institution convention or user-entered criteria.

In this example, filter the value in the PEDI_SL column by the institution convention that the severity level be 1 or 2. In this example, the only returned record contains a value of 3 in the PEDI_SL column, so it does not meet the criteria.

4. Display the results to the user. In this example, the system does not generate an alert because the returned record does not meet the criteria.

Pediatric Precautions Module ERD and Technical Specifications

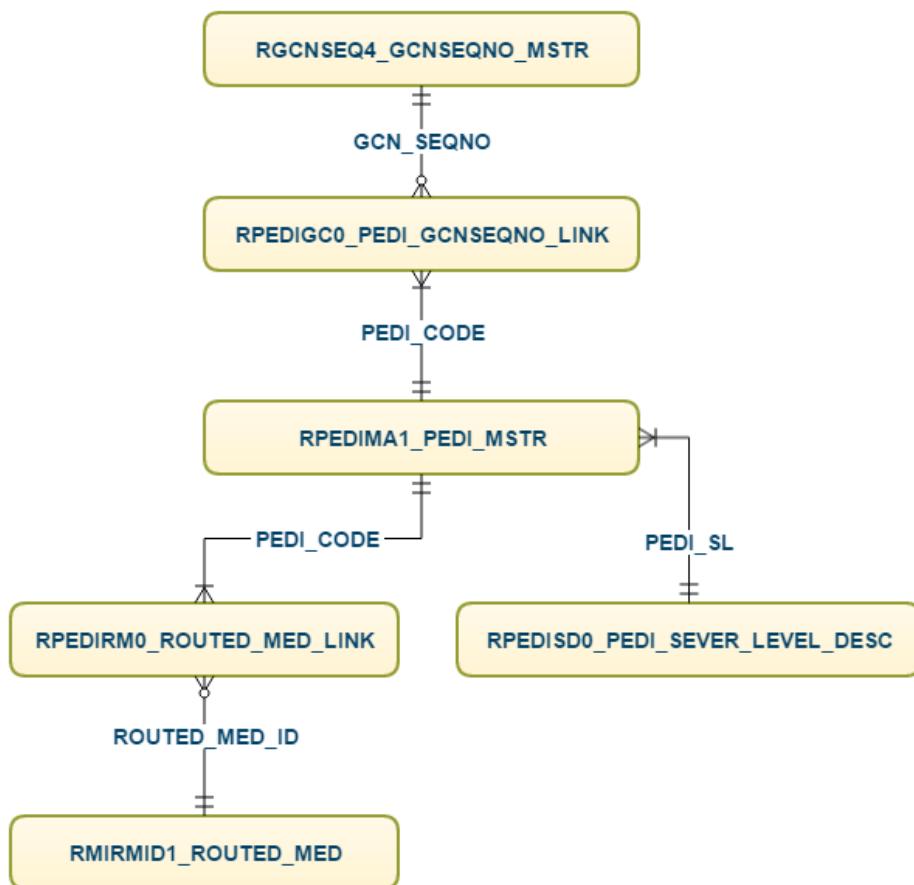
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Pediatric Precautions Module Tables
- Pediatric Precautions Module ERD

Pediatric Precautions Module Tables

- Pediatric Precautions Master Table
- PEDI GCN_SEQNO Link Table
- PEDI ROUTED_MED_ID Link Table
- PEDI Severity Level Description Table

Pediatric Precautions Module ERD



Pediatric Precautions Master Table

Table Name	RPEDIMA1_PEDI_MSTR				
Revision Activity	rev.11-22-2011				
Purpose	Provides attributes of pediatric precaution information for a particular drug.				

Key	Column Name	Column Description	Format	Length	Picture
P	PEDI_CODE	Pediatric Precaution Code	N	6	9(6)
	PEDI_DESC	Pediatric Precaution Description	AN	34	X(34)
	PEDI_SL	Pediatric Precaution Severity Level	AN	1	X(1)
	PEDI_MINAG	Pediatric Precaution Age Range (Minimum Days)	N	4	9(4)
	PEDI_MAXAG	Pediatric Precaution Age Range (Maximum Days)	N	4	9(4)
	PEDI_NARRATIVE	Pediatric Precaution Narrative	AN	500	X(500)

PEDI GCN_SEQNO Link Table

Table Name	RPEDIGC0_PEDI_GCNSEQNO_LINK				
Revision Activity	original				
Purpose	Links a clinical formulation to pediatric precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	PEDI_CODE	Pediatric Precaution Code	N	6	9(6)

PEDI ROUTED_MED_ID Link Table

Table Name	RPEDIRM0_ROUTED_MED_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links a routed medication to pediatric precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	PEDI_CODE	Pediatric Precaution code	N	6	9(6)

PEDI Severity Level Description Table

Table Name	RPEDISD0_PEDI_SEVER_LEVEL_DESC
Revision Activity	add.11-22-2011
Purpose	Relates the Pediatric Precaution Severity Level to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	PEDI_SL	Pediatric Precaution Severity Level	AN	1	X(1)
	PEDI_SL_DESC	Pediatric Precaution Severity Level Description	AN	255	X(255)

Pregnancy Precautions Module (PREG) 2.0

- Pregnancy Precautions Module Editorial Policies
- Applications
- ERD and Technical Specifications

Pregnancy Precautions Module Editorial Policies

- Overview
- Inclusion/Exclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

Pregnancy Precautions Module Overview

The Pregnancy Precautions Module™ (PREG) contains precaution information for the use of drugs in a pregnant patient or in female patients who are in the childbearing age group.

The PREG module enables you to create warning messages about drug use in pregnant patients or female patients who are in the childbearing age group. These warnings allow healthcare professionals to make informed decisions about altering a patient's drug therapy when potential problems exist. Although system access to the patient's age and gender enhances the functionality of the product, it is not a requirement to achieve valuable results. The PREG module can work in a stand-alone pharmacy system or as part of an integrated system.

The PREG module is intended for use as a screening mechanism to detect pregnancy drug precautions specific to pregnant patients or female patients who are in the childbearing age group. The precautions are clinically relevant and are generally well documented in the literature. However, pregnancy information may not be as conclusive in the literature and inconclusive precautions or precautions based on very limited data may be presented. Warnings may not be included if there is no data on a particular drug usage in the population covered by the PREG module.

Systems using PREG can provide the following information:

- Severity level of the precaution, which indicates either the Food and Drug Administration (FDA) pregnancy risk category or the First Databank (FDB) pregnancy severity level
- Pregnancy precaution narrative (this is an optional usage data field)

What's New in PREG 2.0?

Pregnancy Precautions Module (PREG) 2.0 has been updated to include the following features:

- Additional numeric severity levels and a more detailed description for severity level 1
- Monograph with sections that correlate with the new sections in the drug manufacturer labeling
 - Fetal Risk Summary
 - Clinical Considerations
 - Data (includes Human and Animal)
 - Pregnancy Registry Contact Information
- Boxed Warning Indicator
 - Included for FDA-approved prescription drugs where the drug labeling contains fetal/neonatal risk or pregnancy warnings in the Boxed Warning section
- References
 - Citations using standardized reference formats

To accommodate these changes, the Pregnancy Precautions Narrative (PREG_PRCTN) column has been removed and following tables have been added:

- **PREG Monograph Line Table** (RPREGPL0_MONO_LINE)
- **PREG Monograph Section Description Table** (RPREGMS0_MONO_SECTION_DESC)
- **PREG Reference Table** (RPREGRE0_PREG_REFERENCE)

- PREG Reference Link Table (RPREGRL0_PREG_REFERENCE_LINK)
- PREG Reference Type Table (RPREGRT0_PREG_REFERENCE_TYPE)

i Customers must program to version 2.0 to leverage this new content.

Pregnancy Precautions Module Inclusion-Exclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion. This section includes the following topics:

- Inclusion - Drug Scope
- Inclusion - Warnings Content Scope
- Exclusion - Drug Scope

Inclusion - Drug Scope

- U.S. FDA-approved Rx product ingredients with New Drug Application (NDA), Abbreviated New Drug Application (ANDA), Biologic License Application (BLA)
- U.S. over-the-counter (OTC) products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbal products enumerated in the FDB [Herbal Products Inclusion List](#)

Inclusion - Warnings Content Scope

Content pertains to drug use in pregnant patients or female patients in the childbearing age group. The following information is included for a given drug when available:

- Teratogenic risk of drug in the human or animal fetus
- Adverse effect(s) of drug on the human or animal fetus
- Adverse effect(s) of drug on the mother during gestation, labor, or delivery
- Carcinogenicity and mutagenicity of a drug on the human or animal fetus

The most severe warnings in the PREG precautions module are FDA category D and X, or FDB Severity Level 1. These severe warnings are also included in the [Drug-Disease Contraindications Module™ \(DDCM™\) 2.0](#), and a Severity Level 1 is assigned to DXID 3446 (Pregnancy).

Exclusion - Drug Scope

- Self-proclaimed Rx products without ANDA/NDA/BLA
- Rx drug products with 510K device approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products, except those enumerated in the FDB NDC Attributes Inclusion list
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers

- Cosmetics
- Veterinary drugs
- Inactive ingredients

Pregnancy Precautions Module Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module. This section includes the following data elements:

- Pregnancy Precautions Code
- Pregnancy Precautions Description
- Pregnancy Precautions Severity Level
- Pregnancy Precautions Monograph
- PREG Boxed Warning Indicator
- PREG References

Pregnancy Precautions Code

The Pregnancy Precautions Code ([PREG_CODE](#)) is a system-assigned dumb number for each drug group.

Each ingredient in a multi-ingredient product will have its own PREG code and description. PREG codes are linked to the following FDB drug identifiers:

- Routed Medication ID ([ROUTED_MED_ID](#))
- Clinical Formulation ID ([GCN_SEQNO](#))

Example 1 below shows clinical formulations with the same ingredient and therefore linked to the same PREG code.

Example 1—PREG GCN_SEQNO Link Table (RPREGGC0_PREG_GCNSEQNO_LINK)

GCN_SEQNO	PREG_CODE
45131	1549
45132	1549
45133	1549
45134	1549
47821	1549

Example 2 below shows a given multi-ingredient clinical formulation with two PREG codes.

Example 2—Multi-Ingredient Clinical Formulation with PREG codes

GCN_SEQNO	PREG_CODE	PREG_DESC
374	35	CAPTOPRIL
374	484	HYDROCHLOROTHIAZIDE

Pregnancy Precautions Description

The description is assigned to the Pregnancy Precautions Code (**PREG_CODE**). This drug group description is usually ingredient-based but can be broader and include a collection of ingredients—for example, "ORAL CONTRACEPTIVES"—or may be narrower and include only certain dose forms or routes—for example, "GENTAMICIN (OPHTH)."

Example 1—Pregnancy Precautions Master Table (RPREGMA0_PREG_MSTR)

PREG_CODE	PREG_DESC
1549	LINEZOLID

Example 2 below shows the ingredient break-out.

Example 2—Pregnancy Precautions Master Table (RPREGMA0_PREG_MSTR)

PREG_CODE	PREG_DESC	PREG_SL	PREG_PRCTN
628	GENTAMICIN (INJECTABLE)	D	8TH CRANIAL NERVE TOXICITY IN FETUS REPORTED WITH OTHER AMINOGLYCOSIDES
1773	GENTAMICIN (OPHTH)	C	

Pregnancy Precautions Severity Level

There are nine severity levels that can be assigned to a given drug with a PREG code. Each PREG code is assigned only one severity level. (See Rule Set for Pregnancy Precautions Severity Level (PREG_SL) description.)

Value Description:

- FDA Pregnancy Risk Categories: A, B, C, D, and X (will be phased out over time as updated FDA guidelines are adopted)
- FDB Severity Level: 1, 3, 4, and 5

Example—Pregnancy Precautions Master Table (RPREGMA0_PREG_MSTR)

PREG_CODE	PREG_DESC	PREG_SL
37	LISINOPRIL	D
409	HEPARIN	C

Pregnancy Precautions Monograph

The monograph is comprised of four individual sections, each populated with available information located in the pregnancy section of the manufacturer drug labeling or additional references. (See Rule Sets for content inclusion)

The following sections comprise the Pregnancy Precautions Monograph:

- Fetal Risk Summary
- Clinical Considerations
- Data
- Pregnancy Exposure Registry Information

PREG Boxed Warning Indicator

A one character alpha value indicates the presence of pregnancy/fetal/neonatal information in the boxed warning section of the manufacturer drug labeling.

Valid Values for PREG_BXW_IND

PREG_BXW_IND	Description
1	Boxed warning section of the manufacturer drug labeling contains pregnancy/fetal/neonatal information
0	No pregnancy/fetal/neonatal information present in the boxed warnings section of the manufacturer drug labeling

PREG References

The following columns contain reference information used in content creation for pregnancy precautions monographs:

- Pregnancy Reference Author ([PREG_REFERENCE_AUTHOR](#))
- Pregnancy Reference Edition ([PREG_REFERENCE_EDITION](#))
- Pregnancy Reference Name ([PREG_REFERENCE_NAME](#))
- Pregnancy Reference Identifier ([PREG_REFERENCE_ID](#))
- Pregnancy Reference Issue ([PREG_REFERENCE_ISSUE](#))
- Pregnancy Reference Issue Date Text ([PREG_REFERENCE_ISSUE_DT_TXT](#))
- Pregnancy Reference Location ([PREG_REFERENCE_LOCATION](#))
- Pregnancy Reference Page ([PREG_REFERENCE_PAGE](#))
- Pregnancy Reference PUBMED Identifier ([PREG_REFERENCE_PUBMED_ID](#))
- Pregnancy Reference Supplement Number ([PREG_REFERENCE_SUPPLEMENT_NBR](#))
- Pregnancy Reference Title ([PREG_REFERENCE_TITLE](#))
- Pregnancy Reference Type Description ([PREG_REFERENCE_TYPE_DESC](#))

Pregnancy Precautions Module Rule Sets

This section provides rules that the clinical team uses in regard to creating the module's data, both general rules and rules specific to data elements.

- Rules of General Applicability
- Rules for Data Elements

Trigger content text (for example, Sporadic MedWatch alert text) are reviewed and concepts applicable to PREG are identified. Trigger content drug(s) are identified and PREG precautions coding is applied to all applicable PREG drug groups.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

Non-U.S. drug Clinical Formulations may inherit U.S.-based PREG clinical data.

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

- Pregnancy Precautions Severity Level
- Evidence Schema
- Pregnancy Monograph Sections

Pregnancy Precautions Severity Level

The FDA pregnancy risk category is assigned as the severity level for a given drug with a PREG code.

Alternatively, an FDB severity level may be assigned when applicable. Only one severity level is assigned to a drug group for a given PREG code.

Below are detailed descriptions from the [PREG Severity Level Description Table](#)

(RPREGSL1_PREG_SEVER_LEVEL) utilized for making severity level assignments and distinctions between FDA pregnancy risk categories versus FDB severity level assignments.

FDA Pregnancy Risk Categories

Severity Level	Description
A	Adequate & well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in 1st trimester of pregnancy (and no evidence of risk in later trimesters).

B	Animal studies have failed to demonstrate a risk to the fetus but there are no well-controlled studies in pregnant women; or animal reproduction studies have shown an adverse effect (other than decrease in fertility), but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus during the first trimester of pregnancy (and there is no evidence of a risk in later trimesters).
C	Animal studies have shown adverse effect on fetus but no well-controlled studies in humans: potential benefits may warrant use in pregnant women despite potential risks; or no animal reproduction studies and no adequate and well-controlled studies in humans.
D	Positive evidence of human fetal risk based on investigation or marketing information but potential benefits may warrant use of drug in pregnant women despite potential risks.
X	Studies in animals or humans have shown fetal abnormalities and/or there is positive evidence of fetal risk based on investigational or marketing information and risks involved in use of drug in pregnant women clearly outweigh potential benefits.

FDB Assigned Pregnancy Severity Level Descriptions

Severity Level	Description
1	Contraindicated or not recommended. Existing FDA teratogenicity category (if available) is augmented by information supporting a more severe warning.
3	Known or theoretical risk. For some indications, maternal treatment benefit may outweigh fetal/neonatal risk. Available human and/or animal data suggest fetal/neonatal risk or there is a considerable theoretical risk.
4	Assess risk/benefit. Human data limited or unavailable. Maternal treatment may outweigh the unclear fetal/neonatal risk. Animal data suggest no fetal/neonatal risk.
5	No known fetal/neonatal risk. Available human and/or animal data suggest no risk.

FDB severity levels can be assigned to drug ingredients that do not carry an FDA pregnancy risk category (that is, teratogenicity category). For example, some FDA prescription drugs approved before 1980 do not have FDA teratogenicity category assignment. Additionally, FDB severity levels can replace the existing FDA pregnancy risk category for a given drug to convey more severe pregnancy warnings. For drugs assigned an FDB severity level, the narrative section is used to indicate the presence or absence of an FDA risk category.

The FDB severity level assignment is primarily determined by the pregnancy warnings content in the FDA approved manufacturer prescription information for a given drug. In addition to the prescription label information, other expert opinion references are also consulted (see [Pregnancy Precautions Module Rule Sets](#)).

Evidence Schema

FDB Severity Level 1

- Contraindicated during pregnancy or in women of childbearing age
- Manufacturer drug labeling contains pregnancy/fetal/neonatal warnings in the following sections: Boxed Warning, Contraindications, Warnings, Precautions, Pregnancy
- Post-marketing human or animal data that indicates adverse maternal or fetal outcomes

FDB Severity Level 3

- Not recommended during pregnancy or in women of childbearing age.
- Manufacturer drug labeling contains pregnancy/fetal/neonatal warnings in the following sections: Boxed Warning, Warnings, Precautions, Pregnancy.
- Drug pharmacology and/or available data indicate fetal/neonatal risk.
- FDA approved indication for medication may have maternal treatment benefits that outweigh possible fetal/neonatal risks (e.g.-anti-epileptic drugs, chemotherapy).
- Post-marketing human or animal data that indicate adverse maternal or fetal outcomes.

FDB Severity Level 4

- Fetal/neonatal risk is unclear since human and/or animal data are unavailable or limited.
- FDA approved indication for medication may improve maternal health outcomes.
- Pharmacology and/or available data do not suggest clear fetal/neonatal risk.

FDB Severity Level 5

- Available human and/or animal data have shown no known fetal/neonatal risk.

Pregnancy Monograph Sections

The PREG monograph contains the following information when available: detailed risk information, recommendations to reduce risk, supporting evidence as well as pregnancy registry contact information. When the drug manufacturer labeling does not contain additional detailed risk information, the existing narrative will be used and displayed in the fetal risk section of the PREG monograph. Additionally, when information is absent, the corresponding PREG monograph section will not be populated.

Fetal Risk Summary

This section will be populated with fetal/neonatal risk information found in the manufacturer drug labeling or other expert references. Short and succinct and standardized sentences will be used to describe the known, potential or unknown risks.

Clinical Considerations

This section will be populated with recommendations to possibly minimize the known or potential maternal or

fetal/neonatal risks. These recommendations will be derived from the drug manufacturer labeling and/or other expert references. Maternal treatment benefit and fetal/neonatal risks may be presented in this section.

Data

The data presented in the manufacturer drug labeling will be stated in the exact manner in which they appear in the pregnancy section of the manufacturer drug labeling, within allowable data field limits. Both human and animal data can be populated when made available in the drug manufacturer labeling.

Registry Information

If pregnancy registry information is listed, it will be stated in the exact manner in which they appear in the pregnancy section of the manufacturer drug labeling.

Pregnancy Precautions Module Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

- External Triggers for Clinical Review
- Internal Triggers for Clinical Review
- Additional Sources

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health-Canada (except Non-U.S. product alerts exclusive to Canada)
- MedWatch Safety Alerts from FDA
- FDA CDER NEW listserv emails
- FDA CBER What's New listserv emails
- FDA MedWatch Monthly Label Changes
- Briggs Pregnancy and Lactation Newsletter

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review PREG drug groups is a new Clinical Formulation (GCN_SEQNO) added to MedKnowledge and its U.S. product labeling.

Additional Sources

First Databank may rely on current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Briggs GG, Freeman RK. *Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk.*
- American Congress of Obstetricians and Gynecologists. Available at: <http://www.acog.org/>

Pregnancy Precautions Module References

This section lists sources used by First Databank to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB may rely on current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Briggs GG, Freeman RK, Yaffe SJ, eds. *Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk*.
- American Congress of Obstetricians and Gynecologists. Available at: <http://www.acog.org/>.

Pregnancy Precautions Module Applications

This section provides information about the practical application of data contained in this module.

Screening a Drug for Pregnancy Precautions

Screening a Drug for Pregnancy Precautions

Systems can use the Pregnancy Precautions Module to identify warnings that might impact drug ordering and dispensing decisions. This application illustrates how to screen a drug for precautions.

1. Do one of the following:
 - Select the Pregnancy Precautions Code ([PREG_CODE](#)) from the [PREG GCN_SEQNO Link Table](#) ([RPREGGC0_PREG_GCNSEQNO_LINK](#)) where the Clinical Formulation ID ([GCN_SEQNO](#)) column equals the Clinical Formulation ID ([GCN_SEQNO](#)) of the drug to screen.
 - Select the [PREG_CODE](#) from the [PREG ROUTED_MED_ID Link Table](#) ([RPREGRM0_ROUTED_MED_LINK](#)) where the MED Routed Medication ID ([ROUTED_MED_ID](#)) column equals the [ROUTED_MED_ID](#) of the drug to screen.
2. If no records exist in a link table, the drug has no pregnancy precautions. If records do exist in a link table, the drug has pregnancy precautions.

The system might need to perform additional navigation to access the [PREG_CODE](#) from the user-entered drug identifier. See [Multiple Access Points \(MAPs\)](#) for more information.

3. Select pregnancy precautions information from the [Pregnancy Precautions Master Table](#) ([RPREGMA1_PREG_MSTR](#)) where the [PREG_CODE](#) column equals the [PREG_CODE](#) value from the previous step.
4. Select the pregnancy precautions monograph information from the [PREG Monograph Line Table](#) ([RPREGPL0_MONO_LINE](#)) and [PREG Monograph Section Description Table](#) ([RPREGMS0_MONO_SECTION_DESC](#)).
5. (Optional) Select the pregnancy precautions reference information from the [PREG Reference Link Table](#) ([RPREGRL0_PREG_REFERENCE_LINK](#)), [PREG Reference Table](#) ([RPREGRE0_PREG_REFERENCE](#)), and [PREG Reference Type Table](#) ([RPREGRT0_PREG_REFERENCE_TYPE](#)).
6. (Optional) Filter the results according to institution convention or user-entered criteria.
7. Display the results to the user.
 - Example—Screening a Drug for Pregnancy Precautions with a [ROUTED_MED_ID](#)
 - Example—Screening a Drug for Pregnancy Precautions with a Clinical Formulation ID
 - Example—Filtering Pregnancy Precaution Information

Example—Screening a Drug for Pregnancy Precautions with a [ROUTED_MED_ID](#)

For the purposes of demonstrating this application, the following scenario is used: A physician screens *Atorvastatin Calcium Oral* ([ROUTED_MED_ID](#) 000841) for all possible PREG information. The MED Routed Medication ID ([ROUTED_MED_ID](#)) is in the [MED Routed Medication Table](#) ([RMIR MID2_ROUTED_MED](#)).

1. Select the Pregnancy Precautions Code ([PREG_CODE](#)) value from the [PREG ROUTED_MED_ID Link Table](#) ([RPREGRM0_ROUTED_MED_LINK](#)) where the [ROUTED_MED_ID](#) column equals the

ROUTED_MED_ID value of the drug to screen.

ROUTED_MED_ID	000841
PREG_CODE	000399

- Select the Pregnancy Precautions Description (**PREG_DESC**), Pregnancy Precautions Severity Level (**PREG_SL**), and Pregnancy Precautions Boxed Warning (BXW) Indicator (**PREG_BOXED_WARNING_IND**) values from the **Pregnancy Precautions Master Table** (RPREGMA1_PREG_MSTR) where the PREG_CODE column equals the value from the previous step.

PREG_CODE	000399
PREG_DESC	HMG COA REDUCTASE INHIBITORS
PREG_SL	X
PREG_BOXED_WARNING_IND	0

- Retrieve the following from the **PREG Monograph Line Table** (RPREGPL0_MONO_LINE) where the Pregnancy Precautions Code (**PREG_CODE**) value equals the Pregnancy Precautions Code (**PREG_CODE**) value from step 1:

- Pregnancy Monograph Section Code (**PREG_MONO_SECTION_CD**)
- Pregnancy Monograph Line (**PREG_MONO_LINE**)
- Pregnancy Monograph Sequence Number (**PREG_MONO_SN**)

PREG_CODE	000399
PREG_DESC	HMG COA REDUCTASE INHIBITORS
PREG_SL	X
PREG_BOXED_WARNING_IND	0
PREG_MONO_SECTION_CD	1
PREG_MONO_SN	1
PREG_MONO_LINE	Source content to be reviewed.

- Sort the content of the Pregnancy Monograph Line (**PREG_MONO_LINE**) for each Pregnancy Monograph Section Code (**PREG_MONO_SECTION_CD**) and sort the records using the Pregnancy Monograph Sequence Number (**PREG_MONO_SN**) column.
- Select the Pregnancy Reference Identifier (**PREG_REFERENCE_ID**) values from the **PREG Reference Link Table** (RPREGRL0_PREG_REFERENCE_LINK) where the where the Pregnancy Precautions Code (**PREG_CODE**) column equals the value from step 1.
- Select the pregnancy reference information from the **PREG Reference Table** (RPREGRE0_PREG_REFERENCE) where the Pregnancy Reference Identifier (**PREG_REFERENCE_ID**)

column equals the value from the previous step.

7. Select the Pregnancy Reference Type Description ([PREG_REFERENCE_TYPE_DESC](#)) from the [PREG Reference Type Table](#) (RPREGRT0_PREG_REFERENCE_TYPE).
8. Display the results to the user.

In this example, the system alert contains the Pregnancy Precautions Significance Level Description ([PREG_SLD](#)) from the [PREG Severity Level Description Table](#) (RPREGSL1_PREG_SEVER_LEVEL) for the FDA pregnancy risk category X:

Example Pregnancy Precaution Alert

ATORVASTATIN
— FDA-ASSIGNED SEVERITY LEVEL OF X.
STUDIES IN ANIMALS OR HUMANS HAVE SHOWN FETAL ABNORMALITIES
AND/OR THERE IS POSITIVE EVIDENCE OF FETAL RISK BASED ON
INVESTIGATIONAL OR MARKETING INFORMATION AND RISKS INVOLVED
IN USE OF DRUG IN PREGNANT WOMEN CLEARLY OUTWEIGH POTENTIAL
BENEFITS.

In this example, the PREG description is a drug class description, not an ingredient description.

Example—Screening a Drug for Pregnancy Precautions with a Clinical Formulation ID

For purposes of demonstrating this application, the following scenario is used: A pharmacist screens *Enalapril/Hydrochlorothiazide 10 mg-25 mg Tablet* (Clinical Formulation ID [GCN_SEQNO] 000382) for all possible PREG information. The Clinical Formulation ID ([GCN_SEQNO](#)) is in the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

1. Select the Pregnancy Precautions Code ([PREG_CODE](#)) values from the [PREG GCN_SEQNO Link Table](#) (RPREGGC0_PREG_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug to screen.

GCN_SEQNO	000382	000382
PREG_CODE	000036	000484

2. Select the Pregnancy Precautions Description ([PREG_DESC](#)), Pregnancy Precautions Severity Level ([PREG_SL](#)), and Pregnancy Precautions Boxed Warning (BXW) Indicator ([PREG_BOXED_WARNING_IND](#)) values from the [Pregnancy Precautions Master Table](#) (RPREGMA1_PREG_MSTR) where the PREG_CODE column equals the value from the previous step.

PREG_CODE	000036	000484
PREG_DESC	ENALAPRIL	HYDROCHLOROTHIAZIDE
PREG_SL	D	B

PREG_BOXED_WARNING_IND	1	0
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3. Retrieve the following from the **PREG Monograph Line Table** (RPREGPL0_MONO_LINE) where the Pregnancy Precautions Code (**PREG_CODE**) value equals the Pregnancy Precautions Code (**PREG_CODE**) value from step 1:

- Pregnancy Monograph Section Code (**PREG_MONO_SECTION_CD**)
- Pregnancy Monograph Line (**PREG_MONO_LINE**)
- Pregnancy Monograph Sequence Number (**PREG_MONO_SN**)

PREG_CODE	000036	000484
PREG_DESC	ENALAPRIL	HYDROCHLOROTHIAZIDE
PREG_SL	D	B
PREG_BOXED_WARNING_IND	1	0
PREG_MONO_SECTION_CD	1	1
PREG_MONO_LINE	Fetal death/morbidity w/use in 2nd & 3rd trimester, stop when pregnancy detected	Not recommended in pre-eclampsia and other pregnancy-induced hypertension.
PREG_MONO_SN	1	1

4. Sort the content of the Pregnancy Monograph Line (**PREG_MONO_LINE**) for each Pregnancy Monograph Section Code (**PREG_MONO_SECTION_CD**) and sort the records using the Pregnancy Monograph Sequence Number (**PREG_MONO_SN**) column.
5. Select the Pregnancy Reference Identifier (**PREG_REFERENCE_ID**) values from the **PREG Reference Link Table** (RPREGRL0_PREG_REFERENCE_LINK) where the where the Pregnancy Precautions Code (**PREG_CODE**) column equals the value from step 1.
6. Select the pregnancy reference information from the **PREG Reference Table** (RPREGRE0_PREG_REFERENCE) where the Pregnancy Reference Identifier (**PREG_REFERENCE_ID**) column equals the value from the previous step.
7. Select the Pregnancy Reference Type Description (**PREG_REFERENCE_TYPE_DESC**) from the **PREG Reference Type Table** (RPREGRT0_PREG_REFERENCE_TYPE).
8. Display the results to the user.

In this example, the system alert contains the Pregnancy Precautions Significance Description (**PREG_SLD**) from the **PREG Severity Level Description Table** (RPREGSL1_PREG_SEVER_LEVEL), and precautions narratives:
Example Pregnancy Precaution Alert

ENALAPRIL — FDA-ASSIGNED SEVERITY LEVEL OF D

POSITIVE EVIDENCE OF HUMAN FETAL RISK BASED ON INVESTIGATION OR MARKETING INFORMATION BUT POTENTIAL BENEFITS MAY WARRANT USE OF DRUG IN PREGNANT WOMEN DESPITE POTENTIAL RISKS.

FETAL DEATH/MORBIDITY W/USE IN 2ND & 3RD TRIMESTER, STOP WHEN PREGNANCY DETECTED

HYDROCHLOROTHIAZIDE — FDA-ASSIGNED SEVERITY LEVEL OF B

ANIMAL STUDIES HAVE FAILED TO DEMONSTRATE A RISK TO THE FETUS BUT THERE ARE NO WELL-CONTROLLED STUDIES IN PREGNANT WOMEN; OR ANIMAL REPRODUCTION STUDIES HAVE SHOWN AN ADVERSE EFFECT (OTHER THAN DECREASE IN FERTILITY), BUT ADEQUATE AND WELL-CONTROLLED STUDIES IN PREGNANT WOMEN HAVE FAILED TO DEMONSTRATE A RISK TO THE FETUS DURING THE FIRST TRIMESTER OF PREGNANCY (AND THERE IS NO EVIDENCE OF A RISK IN LATER TRIMESTERS).

NOT RECOMMENDED IN PRE-ECLAMPSIA AND OTHER PREGNANCY-INDUCED HYPERTENSION

Example—Filtering Pregnancy Precaution Information

For purposes of demonstrating this application, the following scenario is used: A nurse practitioner screens *Fluoxetine 10mg Oral Capsule* (Clinical Formulation ID [GCN_SEQNO] 046213) for pregnancy precautions, and the institution has decided to filter warnings to display only those with a severity level of C, D, X, or 1. The Clinical Formulation ID ([GCN_SEQNO](#)) is in the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

1. Select the Pregnancy Precautions Code ([PREG_CODE](#)) value from the [PREG GCN_SEQNO Link Table](#) (RPREGGC0_PREG_GCNSEQNO_LINK) where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug to screen.

GCN_SEQNO	046213
PREG_CODE	000251

2. Select the Pregnancy Precautions Description ([PREG_DESC](#)), Pregnancy Precautions Severity Level ([PREG_SL](#)), and Pregnancy Precautions Boxed Warning (BXW) Indicator ([PREG_BOXED_WARNING_IND](#)) values from the [Pregnancy Precautions Master Table](#) (RPREGMA1_PREG_MSTR) where the PREG_CODE column equals the value from the previous step.

PREG_CODE	000251
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PREG_DESC	FLUOXETINE
PREG_SL	C
PREG_BOXED_WARNING_IND	0

3. Retrieve the following from the **PREG Monograph Line Table** (RPREGPL0_MONO_LINE) where the Pregnancy Precautions Code (**PREG_CODE**) value equals the Pregnancy Precautions Code (**PREG_CODE**) value from step 1:

- Pregnancy Monograph Section Code (**PREG_MONO_SECTION_CD**)
- Pregnancy Monograph Line (**PREG_MONO_LINE**)
- Pregnancy Monograph Sequence Number (**PREG_MONO_SN**)

PREG_CODE	000251
PREG_DESC	FLUOXETINE
PREG_SL	C
PREG_BOXED_WARNING_IND	0
PREG_MONO_SECTION_CD	1
PREG_MONO_LINE	Risk of persistent pulm HTN after 20 wks; neonate behavior syndr 3rd trimester
PREG_MONO_SN	1

4. Sort the content of the Pregnancy Monograph Line (**PREG_MONO_LINE**) for each Pregnancy Monograph Section Code (**PREG_MONO_SECTION_CD**) and sort the records using the Pregnancy Monograph Sequence Number (**PREG_MONO_SN**) column.
5. Select the Pregnancy Reference Identifier (**PREG_REFERENCE_ID**) values from the **PREG Reference Link Table** (RPREGRL0_PREG_REFERENCE_LINK) where the where the Pregnancy Precautions Code (**PREG_CODE**) column equals the value from step 1.
6. Select the pregnancy reference information from the **PREG Reference Table** (RPREGRE0_PREG_REFERENCE) where the Pregnancy Reference Identifier (**PREG_REFERENCE_ID**) column equals the value from the previous step.
7. Select the Pregnancy Reference Type Description (**PREG_REFERENCE_TYPE_DESC**) from the **PREG Reference Type Table** (RPREGRT0_PREG_REFERENCE_TYPE).
8. Filter the results according to institution convention or user-entered criteria.
In this example, filter the value in the PREG_SL column by the institution convention that the severity level be C, D, X, or 1. In this example, the only returned record contains a value of C in the PREG_SL column, so it meets the criteria.
9. Display the results to the user.

-  Drug ingredients with a severity level of C may contain warnings that impact patient safety and care.

In this example, the system alert contains the Pregnancy Precautions Significance Description (**PREG_SLD**) from the **PREG Severity Level Description Table** (RPREGSL1_PREG_SEVER_LEVEL), and the precautions narratives:

Example Pregnancy Precaution Alert

FLUOXETINE — FDA-ASSIGNED SEVERITY LEVEL OF C

ANIMAL STUDIES HAVE SHOWN ADVERSE EFFECT ON FETUS BUT NO WELL-CONTROLLED STUDIES IN HUMANS: POTENTIAL BENEFITS MAY WARRANT USE IN PREGNANT WOMEN DESPITE POTENTIAL RISKS; OR NO ANIMAL REPRODUCTION STUDIES AND NO ADEQUATE AND WELL-CONTROLLED STUDIES IN HUMANS.

RISK OF PERSISTENT PULM HTN AFTER 20 WKS; NEONATE BEHAVIOR SYNDR 3RD TRIMESTER

Pregnancy Precautions Module ERD and Technical Specifications

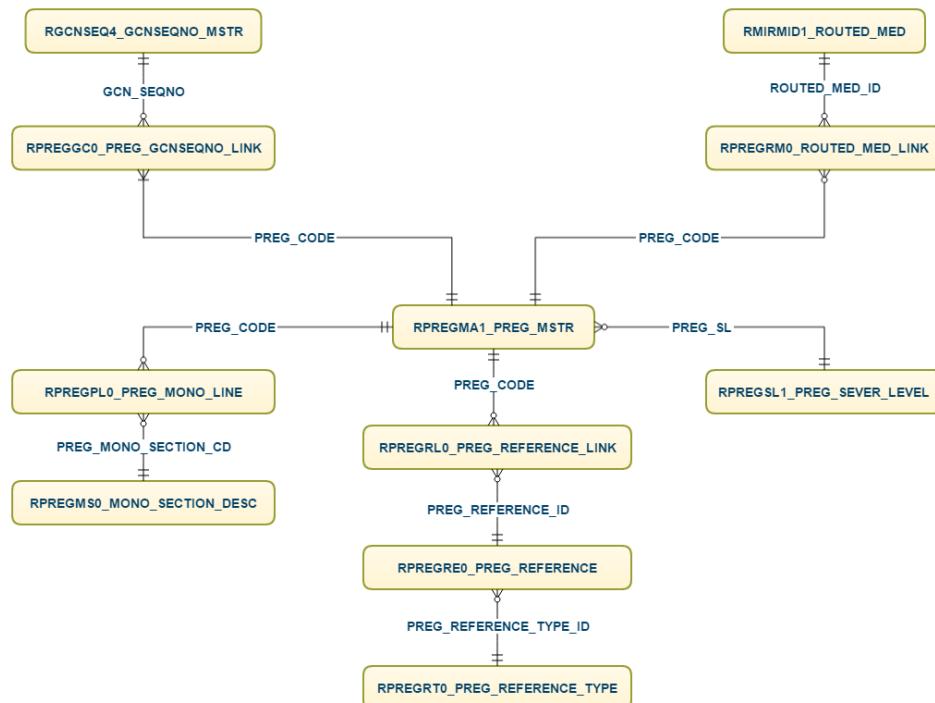
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module. The table names are listed below.

- Pregnancy Precautions Tables
- Pregnancy Precautions ERD

Pregnancy Precautions Tables

- PREG GCN_SEQNO Link Table
- PREG Monograph Line Table
- PREG Monograph Section Description Table
- Pregnancy Precautions Master Table
- PREG Reference Link Table
- PREG Reference Table
- PREG Reference Type Table
- PREG ROUTED_MED_ID Link Table
- PREG Severity Level Description Table

Pregnancy Precautions ERD



PREG GCN_SEQNO Link Table

Table Name	RPREGGC0_PREG_GCNSEQNO_LINK				
Revision Activity	original				
Purpose	Links a clinical drug formulation to pregnancy precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	PREG_CODE	Pregnancy Precautions Code	N	6	9(6)

PREG Monograph Line Table

Table Name	RPREGPL0_PREG_MONO_LINE				
Revision Activity	add.10-01-2015				
Purpose	Provides monograph information for a given pregnancy precaution.				

Key	Column Name	Column Description	Format	Length	Picture
P	PREG_MONO_ID	Pregnancy Monograph Identifier	N	8	9(8)
PF	PREG_MONO_SECTION_CD	Pregnancy Monograph Section Code	N	4	9(4)
P	PREG_MONO_SN	Pregnancy Monograph Sequence Number	N	2	9(2)
F	PREG_CODE	Pregnancy Precautions Code	N	6	9(6)
	PREG_MONO_LINE	Pregnancy Monograph Line	AN	500	X(500)

PREG Monograph Section Description Table

Table Name	RPREGMS0_MONO_SECTION_DESC
Revision Activity	add.10-01-2015
Purpose	Relates the Pregnancy Monograph Section Code to its text description. The Pregnancy Monograph Section Code identifies the types of text included in the monographs. This table provides the ability to group the monograph lines into sections, including or excluding individual sections of a monograph depending upon specific business needs.

Key	Column Name	Column Description	Format	Length	Picture
P	PREG_MONO_SECTION_CD	Pregnancy Monograph Section Code	N	4	9(4)
	PREG_MONO_SECTION_CD_DESC	Pregnancy Monograph Section Code Description	AN	50	X(50)

Pregnancy Precautions Master Table

Table Name	RPREGMA1_PREG_MSTR				
Revision Activity	rev.10-01-2015				
Purpose	Provides attributes of pregnancy precaution information for a particular drug.				

Key	Column Name	Column Description	Format	Length	Picture
P	PREG_CODE	Pregnancy Precautions Code	N	6	9(6)
	PREG_DESC	Pregnancy Precautions Description	AN	41	X(41)
F	PREG_SL	Pregnancy Precautions Severity Level	AN	1	X(1)
	PREG_BOXED_WARNING_IND	Pregnancy Precautions Boxed Warning (BXW) Indicator	AN	1	X(1)

PREG Reference Link Table

Table Name	RPREGRL0_PREG_REFERENCE_LINK				
Revision Activity	add.10-01-2015				
Purpose	Links a pregnancy precaution to its defining references.				
Key	Column Name	Column Description	Format	Length	Picture
PF	PREG_CODE	Pregnancy Precautions Code	N	6	9(6)
PF	PREG_REFERENCE_ID	Pregnancy Reference Identifier	N	8	9(8)

PREG Reference Table

Table Name	RPREGRE0_PREG_REFERENCE
Revision Activity	add.10-01-2015
Purpose	Contains sources used by FDB to compile the information contained in the pregnancy precaution.

Key	Column Name	Column Description	Format	Length	Picture
P	PREG_REFERENCE_ID	Pregnancy Reference Identifier	N	8	9(8)
F	PREG_REFERENCE_TYPE_ID	Pregnancy Reference Type Identifier	N	8	9(8)
	PREG_REFERENCE_TITLE	Pregnancy Reference Title	AN	255	X(255)
	PREG_REFERENCE_AUTHOR	Pregnancy Reference Author	AN	255	X(255)
	PREG_REFERENCE_NAME	Pregnancy Reference Name	AN	255	X(255)
	PREG_REFERENCE_ISSUE_DT_TEXT	Pregnancy Reference Issue Date Text	AN	25	X(25)
	PREG_REFERENCE_VOLUME	Pregnancy Reference Volume	AN	80	X(80)
	PREG_REFERENCE_SUPPLEMENT_NBR	Pregnancy Reference Supplement Number	AN	80	X(80)
	PREG_REFERENCE_EDITION	Pregnancy Reference Edition	AN	80	X(80)
	PREG_REFERENCE_LOCATION	Pregnancy Reference Location	AN	80	X(80)
	PREG_REFERENCE_ACCESSED_DT	Pregnancy Reference Accessed Date	N	8	9(8)
	PREG_REFERENCE_ISSUE	Pregnancy Reference Issue	AN	80	X(80)
	PREG_REFERENCE_PAGE	Pregnancy Reference Page	AN	80	X(80)

	PREG_REFERENCE_PUBMED_ID	Pregnancy Reference PUBMED Identifier	AN	50	X(50)
	PREG_REFERENCE_URL_TEXT	Pregnancy Reference URL Text	AN	500	X(500)

PREG Reference Type Table

Table Name	RPREGRT0_PREG_REFERENCE_TYPE				
Revision Activity	add.10-01-2015				
Purpose	Categorizes sources used by FDB to compile the information contained in the pregnancy precaution.				

Key	Column Name	Column Description	Format	Length	Picture
P	PREG_REFERENCE_TYPE_ID	Pregnancy Reference Type Identifier	N	8	9(8)
	PREG_REFERENCE_TYPE_DESC	Pregnancy Reference Type Description	AN	255	X(255)

PREG ROUTED_MED_ID Link Table

Table Name	RPREGRM0_ROUTED_MED_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links a routed medication to pregnancy precaution information.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	PREG_CODE	Pregnancy Precautions Code	N	6	9(6)

PREG Severity Level Description Table

Table Name	RPREGSL1_PREG_SEVER_LEVEL				
Revision Activity	rev.10-01-2015				
Purpose	Relates the Pregnancy Precaution Severity Level to its text description.				

Key	Column Name	Column Description	Format	Length	Picture
P	PREG_SL	Pregnancy Precautions Severity Level	AN	1	X(1)
P	PREG_SLSN	Pregnancy Precautions Severity Level Description Text Sequence Number	N	2	9(2)
	PREG_SLD	Pregnancy Precautions Severity Level Description	AN	60	X(60)

Side Effects Module (SIDE) 2.0

- Side Effects Module Editorial Policies
- Applications
- ERD and Technical Specifications

Side Effects Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the Side Effects Module are provided in the following sections:

- Overview
- Inclusion/Exclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- Resources

SIDE Overview

The Side Effects Module (SIDE) addresses the problem of drug-induced illness/side effects. It can be used in prospective and retrospective environments in systems for prescribers, community or hospital pharmacies, nursing homes or long-term care facilities, and third party processors.

Detailed and comprehensive lists of side effects can be generated for use in patient monitoring and counseling. The potential for additive side effects between two or more medications can be checked. Drug-induced adverse effects can be detected, which facilitates compliance with The Joint Commission (TJC) requirements stating that “medication errors and adverse drug reactions shall be reported immediately.”

- i Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

SIDE Inclusion and Exclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

This section includes the following topics:

- Inclusion - Drug Scope
- Inclusion - Content Scope
- Exclusion - Drug Scope
- Exclusion - SIDE Content

Inclusion - Drug Scope

- U.S. FDA-approved Rx product ingredients with NDA, ANDA, BLA
- U.S. OTC products with NDAs or ANDAs
- U.S. OTC drug product ingredients consistent with FDA OTC Monographs
- Herbal products enumerated in the FDB [Herbal Products Inclusion List](#)

Inclusion - Content Scope

The SIDE module includes documented drug-induced illnesses, conditions, manifestations of drug intolerance, hypersensitivity reactions and may include lab test changes (for example, decreased serum potassium) that reflects side effects from physiological changes.

Exclusion - Drug Scope

- Non-U.S. products that are exclusive to other countries
- Self-proclaimed Rx products without ANDA/NDA/BLA
- Rx drug products with 510K device approval
- Dietary supplements
- Large volume parenteral, nutritional, irrigation or dialysis solutions
- Nutraceuticals
- Diluent solutions
- Herbal products, except those enumerated in the FDB [Herbal Products Inclusion List](#)
- Homeopathic drugs
- OTC products that are not described by FDA OTC Monographs
- Bulk drugs or chemicals
- Medical supplies, soaps, cleansers
- Cosmetics
- Veterinary drugs
- Inactive ingredients

Exclusion - SIDE Content

The Side Effects Module is not intended to include the full listing of adverse events as reported in the manufacturer labeling. Less commonly reported adverse reactions notated as "other adverse reactions" and frequently organized by system may not be included. Similarly, adverse events reported from uncontrolled trials where causality is not established or stated as "may be related" may not be included.

Other examples of exclusions:

- Adverse events occurring from medication withdrawal or conditions or rebound effects occurring after discontinuing therapy (for example, beta-blockers and rebound hypertension)
- Adverse events that occur from routes or methods of drug administration not approved by the FDA (for example, ocular administration of a topical solution)
- Side effects due to a drug-drug interaction
- Side effects that occur from overdose conditions
- Reported adverse events associated with the indication or underlying condition being treated
- Indirect adverse events due to physiologic condition in response to previous or current therapy (that is, tumor lysis syndrome associated with chemotherapy, immune reconstitution syndrome associated with HAART, radiation recall seen with anthracycline and other chemotherapy treatments)
- Adverse event incidence occurs higher in placebo group than in treatment group (when available from prescribing information)
- Antibody formation caused by protein (or peptide based) drug therapy
- Side effects occurring from product contamination (for example, rotavirus vaccine contaminated with porcine flu strain)
- Lab test result abnormalities that have no associated physiologic effects or are not reasonably associated with the known pharmacology of the drug
- Multiple listings of side effects that express similar disease concepts (that is, arrhythmia is included instead of separate listings: bradycardia, tachycardia)

SIDE Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

This section includes the following data elements:

- SIDE Code Description
- Disease Identifiers
- SIDE Frequency of Occurrence Code
- SIDE Severity Code
- SIDE Visibility Code
- SIDE Lab/Diagnostic Tests Code
- SIDE Physician Code
- SIDE Hypersensitivity Indicator

SIDE Code Description

Each SIDE code has a unique Side code description ([SIDE_DRUG_DESC](#)). This drug group description is usually ingredient-based but can be broader and include a collection of ingredients (for example, "Bulk Laxatives") or may be narrower and include only certain dose forms or routes. (for example, "NASAL DECONGESTANTS (TOP)").

Example

SIDE	SIDE_DRUG_DESC
777	NASAL DECONGESTANTS (TOP)
1119	DONEPEZIL
1122	FOSPHENYTOIN

- Some drug groups may have more than 99 listed side effects and are programmatically assigned a second SIDE code. The second drug description is the original drug group name and qualified as "(CONTINUED)" in the SIDE_DRUG_DESC field from the RSIDEDD0_DRUG_DESC table.

Example

SIDE	SIDE_DRUG_DESC
1173	SILDENAFIL
1174	SILDENAFIL (CONTINUED)

- Multi-ingredient products may have more than one SIDE code and description, or a single SIDE code for the combination.

Example

GCN_SEQNO	GNN	SIDE	SIDE_DRUG_DESC
29123	IPRATROPIUM BROMIDE/ALBUTEROL	341	IPRATROPIUM
29123	ALBUTEROL INHALATION	566	ALBUTEROL INHALATION
46601	LOPINAVIR/RITONAVIR	1378	LOPINAVIR/RITONAVIR

Disease Identifiers

Each side effect listed in the master table is encoded with a Disease Identifier ([DxID](#)) that is maintained in the First Databank Medical Lexicon (FML).

SIDE Frequency of Occurrence Code

The SIDE frequency of occurrence ([SIDE_FREQ](#)) indicates the approximate relative frequency that a side effect occurs with a given drug product. SIDE_FREQ has the following valid values.

SIDE_FREQ Values and Descriptions

Value	Description
0	Incidence more frequent
1	Incidence less frequent
2	Incidence rare or very rare

SIDE Severity Code

There are two possible severity levels ([SIDE_SEV](#)) that can be assigned to each DxID record.

SIDE_SEV Values and Descriptions

Value	Description
0	"less severe" if it is non-threatening (such as constipation)
1	"severe" if it may be life-threatening (such as agranulocytosis)

SIDE Visibility Code

The SIDE Visibility Code ([SIDE_VISCD](#)) characterizes the presentation of a side effect. It has the following valid values and descriptions:

SIDE_VISCD Values and Descriptions

Value	Description
0	"Visible" if it is definitely detectable (for example, rash). Visible during routine physical exam.

1	"May be communicated by patient." In these cases, it is assumed that the patient is responsive and communicative (for example, nausea).
2	"Not visible" if it is definitely not visible (for example, neutropenia), or if it is not detectable by routine physical exam.

SIDE Lab/Diagnostic Tests Code

The SIDE Lab/Diagnostic Test Code ([SIDE_LABCD](#)) indicates whether a lab or diagnostic test is necessary as follow-up or to elucidate a given drug side effect. It does not establish which lab tests should be ordered for a given drug as a baseline or for monitoring.

SIDE_LABCD Values and Descriptions

Value	Description
0	No Lab or Diagnostic Test Recommended
1	Lab or Diagnostic Test Recommended

SIDE Physician Code

The SIDE Physician Code ([SIDE_PHYS](#)) indicates the need for physician notification.

SIDE_PHYS Values and Descriptions

Value	Description
0	Contact MD only if becomes bothersome
1	MD should be contacted

SIDE Hypersensitivity Indicator

The SIDE Hypersensitivity Indicator field ([SIDE_HYPER](#)) may be populated with a value of **H** or left null. "**H**" identifies side effects likely due to immunological mechanisms or immune-mediated reactions, such as skin rash, bronchospasm, or anaphylaxis. This indicator enables the user to selectively screen specific side effects that fit the criteria of this type.

SIDE Rule Sets

This section provides rules that the clinical team uses in regard to creating the module's data, both general rules and rules specific to data elements.

- [Rules of General Applicability](#)
- [Rules for Data Elements](#)

Trigger content is reviewed and concepts applicable to SIDE are identified. (See [Maintenance](#) for list of triggers).

Disease terminology concepts within FML are searched and codes/descriptions are selected. Associated attributes of frequency, severity level, visibility, laboratory study association, physician and hypersensitivity indicators are included.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

Side effect clinical content is reviewed, collected, and associated to a drug group reflected by the Side Code Description. Group linking to other drug identifiers (Routed Medication IDs, Routed Generic IDs, and Clinical Formulations) is programmatically derived. Linkage or assignment of SIDE information is not drug manufacturer-specific.

Non-U.S. drug Clinical Formulations may inherit U.S.-based SIDE clinical data.

Example

SIDE	SIDE_DRUG_DESC	GCN_SEQNO
592	BUDESONIDE NASAL	18166
591	BUDESONIDE INH	24187
591	BUDESONIDE INH	24872
1715	BUDESONIDE - ORAL	25750
1718	BUDESONIDE - ORAL (CONTINUED)	25750

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

SIDE Frequency

There are three possible frequency values in SIDE ([SIDE_FREQ](#)) that can be assigned to each DxID record. The following description is utilized for making frequency assignments.

Evidence Schema

- **Incidence more frequent**—Adverse effects that are listed as more frequent in the "Highlights of Prescribing Information" product label or occurring in the highest percentage of patients in controlled trials

or clinical use of the drug product label are assigned a frequency of "0."

- **Incidence less frequent**—Adverse events with a lower percent occurrence rate are assigned a frequency level of "1."
- **Incidence rare or very rare**—Adverse events that are rare or rarely reported or may be included in the post marketing section of the manufacturer label are assigned a frequency of "2."

SIDE Severity Level

There are two possible severity level messages in SIDE (**SIDE_SEV**) that can be assigned to each DxID record. The following are detailed descriptions utilized for making severity level assignments:

- **Less severe** is assigned to adverse effects that are less threatening or mild in effect. These DxID's have an assigned severity level of "0."
- **More severe** is for warnings that are more significant or where harm is a more likely outcome if it occurs. These DxID's are assigned a severity level of "1."

Evidence Schema

Severity Level 1

- Boxed Warning labeling adverse event content
- Warnings and Precautions section adverse event content
- Adverse Event section for side effects with potential for severe or life threatening consequence or compromise
- Post-marketing section for side effects with potential for severe or life threatening consequence or compromise

Severity Level 0

- Adverse Event section for side effects unlikely to result in serious or permanent effects

SIDE Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The First Databank Knowledge Base Services Department utilizes a robust methodology for capture, documentation, triage and tracking of the most important sources for drug knowledge changes. The external triggers that are triaged to the clinical editors for review are the following:

- MedEffects Alerts from Health-Canada (except Non-U.S. product alerts exclusive to Canada)
- FDA MedWatch Medical Product Safety Information Alerts
- FDA CDER NEW
- FDA CBER What's New
- FDA MedWatch Monthly Label Changes
- FDA Division of Drug Information (DDI)
- FDA Hematology/Oncology (Cancer) Approvals and Safety Notifications
- What's New at FDA in HIV/AIDS
- FDA Table of Pharmacogenomic Biomarkers in Drug Labels
- FDA Press Announcements

Internal Triggers for Clinical Review

The internal triggers that prompt the clinical editors to add or review data are the following:

New Clinical Formulations (GCN_SEQNO) added to the MedKnowledge database and their associated U.S. product labeling are internal triggers that prompt the clinical editors to add or review SIDE drug group linking or SIDE group (DxID) content.

SIDE Resources

This section lists sources used by First DataBank to compile the information contained in the module.

The following references contain bibliographic information about the resources used by the clinical pharmacist editorial staff to author the information contained in the module.

First Databank utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. First Databank uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- American Society of Health System Pharmacists. AHFS Drug Information.

SIDE Applications

This section provides information about the practical application of data contained in this module. The applications utilize tables in the First Databank Medical Lexicon Module, and successful use of these applications depends upon the following:

- Familiarity with the First Databank Medical Lexicon Module and the Disease Identifier (**DXID**). Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) for more information.
- Familiarity with drug concepts and their identifiers. Refer to the [Multiple Access Points™ \(MAPs™\)](#) for more information.
- Ability to navigate to a Clinical Formulation ID (**GCN_SEQNO**) from a concept such as the DIN or MEDID. Refer to [MedKnowledge Identifiers and Attributes](#) for more information.
- Assignment of a DxID or ICD Code to a given disease state. Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) for more information.

[Retrieving a List of Side Effects](#)

[Detecting Additive Side Effects](#)

[Comparing Side Effects to Current Patient Conditions](#)

Retrieving a List of Side Effects

This application illustrates how to use SIDE to retrieve a list of drug side effects based on its Clinical Formulation ID ([GCN_SEQNO](#)).

This example displays the following pieces of side effect information about pseudophedrine 30MG capsules (Clinical Formulation ID [GCN_SEQNO] 013493):

- Each side effect's **Primary Layman Name**
- Its frequency of occurrence
- Its severity

This list of side effects can be sorted in a variety of ways (see the final step of the application for sorting options).

1. Query the GCN_SEQNO column of the [SIDE GCN_SEQNO/Drug Side Effect Code Relation Table](#) (RSIDEGC0_GCNSEQNO_LINK) using the drug's Clinical Formulation ID (GCN_SEQNO) value to retrieve all of its related SIDE Side Effects Code ([SIDE](#)) values.

GCN_SEQNO	SIDE
013493	00361



Multi-ingredient drugs may have different side effects (SIDEs) for each ingredient.

2. Query the SIDE column of the [SIDE Master Table](#) (RSIDEMA3_MSTR) using each SIDE value from the previous step to retrieve the following columns:

- SIDE Frequency of Occurrence Code ([SIDE_FREQ](#))
- SIDE Severity Code ([SIDE_SEV](#))
- FML Disease Identifier ([DXID](#))

GCN_SEQNO	SIDE	SIDE_FREQ	SIDE_SEV	DXID
013493	00361	0	0	00003063
013493	00361	0	0	00003305
013493	00361	1	0	00003133
013493	00361	1	0	00003059
013493	00361	1	0	00004389
013493	00361	1	0	00003092
013493	00361	1	0	00003153
013493	00361	1	0	00003176
013493	00361	1	0	00003189
013493	00361	1	0	00003223

013493	00361	1	0	00003226
013493	00361	1	0	00003251
013493	00361	1	0	00003077
013493	00361	2	1	00003199
013493	00361	2	1	00001563
013493	00361	2	1	00003055
013493	00361	2	1	00003050
013493	00361	2	1	00001572

You may retrieve other side effect columns during this step, too, if your application requires additional information.

- Follow the process described in the FML module's [Finding DXID Descriptions and Synonyms](#) application to find each DXID value's **Primary Layman Name**.

GCN_SEQNO	SIDE	SIDE_FREQ	SIDE_SEV	DXID	DXID_SYN_DE SC100
013493	00361	0	0	00003063	Abnormal Trouble Sleeping
013493	00361	0	0	00003305	Nervous
013493	00361	1	0	00003133	Loss of Skin Color
013493	00361	1	0	00003059	Dizzy
013493	00361	1	0	00004389	Feeling Weak
013493	00361	1	0	00003092	Involuntary Quivering
013493	00361	1	0	00003153	Head Pain
013493	00361	1	0	00003176	Fast Heartbeat
013493	00361	1	0	00003189	Change in Pulse
013493	00361	1	0	00003223	Feel Like Throwing Up
013493	00361	1	0	00003226	Throwing Up
013493	00361	1	0	00003251	Difficult or Painful Urination
013493	00361	1	0	00003077	Excessive Sweating

013493	00361	2	1	00003199	Trouble Breathing
013493	00361	2	1	00001563	Slow Heartbeat
013493	00361	2	1	00003055	Fit
013493	00361	2	1	00003050	Hallucination
013493	00361	2	1	00001572	Abnormal Heart Rhythm

4. Use the Data Dictionary to find descriptions for the SIDE_FREQ and SIDE_SEV columns. For this example we display information to the end-user based on the following descriptions:

SIDE_FREQ	Description
0	Incidence more frequent
1	Incidence less frequent
2	Incidence rare or very rare

SIDE_SEV	Description
0	"less severe" if it is non-threatening (such as constipation)
1	"severe" if it may be life-threatening (such as agranulocytosis)

5. Display the results to the end-user. You may sort the results based on a variety of columns, including severity, frequency of occurrence, or name. The following results are grouped by frequency, then sorted in each frequency group first by severity, then alphabetically:

Side Effects for Pseudophedrine 30MG capsules:**More Frequent:**

Severe - (None)	Less Severe - Abnormal Trouble Sleeping - Nervous
--------------------	---

Less Frequent:

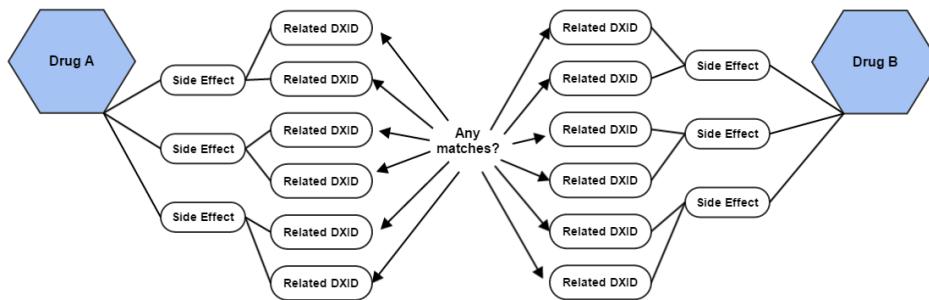
Severe - (None)	Less Severe - Change in Pulse - Difficult or Painful Urination - Dizzy - Excessive Sweating - Fast Heartbeat - Feel Like Throwing Up - Feeling Weak - Head Pain - Involuntary Quivering - Loss of Skin Color - Throwing Up
--------------------	---

Rare or Very Rare:

Severe - Abnormal Heart Rhythm - Fit - Hallucination - Slow Heartbeat - Trouble Breathing	Less Severe - (None)
--	-------------------------

Detecting Additive Side Effects

This application illustrates how to use SIDE to detect the chance of additive side effects by comparing the potential side effects of the drugs on a patient profile. Shared side effects run the risk of being additive in nature, and can be detrimental to the patient.



This example identifies the possible additive side effects between the following two medications based on their Clinical Formulation IDs ([GCN_SEQNO](#)):

- **Enalapril Maleate 20 mg tablet** (Clinical Formulation ID [GCN_SEQNO] 000386)
- **Methadone 10 mg tablet** (Clinical Formulation ID [GCN_SEQNO] 004240)

The application presents each side effect's **Primary Professional Name** to the end user.

1. Query the GCN_SEQNO column of the [SIDE GCN_SEQNO/Drug Side Effect Code Relation Table](#) (RSIDEGC0_GCNSEQNO_LINK) using each drug's Clinical Formulation ID (GCN_SEQNO) value to retrieve all of their related SIDE Side Effects Codes ([SIDE](#)).

GCN_SEQNO	SIDE
000386	00002
004240	00116

2. Query the SIDE column of the [SIDE Master Table](#) (RSIDEMA3_MSTR) using each SIDE code found in the previous step to retrieve their related FML Disease Identifiers ([DXID](#)). A sample of each Clinical Formulation ID's (GCN_SEQNO's) related DXIDs are displayed below (total results exceed 100 DXID codes).

GCN_SEQNO	SIDE	DXID
000386	00002	00000753
000386	00002	00000882
000386	00002	00000897
...

000386	00002	00012480
000386	00002	00013393
GCN_SEQNO	SIDE	DXID
004240	00116	00000937
004240	00116	00000989
004240	00116	00000993
...
004240	00116	00003378
004240	00116	00003387

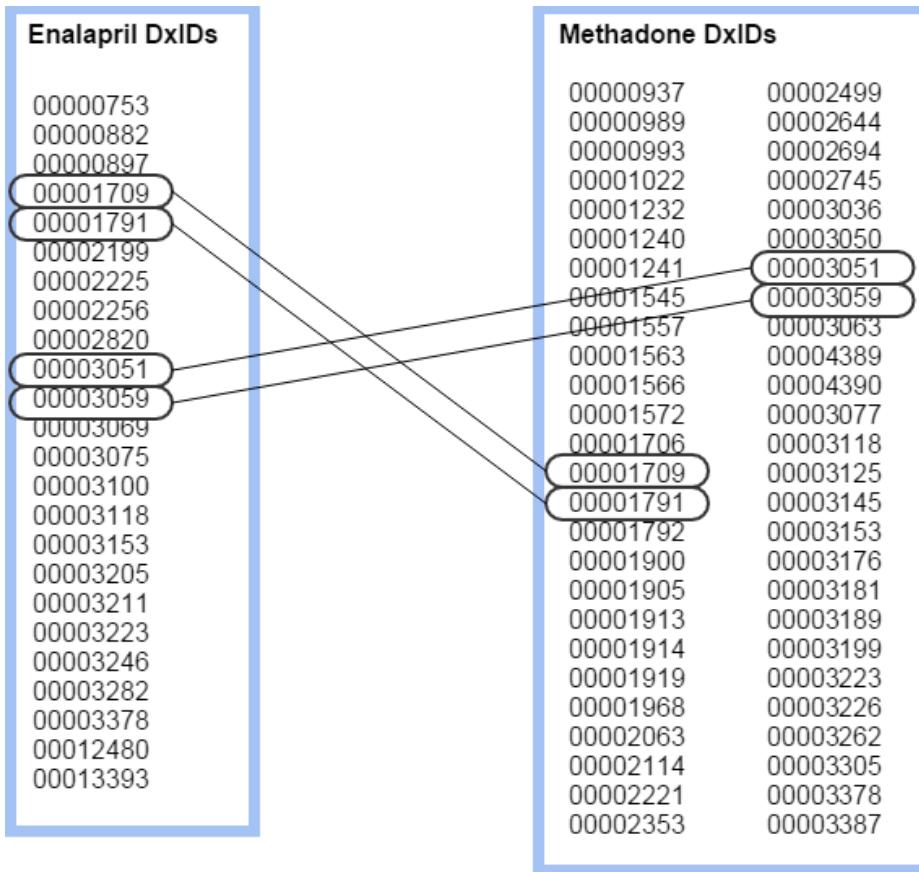
3. Query the FML Search DXID (**SEARCH_DXID**) column of the **FML Disease Identifier (DxID) Search Table (RFMLDSR0_DXID_SEARCH)** using each DXID code found in the previous step to retrieve their FML Related DXID (**RELATED_DXID**) and FML Navigation Code (**FML_NAV_CODE**) values. Additionally, specify an FML Clinical Module Code (**FML_CLIN_CODE**) of **02** for the Side Effects module. A sample of each Clinical Formulation ID's (GCN_SEQNO's) RELATED_DXIDs are displayed below.

GCN_SEQNO	SIDE	SEARCH_DXID	RELATED_DXID	FML_CLIN_CODE	FML_NAV_CODE
000386	00002	00000753	00000753	02	01
000386	00002	00000882	00000882	02	01
000386	00002	00000897	00000897	02	01
...
000386	00002	00012480	00012480	02	01
000386	00002	00013393	00013393	02	01

GCN_SEQNO	SIDE	SEARCH_DXID	RELATED_DXID	FML_CLIN_CODE	FML_NAV_CODE
004240	00116	00000937	00000937	02	01
004240	00116	00000989	00000989	02	01
004240	00116	00000993	00000993	02	01
...
004240	00116	00003378	00003378	02	01
004240	00116	00003387	00003387	02	01

You will use the FML_NAV_CODE when constructing alerts later in this process.

4. Compare the two sets of RELATED_RXIDs found in the previous step to identify the RXIDs that appear on both lists. Matching codes represent side effects that are associated to both products.



5. Follow the process described in the FML module's [Finding DXID Descriptions and Synonyms](#) application to find each matching RELATED_RXID value's **Primary Professional Name**.

RELATED_RXID	DXID_DESC100
00001709	Hypotension
00001791	Laryngeal Edema
00003051	Fainting
00003059	Dizziness

i If any DXID values had an FML_NAV_CODE of 02 or 03, be sure to keep track of which DXID code was the *search* code, and which was the *related* code. You will use both descriptions in the user-output string (see the next step for more details).

6. Construct a string to present to the end user that loosely follows these guidelines. These guidelines refer to

the two drugs as *Drug A* and *Drug B*. Note that FML_NAV_CODE values of 02 and 03 require you to use the SEARCH_DXID and RELATED_DXID values from step 3.

- **If FML_NAV_CODE = 01;** “[*Drug A*] and [*Drug B*] share the side effect [DXID_DESC100], which may be additive in nature.”
- **If FML_NAV_CODE = 02 or 03;** “[*Drug A*] and [*Drug B*] both exhibit side effects that relate to the condition [Related DXID_DESC100]. [*Drug A*] has a potential side effect of [*Drug A* SEARCH_DXID]. [*Drug B*] has a potential side effect of [*Drug B* SEARCH_DXID]. These two side effects are similar and therefore may be additive in nature.”

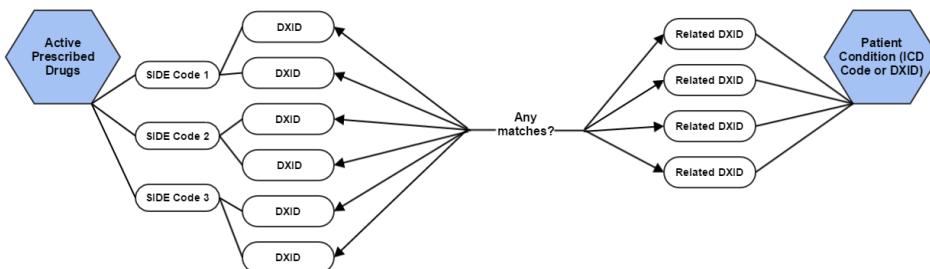
7. Display results to the end-user.

Enalapril Maleate 20 mg tablet and Methadone 10 mg tablet share the following four side effects which may be additive in nature.

- Dizziness
- Fainting
- Hypotension
- Laryngeal Edema

Comparing Side Effects to Current Patient Conditions

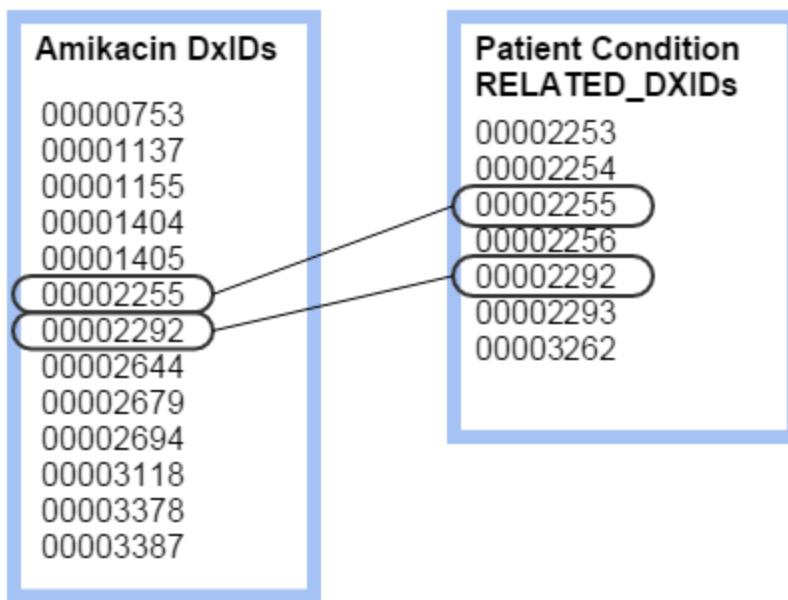
This application illustrates how to use SIDE to compare potential side effects to a patient's current conditions (codified on their profile as ICD Codes or DXIDs).



1. Query the GCN_SEQNO column of the [SIDE GCN_SEQNO/Drug Side Effect Code Relation Table](#) (RSIDEGC0_GCNSEQNO_LINK) using each drug's Clinical Formulation ID (GCN_SEQNO) value to retrieve all of their related SIDE Side Effects Codes ([SIDE](#)).

A drug may have more than one SIDE code. Some or all of these SIDE codes may be filtered out by the [FML ICD Search Exclusion Table](#) (RFMLISX0_ICD_SEARCH_EXCLUSION).
2. Query the SIDE column of the [SIDE Master Table](#) (RSIDEMA3_MSTR) using each SIDE code retrieved in step 1 to retrieve their related FML Disease Identifiers ([DXID](#)).
3. Query the Clinical Module Drug Group ([CLIN_DRUG_GROUP](#)) column of the [FML ICD Search Exclusion Table](#) (RFMLISX0_ICD_SEARCH_EXCLUSION) using each SIDE code retrieved in step 1 to retrieve ICD to DxID mappings with FML_CLIN_CODE=02 that are to be excluded from the query in the next step.
4. Query the Search ICD Code ([SEARCH_ICD_CD](#)) column of the [FML ICD Search Table](#) (RFMLISR1_ICD_SEARCH) using the ICD Code(s) from the patient's profile to retrieve their FML Related DXID ([RELATED_DXID](#)) and FML Navigation Code ([FML_NAV_CODE](#)) values. Additionally, specify an FML Clinical Module Code ([FML_CLIN_CODE](#)) of **02** for the Side Effects module. Exclude any retrieved ICD to DxID mapping records identified in step 3 from the results in this step.

If this step returns zero results, no potential side effects relate to the patient's current conditions.
5. Compare the DXIDs found in step 2 to the RELATED_DXIDs found in step 4 and identify the values that appear on both lists. Matching codes represent side effects that are associated to a prescribed drug and a patient condition.



6. Follow the process described in the FML module's [Finding DXID Descriptions and Synonyms](#) application to find each matching DXID value's **Primary Professional Name**.
7. Follow the process described in the [FML module's Retrieving an ICD Code's Alternate Description](#) application to find the SEARCH_ICD_CD's ICD Description ([ICD_DESC](#)).
8. Construct a string to present to the end user that loosely follows these guidelines based on each DXID's related FML_NAV_CODE found in step 3. You may present a warning for each side effect or prioritize them as you see fit.
 - **If FML_NAV_CODE = 01;** “[Prescribed Drug] has a potential side effect of [DXID_DESC100], which is clinically equivalent to the patient’s current condition of [ICD_DESC].”
 - **If FML_NAV_CODE = 02, 03, or 04;** “[Prescribed Drug] has a potential side effect of [DXID_DESC100], a condition related to the patient’s current condition of [ICD_DESC].”
9. Display the results to the end-user.

Amikacin 250mg/mL vial has a potential side effect of Renal Disease, a condition related to the patient's current condition of Acute Nephritis Not Otherwise Specified.

SIDE ERD and Technical Specifications

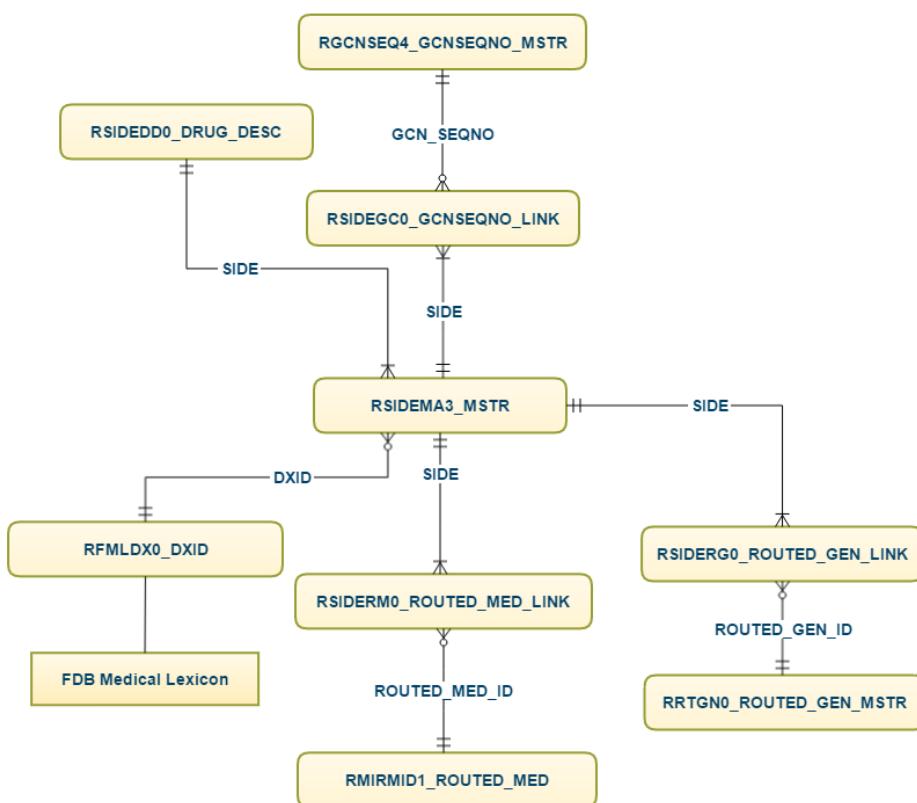
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module. These table names are listed below.

- SIDE Tables
- SIDE ERD

SIDE Tables

- SIDE GCN_SEQNO/Drug Side Effect Code Relation Table
- SIDE Master Table
- SIDE Routed Generic Table
- SIDE Routed Medication Table
- SIDE Side Effects Drug Description Table

SIDE ERD



SIDE GCN_SEQNO-Drug Side Effect Code Relation Table

Table Name	RSIDE_GC0_GCNSEQNO_LINK				
Revision Activity	original				
Purpose	Links a clinical formulation to a side effect.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
P	SIDE	SIDE Side Effects Code	N	5	9(5)

SIDE Master Table

Table Name	RSIDEMA3_MSTR				
Revision Activity	rev.03-14-2002				
Purpose	Provides attributes of a side effect.				

Key	Column Name	Column Description	Format	Length	Picture
P	SIDE	SIDE Side Effects Code	N	5	9(6)
P	SIDE_SN	SIDE Sequence Number	N	2	9(2)
F	FDBDX	First Databank Disease Code	AN	9	X(9)
	SIDE_FREQ	SIDE Frequency of Occurrence Code	AN	1	X(1)
	SIDE_SEV	SIDE Severity Code	AN	1	X(1)
	SIDE_VISCD	SIDE Visibility Code	AN	1	X(1)
	SIDE_LABCD	SIDE Lab/Diagnostic Test Code	AN	1	X(1)
	SIDE_PHYS	SIDE Physician Code	AN	1	X(1)
	SIDE_HYPER	SIDE Hypersensitivity Indicator	AN	1	X(1)
F	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)

SIDE Routed Generic Table

Table Name	RSIDERG0_ROUTED_GEN_LINK				
Revision Activity	add.09-24-2015				
Purpose	Links a routed generic to a side effect.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_GEN_ID	Routed Generic Identifier	N	8	9(8)
PF	SIDE	SIDE Side Effects Code	N	5	9(5)

SIDE Routed Medication Table

Table Name	RSIDERM0_ROUTED_MED_LINK				
Revision Activity	add.07-01-2002				
Purpose	Links a routed medication to a side effect.				

Key	Column Name	Column Description	Format	Length	Picture
PF	ROUTED_MED_ID	MED Routed Medication ID (Stable ID)	N	8	9(8)
PF	SIDE	SIDE Side Effects Code	N	5	9(5)

SIDE Side Effects Drug Description Table

Table Name	RSIDEDED0_DRUG_DESC				
Revision Activity	add.02-20-2002				
Purpose	Relates the Side Effects Code to the text description of the drug associated with it.				

Key	Column Name	Column Description	Format	Length	Picture
P	SIDE	SIDE Side Effects Code	N	5	9(5)
	SIDE_DRUG_DESC	SIDE Side Effects Drug Description	AN	100	X(100)

Counseling Messages Module (CMM) 1.0

- Counseling Messages Module Editorial Policies
- Applications
- ERD and Technical Specifications

 In this module, U.S. data and external identifiers are used in the examples.

Counseling Messages Module Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in the creation of this module are provided in the following sections:

- Overview
- Definitions
- Concepts
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- References

Overview

The Counseling Messages Module (CMM) is intended to be used as an aid for the healthcare professional involved in providing counseling to patients about the proper use, side effects, and other important information about the medicine they receive. It also serves as an educational tool for the patient.

- ① CMM must not be used as a substitute for Patient Education Module™ (PEM™) monographs when providing medication counseling to patients. CMM, like the PEM module, is not intended to be and must not be used as, a substitute for oral medication counseling. CMM provides "counseling tips" for drug products, but is not comprehensive.
- ① Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. CMM associates clinical information at the Clinical Formulation ID ([GCN_SEQNO](#)) level. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module may also be defined.

CMMC

The Counseling Messages Message Codes (**CMMC**) are associated with a Clinical Formulation ID ([GCN_SEQNO](#)) and each code references a set of text messages consisting of a one- or two-line professional message and a one- or two-line patient message.

Concepts

This section describes concepts important for understanding the Counseling Messages Module.

Counseling Messages Message Code

The Counseling Messages Module consists of a link between a drug record and a list of up to eight Counseling Messages Message Codes. The Counseling Messages Message Code values are stored from left to right and are not sorted (codes are stored in order of importance, so the left-most code is considered to be relatively more important than the code on its right, and so forth).

Using the Counseling Messages Message Codes from a particular drug, the text of the message is determined by searching the Counseling Messages Text Table for each Counseling Messages Message Code. You can display all messages at the terminal, or you can display the professional messages and print the patient messages with the prescription label. You can also do a combination of both of these options. All patient messages have a corresponding professional message. However, messages that are only appropriate for the professional do not have a corresponding patient message.

Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

1. CMM includes CMM message sets created for specific ingredients and routes of administration and, as necessary, specific dosage forms and ingredient strengths. CMM message sets are primarily based on high-volume-use ambulatory care drug products.
2. CMM does not include CMM message sets covering medical supplies or devices, bulk chemical products, oral/enteral nutritional supplements such as Ensure™, or homeopathic remedies. CMM does not include CMM message sets related to drug products that are administered and monitored solely by a healthcare professional (as opposed to a patient or lay caregiver). An example would be general anesthetic gases or general surgical parenteral products.
3. CMM message sets consist of the following:
Messages are provided for both the healthcare professional and the patient. Messages for the healthcare professional are more technical and sometimes more explanatory. Each pair of messages (the professional and corresponding patient message) is rated according to the importance of the information to the patient. Therefore, all messages for the patient (which include the corresponding professional messages) are rated first, and then if applicable, the stand-alone professional messages follow. At times, one message might be equally as important as the next. When this occurs, the messages are arbitrarily assigned rank. There are up to eight message pairs within a CMM message set.

CMM messages are available in the following languages: English, Spanish, and French.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

Counseling Messages Module Message Text Table

This table contains all professional and patient counseling messages for English. English is included in the base product but French and Spanish languages are premium modules and must be ordered separately.

CMMC

A four-byte numeric value that associates a counseling message to both the English language professional message and patient message text. The other languages modules have a similar field in their message text table. The CMMCF field is for the French messages and the CMMCS is for Spanish.

CMMC_RN

A one-character numeric value that identifies the priority (1,2,3, and so on) of a specific message in the CMM message set attached to a given Clinical Formulation ID (GCN_SEQNO). It is used to determine message display order.

CMRPH1(2)

Two fields of 34 characters each that contain the professional message text.

CMPAT1(2)

Two fields of 25 characters each that contain the patient message text.

GCN_SEQNO/Counseling Messages Module Counseling Message Relation Table

This table links a clinical formulation to an associated counseling message by the CMMC.

Rule Sets

This section provides rules that the clinical team uses in regards to creating the module's data, both general rules and rules specific to data elements.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

As the Patient Education Module (PEM) serves as the source information for authoring the CMM Module, the following from the PEM editorial policy applies to CMM:

- The Action Plan for the Provision of Useful Prescription Medication Information (aka Keystone Guidelines) and the 2006 Food and Drug Administration (FDA) Consumer Medication Information (CMI) Guidance document form the industry guidelines for authoring and editing patient education monographs. PEM editorial policy and work instructions reflect the recommendations within these documents.
- Clinical Sources.

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained

in the module.

1. CMMs are linked to clinical formulations meeting CMM inclusion criteria and further linked to active Canadian Drug Identification Numbers (DIN) or those that have been inactive less than 2 years.
2. Clinical formulations consisting of products without New Drug Application (NDA), Abbreviated New Drug Application (ANDA), Biologic License Application (BLA), or an Over-the-Counter (OTC) Monograph are excluded.
3. CMMs are linked to ingredient(s), route of administration, dosage form, and ingredient strength (that is, a clinical formulation).
4. CMMs are deleted and stored in an archive database if all attached products (DINs) become greater than 2 years obsolete, or the products have been officially withdrawn from the U.S. and Canadian markets for greater than one year.
5. Spanish and French CMMs utilize the same Counseling Messages Message Code numeric value as the corresponding English CMM.

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health Canada are reviewed and if such information meets inclusion criteria, CMM data is updated on a weekly basis.
- Ad hoc customer or manufacturer clinical inquiries are reviewed daily and the database is updated weekly as appropriate.
- FDA MedWatch Safety Alerts are reviewed and if such information meets inclusion criteria, CMM data is updated on a weekly basis.
- FDA MedWatch Safety Data - monthly professional labeling changes are reviewed and if such information meets inclusion criteria, CMM data is updated on a monthly basis.

Internal Triggers for Clinical Review

The internal triggers that prompt the clinical editors to add or review data are the following:

- New clinical formulations are reviewed against the CMM inclusion criteria on a daily basis. CMMs are authored and attached to clinical formulations meeting inclusion criteria.
- Changes to existing clinical formulations that result in potential CMM linkage changes are reviewed on a daily basis.

References

This section lists sources used by FDB to compile the information contained in the module. The following

references contain bibliographic information about the sources used by the clinical pharmacist editorial staff to author the information contained in the module.

FDB primarily utilizes the following reference sources for the CMM module:

- Manufacturer's professional prescribing information.
- Briggs G. *Drugs in Pregnancy and Lactation*.
- Additional pregnancy and lactation references that may be consulted include NLM's LACTMED database, Hale's *Medications and Mothers' Milk*, and the Organization of Teratology Information Specialists (OTIS)
- Food and Drug Administration. *MedWatch: The FDA Safety Information and Adverse Event Reporting Program*. Available at: <http://www.fda.gov/medwatch>.
- Health Canada. *Safety Alerts*. Available at: <http://healthycanadians.gc.ca/ra/dd-mmm-eng.php>.
- Medical Economics Staff. *Physicians' Desk Reference*.
- Published by authority of the Board of Directors of the American Society of Health-System Pharmacists. *American Hospital Formulary Service (AHFS) Drug Information*.

The following are references for the FDB approved set of herbal and dietary supplements:

- Natural Medicines Comprehensive Database - Pharmacists Letter. Available at: [www.naturaldatabase.com/\(S\(m5kdfcfyw5lhx355dv2ydgir\)\)/home.aspx?cs=&s=ND](http://www.naturaldatabase.com/(S(m5kdfcfyw5lhx355dv2ydgir))/home.aspx?cs=&s=ND)
- NIH: National Center for Complementary and Integrative Health: <https://nccih.nih.gov/>

Applications

This section provides information about the practical application of data contained in this module.

Sample Data

Sample Data

The following examples illustrate the capabilities of the Counseling Message Module. In each example the Counseling Messages Message Codes (**CMMC**) are retrieved from the drug record, and then the related text messages are retrieved, sorted by the Counseling Messages Module Code's Relative Importance Number (**CMMC_RN**), and displayed as shown on the following pages.

- Example 1
- Example 2

Example 1

DIN	00313580
Label Name	DIAZEPAM 5MG TABLET
Generic Name	DIAZEPAM
GCN_SEQNO	003768
GCN	14222
CMMCs	1110, 1554, 1367, 1198, 1670, 1718, 1395, 1916

CMMC	CMMC_RN	Professional Message (CMRPH1 and CMRPH2)	Patient Message (CMPAT1 and CMPAT2)
1110	1	Not recommended during pregnancy or breast feeding	Do not take while breast feeding or when pregnant
1554	2	May cause drowsiness or dizziness Use caution driving	May make you drowsy or dizzy. Drive with caution
1367	3	Avoid taking with other CNS depressant drugs or alcohol	Avoid alcohol/other drugs that make you sleepy
1198	4	Instruct not to coadminister with grapefruit or grapefruit juice	Avoid taking grapefruit juice/grapefruit with med
1670	5	Check with doctor before increasing dose or frequency	Call Dr before increasing dose or frequency
1718	6	Discuss gradual dose reduction with MD before stopping medication	MD may need to reduce the dose before you stop it
1395	7	Many drug-drug interactions possible with this drug	Review all drugs you are taking with your doctor

1916	8	Depression or thoughts of suicide should be reported to MD ASAP	Immediately report to MD any thoughts of suicide
------	---	---	--

Example 2

DIN	02157187
Label Name	POLYMOX 250MG/5ML SUSP
Generic Name	AMOXICILLIN TRIHYDRATE
GCN_SEQNO	008998
GCN	39683
CMMCs	0282, 0857, 0320, 1688, 0020, 0052, 1689, 1687

CMMC	CMMC_RN	Professional Message (CMRPH1 and CMRPH2)	Patient Message (CMPAT1 and CMPAT2)
0282	1	Do not use if allergic to penicillins	Do not take if you are allergic to penicillin
0857	2	Tell doctor what medicines you are taking	Tell doctor what medicines you are taking
0320	3	Shake well before using	Shake well before using
1688	4	Discard unused portion after 14 days	Discard unused portion after 14 days
0020	5	Must complete full course of therapy	Must use for full length of treatment
0052	6	Space doses evenly	Space doses evenly throughout the day
1689	7	Oral or vaginal yeast infections may occur due to changes in flora	Watch for oral thrush or vaginal yeast infections
1687	8	Call doctor if rash or severe diarrhea occur	Call DR if rash or severe diarrhea occur

CMM ERD and Technical Specifications

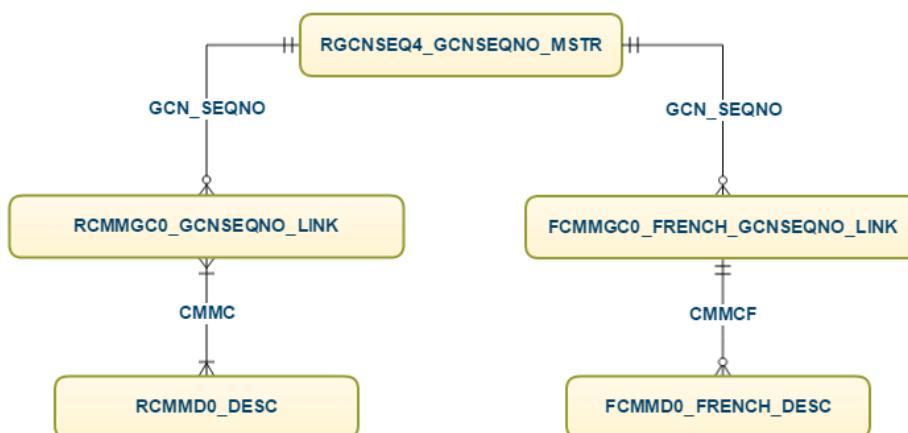
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Counseling Messages Tables
- Counseling Messages ERD

Counseling Messages Tables

- Counseling Message Module Message Text Table
- GCN_SEQNO/Counseling Message Module Counseling Message Relation Table
- Counseling Message Module French Language Message Text Table
- GCN_SEQNO/Counseling Message Module French Language Counseling Message Relation Table

Counseling Messages ERD



Counseling Message Module Message Text Table

Table Name	RCMMD0_DESC
Revision Activity	add.01-22-1993
Purpose	Associates a counseling message to both the professional message and patient message text.

Key	Column Name	Column Description	Format	Length	Picture
P	CMMC	Counseling Messages Message Code	N	4	9(4)
	CMRPH1	Counseling Messages Professional Text Column 1	AN	34	X(34)
	CMRPH2	Counseling Messages Professional Text Column 2	AN	34	X(34)
	CMPAT1	Counseling Messages Patient Text Column 1	AN	25	X(25)
	CMPAT2	Counseling Messages Patient Text Column 2	AN	25	X(25)

GCN_SEQNO Counseling Message Module Counseling Message Relation Table

Table Name	RCMMGC0_GCNSEQNO_LINK				
Revision Activity	add.01-22-1993				
Purpose	Links a clinical formulation to an associated counseling message.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	CMMC	Counseling Messages Message Code	N	4	9(4)
	CMMC_RN	Counseling Messages Module Code's Relative Importance Number	N	1	9(1)

SNOMED CT Module

- SNOMED CT Module Editorial Policies
- Applications
- ERD and Technical Specifications

SNOMED CT Module Editorial Policies

- Overview
- Definitions
- Problem/Reactions (SNOMED CT)
- Maintenance
- Resources

Overview

The SNOMED CT Module extends FDB MedKnowledge vocabulary concepts to recognize standardized allergy and disease vocabularies in order to support the portability of patient disease and allergy history between disparate health information systems. The SNOMED CT module also helps facilitate clinical decision support for drug-disease contraindication screening.

FDB provides SNOMED CT concepts, terms, relationships, cross-references to FDB disease identifiers, and value sets for advanced allergy and intolerance documentation purposes. These value sets include:

- Problem Severities
- Allergy/Adverse Event Types
- Reactions
- Food Allergens
- Environmental Agents

 FDB sources SNOMED CT content from the U.S. National Library of Medicine (NLM). Example data contained in this module may include references to this NLM source material.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module are also be defined.

Child SNOMED CT Concept Identifier

A child concept is a more specific SNOMED CT value of a parent (broader) concept. For example, Felty's syndrome is a child concept of the parent concept Inflammatory disorder.

Clinical Decision Support

An interactive support system designed to assist physicians and other health professionals with decision making tasks, such as determining diagnosis of patient data.

Clinical Quality Measures (CQM)

CQMs are tools that measure and track the quality of healthcare services provided, including health outcomes,

clinical processes, patient safety, efficient use of healthcare resources, care coordination, patient engagements, population and public health, and clinical guidelines.

Concept Identifier

Identifier associated to a collection of vocabulary terms that all have the same meaning (for example, 3841003 is the SNOMED CT concept that spans a fully specified name of hypertensive disorder, systemic arterial [disorder] with synonym terms of hypertension and high blood pressure).

Continuity of Care Document (CCD)

An electronic document exchange standard for sharing patient summary information about current and past health status.

Derived Relationship

Derived relationships are created according to NLM editorial policy using the FDB Hierarchical Ingredient Code Description and the Clinical Formulation ID.

Electronic Health Record (EHR)

A systematic collection of electronic health information about individual patients or populations that is maintained within an institution and is capable of being shared across different health care settings.

Electronic Medical Record (EMR)

An electronic patient record created in hospitals and ambulatory environments that can serve as a data source for the EHR.

Electronic Measure (eMeasure)

Standardized performance measures in an electronic format.

Electronic Prescription (e-prescription)

A computer-generated prescription created by a healthcare provider and sent directly to a pharmacy.

Environmental Allergen Agent

A chemical or biological substance (e.g., pollen, animal dander, house dust mite proteins) present in the living or working environment that induces an allergic state or reaction, characterized by hypersensitivity-like reactions (e.g., rash, shortness of breath).

Medication Reconciliation

A formal process in which healthcare providers partner with patients and their families to ensure accurate and complete medication information transfer at interfaces of care including admission and discharge from a hospital or changes in care setting, service, or level of care.

National Library of Medicine (NLM)

A U.S. biomedical library and part of the National Institutes of Health.

Parent SNOMED CT Concept Identifier

A parent concept is a broader SNOMED CT value of a child (specific) concept. For example, Inflammatory disorder is a parent concept with a child concept of Felty's syndrome.

Personal Health Record (PHR)

A health record in which data and information related to the care of a patient is maintained by the patient.

Persistent Identifier

A concept that is managed and updated over a defined time period to maintain the most current data available for a given concept.

SNOMED CT Fully Specified Term

A unique term used by clinicians to describe a concept and clarify its meaning. The Fully Specified Term is not a commonly used term or natural phrase and addresses the concept at a greater level of specificity than the Preferred Term.

SNOMED CT Problem Severity

An attribute used to subclass a Clinical finding or concept that is defined relative to the expected degree of intensity or hazard of the Clinical finding being qualified.

SNOMED CT Preferred Term

A common word or phrase used by clinicians to name a concept in natural language. Each concept has only one preferred term.

SNOMED CT Synonym Term

A term, other than the Fully Specified Term or Preferred Term, that can be used to represent a concept in a particular language or dialect.

SNOMED CT Relationship

Each concept in SNOMED CT is logically defined through its link(s) (relationships) to other concepts. Every active SNOMED CT concept (except the SNOMED CT Concept Root concept) has at least one “is a” relationship to a parent concept.

Stable Identifier

Numeric identifiers that will always represent a single concept, ensuring stability in customer data. For example, the ingredient code (HIC_SEQN) for diphenhydramine HCl is 3369, and this number will always represent only diphenhydramine HCL.

Systematized Nomenclature of Medicine—Clinical Terms (SNOMED CT®)

Comprehensive clinical terminology maintained by the International Health Terminology Standard Development Organization (IHTSDO).

Term

Unique string of text (for example hypertension, high blood pressure).

Unified Medical Language System® (UMLS®) Metathesaurus®

The Metathesaurus is a very large, multi-purpose, and multi-lingual vocabulary database that contains information about biomedical and health-related concepts, their various names, and the relationships among them. See <http://www.nlm.nih.gov/pubs/factsheets/umlsmeta.html> for more information.

Value set

A vocabulary subset comprised of a collection of concept identifiers and terms that is used for a specified purpose.

Vocabulary

A collection of concept identifiers and terms that are published together (for example, SNOMED CT is a vocabulary).

Problem/Reactions (SNOMED CT)

SNOMED CT descriptive content from the National Library of Medicine (NLM) and cross-references to FDB Disease Identifiers (DXID) which support drug-disease contraindication checking within the SNOMED CT Module are provided in this domain. The domain is composed of two sets of data:

- Best fit cross-mappings of FDB DXID concepts to post-coordinated SNOMED CT values and Reverse mappings from SNOMED CT to DXID values to support access to FDB disease based knowledge
- National Library of Medicine SNOMED CT Release Format 2 (RF2) tables for concepts, descriptions, relationships, and language

SNOMED CT is a comprehensive healthcare terminology maintained and distributed by the International Health Terminology Standards Development Organization (IHTSDO). It has emerged as a problem list vocabulary standard for the exchange of patient problems within and between health information systems and clinical quality measures within systems that are certified to satisfy Stage 2 meaningful use requirements. The NLM is the authoritative U.S. distribution source of SNOMED CT, and FDB redistributes the Release Format 2 (RF2) of the US Edition of SNOMED CT to provide descriptions for cross-referenced SNOMED CT values and as a convenience for our customers. Specifically, the following types of SNOMED CT files are redistributed:

- Concept
- Descriptions
- Relationships
- Language

Implementation of FDB's comprehensive mappings between SNOMED CT and DXID enables drug-disease contraindication screening of prospective medications directly against the SNOMED CT based problem list.

Access to SNOMED CT to DXID mappings will be supported within the existing tables:

- SNOMED CT to DXID Search Exclusion
- SNOMED CT to DXID Best Fit
- SNOMED CT to DXID Best Fit History

Best fit mappings:

- Are context agnostic (i.e. the translation to SNOMED-CT is not specific to a context of indications, side effects or drug-disease).
- One active DXID will span one-to-many SNOMED CT values in the context of “best fit.” Most frequently, a single “primary” SNOMED CT value will be listed; an additional value will be listed when in the judgment of the clinical team multiple SNOMED CT values should be presented to the clinician as candidate patient problems for entry in the patient record.

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

On a semi-annual basis, FDB updates the SNOMED CT Module with the most current SNOMED CT data.

Resources

This section lists sources used by First Databank to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (e.g., published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- National Library of Medicine: Unified Medical Language System. Available at:
<http://www.nlm.nih.gov/research/umls/>
- National Library of Medicine (NLM). Value Set Authority Center (VSAC). Available at:
<https://vsac.nlm.nih.gov/>
- SNOMED CT User Guide. Available at
http://ihtsdo.org/fileadmin/user_upload/doc/download/doc_UserGuide_Current-en-US_INT_20130731.pdf

SNOMED CT Applications

This section provides information about the practical application of data contained in this module.

Retrieving an Active SNOMED CT Clinical Finding Using the Term Description Field

Retrieving an Active SNOMED CT Description for a Given SNOMED CT Description Identifier include

Retrieving an Active SNOMED CT Description for a Given SNOMED CT Concept Identifier include

Retrieving Active Child SNOMED CT Concept Identifiers

Retrieving Active Parent SNOMED CT Concept Identifiers

Retrieving a Single Description for a SNOMED CT Concept Identifier

Retrieving a SNOMED CT Concept Identifier's Associated DXIDs

Retrieving an Active SNOMED CT Clinical Finding Using the Term Description Field

This application illustrates how to retrieve the SNOMED CT Concept Description Identifier for a clinical finding by using the term description. (A clinical finding is the SNOMED CT hierarchy concept representing clinical observation, assessment, or judgment.)

-  FDB sources SNOMED CT content from the U.S. National Library of Medicine (NLM). Example data contained in this application utilizes references to NLM source materials.

- Retrieve the NLM Concept Identifier ([NLM_CONCEPT_ID](#)), the NLM Description Identifier ([NLM_DESCRIPTION_ID](#)), NLM Type Identifier ([NLM_TYPE_ID](#)) and NLM Terminology ([NLM_TERM](#)) values from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where the NLM Terminology ([NLM_TERM](#)) value contains the term description requested. Select the appropriate SNOMED CT Concept Description Identifier for the clinical finding from the list provided.

Example—Retrieving an Active SNOMED CT Clinical Finding Using the Term Description Field

For purposes of demonstrating this application, the following scenario is used: A provider is adding an adverse drug interaction to a patient's medical record and needs to identify an applicable SNOMED CT Description Identifier representing the reaction.

1. Retrieve the NLM Concept Identifier ([NLM_CONCEPT_ID](#)) value from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:
 - The NLM Terminology ([NLM_TERM](#)) contains the text *Adverse Drug Interaction*.
 - The Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (*active*).
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) can be optionally equal to either:
 - [900000000000003001](#) (fully specified name)
 - [9000000000000013009](#) (synonym)
2. Select the corresponding NLM Description Identifier ([NLM_DESCRIPTION_ID](#)) for the appropriate clinical finding.

-  Alternatively, the NLM Concept Identifier ([NLM_CONCEPT_ID](#)) can be selected for documentation.

Retrieving an Active SNOMED CT Description for a Given SNOMED CT Description Identifier

This application illustrates how to retrieve the SNOMED CT description for a given SNOMED CT Description Identifier.

- Retrieve the NLM Description Identifier ([NLM_DESCRIPTION_ID](#)) and NLM Terminology ([NLM_TERM](#)) values from the [SNOMED CT Concept Type Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where the NLM Description Identifier ([NLM_DESCRIPTION_ID](#)) value equals the given SNOMED CT Description Identifier.

Example—Retrieving a SNOMED CT Description for a SNOMED CT Description Identifier

For purposes of demonstrating this application, the following scenario is used: A provider received SNOMED CT Description Identifier 64172013 and wants to determine what it represents.

- Retrieve the NLM Terminology ([NLM_TERM](#)) value from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:
 - The NLM Description Identifier ([NLM_DESCRIPTION_ID](#)) value equals the given SNOMED CT Description Identifier value of 64172013.
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (*active*).

NLM_DESCRIPTION_ID	NLM_ACTIVE_IND	NLM_TERM
64172013	1	High blood pressure

Retrieving an Active SNOMED CT Description for a Given SNOMED CT Concept Identifier

This application illustrates how to retrieve a SNOMED CT description using the SNOMED CT Concept Identifier.

1. Retrieve the NLM Concept Identifier (**NLM_CONCEPT_ID**), NLM Description Identifier (**NLM_DESCRIPTION_ID**), and NLM Terminology (**NLM_TERM**) values from the **NLM SNOMED CT Concept Description Table** (RIMKSD0_NLM_SCT_CONCEPT_DESC) where the NLM Concept Identifier (**NLM_CONCEPT_ID**) value equals the given SNOMED CT Concept Identifier.
2. Select the appropriate SNOMED CT description from the NLM Terminology (**NLM_TERM**) value(s) retrieved.

Example—Retrieving a SNOMED CT Description for a SNOMED CT Concept Identifier

For purposes of demonstrating this application, the following scenario is used: A provider received SNOMED CT Concept Identifier 38341003 and wants the fully specified term it represents.

1. Retrieve the NLM Description Identifier (**NLM_DESCRIPTION_ID**), and NLM Terminology (**NLM_TERM**) values from the **NLM SNOMED CT Concept Description Table** (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:
 - The NLM Concept Identifier (**NLM_CONCEPT_ID**) value equals the given SNOMED CT Concept Identifier value of 38341003.
 - The Active Indicator (**NLM_ACTIVE_IND**) is optionally set to 1 (*active*).
 - The NLM Type Identifier (**NLM_TYPE_ID**) is optionally set to either:
 - 90000000000003001 (fully specified name)
 - 90000000000013009 (synonym)

NLM_CONCEPT_ID	NLM_ACTIVE_IND	NLM_TYPE_ID	NLM_DESCRIPTION_ID	NLM_TERM
38341003	1	900000000000003001	1202949014	Hypertensive disorder, systemic arterial (disorder)
38341003	0	900000000000003001	773296011	Raised blood pressure (disorder)
38341003	1	9000000000000013009	1215744012	Hypertensive disorder
38341003	1	9000000000000013009	490276019	Raised blood pressure
38341003	1	9000000000000013009	64176011	Hypertension
38341003	0	9000000000000013009	64168014	Hypertensive disease

38341003	1	90000000000000013009	64171018	Hyperpiesis
38341003	1	90000000000000013009	64172013	High blood pressure

2. Select the appropriate SNOMED CT description from the NLM Terminology (**NLM_TERM**) values retrieved. In this example, the only active fully specified name is *Hypertensive disorder, systemic arterial (disorder)*.

NLM_CONCEPT_ID	NLM_ACTIVE_IND	NLM_TYPE_ID	NLM_DESCRIPTION_ID	NLM_TERM
38341003	1	9000000000000003001	1202949014	Hypertensive disorder, systemic arterial (disorder)

Retrieving Active Child SNOMED CT Concept Identifiers

This application illustrates how to retrieve the child SNOMED CT Concept Identifier for a given parent SNOMED CT Concept Identifier. Each concept in SNOMED CT is logically defined through its relationships to other concepts. A concept can have more than one “is a” relationship to other concepts.

1. Retrieve the NLM Source Identifier ([NLM_SOURCE_ID](#)) and NLM Destination Identifier ([NLM_DESTINATION_ID](#)) values from the [NLM SNOMED CT Relationship Table](#) (RIMKSRS0_NLM_SCT_RELATIONSHIP) where:
 - The NLM Destination Identifier ([NLM_DESTINATION_ID](#)) value equals the parent SNOMED CT Concept Identifier value.
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) equals 116680003, representing the “is a” relationship.
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) equals 1 (active).
2. Retrieve the NLM Term ([NLM_TERM](#)) from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where the NLM Concept Identifier ([NLM_CONCEPT_ID](#)) equals the NLM Source Identifier ([NLM_SOURCE_ID](#)) retrieved in the previous step. See [Retrieving an Active SNOMED CT Description for a Given SNOMED CT Concept Identifier](#) for additional instruction about retrieving the description.

Example—Retrieve an Active Child SNOMED CT Concept Identifier

For purposes of demonstrating this application, the following scenario is used: A provider received a SNOMED CT Concept Identifier for pneumonia (233604007) and wants to obtain a child SNOMED CT Concept Identifier.

This example represents three levels from the SNOMED CT Concept Identifier provided. Additional relationships may exist.

Part 1: Retrieve a Child SNOMED CT Concept Identifier

1. Retrieve the NLM Source Identifier ([NLM_SOURCE_ID](#)) value from the [NLM SNOMED CT Relationship Table](#) (RIMKSRS0_NLM_SCT_RELATIONSHIP) where:
 - The NLM Destination Identifier ([NLM_DESTINATION_ID](#)) column equals 233604007 (researched SNOMED CT Concept Identifier).
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) value equals 116680003 (“is a” relationship).
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) equals 1 (active).

NLM_DESTINATION_ID	NLM_TYPE_ID	NLM_ACTIVE_IND	NLM_SOURCE_ID
233604007	116680003	1	41207000
233604007	116680003	1	274103002
233604007	116680003	1	312342009
233604007	116680003	1	385093006

The example above shows a partial list of the results of this step.

2. Retrieve the NLM Term (**NLM_TERM**) from the **NLM SNOMED CT Concept Description Table** (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:

- The NLM Type Identifier (**NLM_TYPE_ID**) equals 9000000000000003001 (fully specified named terms).
- The NLM Concept Identifier (**NLM_CONCEPT_ID**) equals the NLM Source Identifier (**NLM_SOURCE_ID**) retrieved in the previous step.

NLM_TYPE_ID	NLM_CONCEPT_ID	NLM_TERM
9000000000000003001	41207000	Adenoviral pneumonia (disorder)
9000000000000003001	274103002	Pneumonia NOS (disorder)
9000000000000003001	312342009	Infective pneumonia (disorder)

3. Select the appropriate NLM CONCEPT Identifier (**NLM_CONCEPT_ID**) from the selection provided in step 2. For purposes of this application, NLM Concept Identifier 312342009 (*infective pneumonia [disorder]*) will be used.

NLM_TYPE_ID	NLM_CONCEPT_ID	NLM_TERM
9000000000000003001	312342009	Infective pneumonia (disorder)

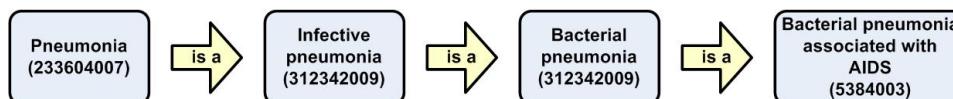
Part 2: Substitute Values to Retrieve Child Concept Identifier

- Repeat steps 1 – 3 of Part 1, substituting the NLM Destination Identifier (**NLM_DESTINATION_ID**) value with the newly-retrieved child SNOMED CT Concept Identifier (**NLM_CONCEPT_ID**) value selected (312342009) until the specific concept is identified or no child values remain. Results provide a collection of related, more specific SNOMED CT values.

NLM_SOURCE_ID	NLM_DESTINATION_ID	NLM_TERM
53084003	312342009	Bacterial pneumonia (disorder)

NLM_SOURCE_ID	NLM_DESTINATION_ID	NLM_TERM
420544002	53084003	Bacterial pneumonia associated with AIDS (disorder)

The following diagram illustrates the relationship of these example values:



Retrieving Active Parent SNOMED CT Concept Identifiers

This application illustrates how to retrieve the child SNOMED CT Concept Identifier for a given parent SNOMED CT Concept Identifier. Each concept in SNOMED CT is logically defined through its relationships to other concepts. A concept can have more than one “is a” relationship to other concepts.

1. Retrieve the NLM Source Identifier ([NLM_SOURCE_ID](#)) and NLM Destination Identifier ([NLM_DESTINATION_ID](#)) values from the [NLM SNOMED CT Relationship Table](#) (RIMKSRS0_NLM_SCT_RELATIONSHIP) where:
 - The NLM Destination Identifier ([NLM_DESTINATION_ID](#)) value equals the parent SNOMED CT Concept Identifier value.
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) equals 116680003, representing the “is a” relationship.
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) equals 1 (active).
2. Retrieve the NLM Term ([NLM_TERM](#)) from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where the NLM Concept Identifier ([NLM_CONCEPT_ID](#)) equals the NLM Source Identifier ([NLM_SOURCE_ID](#)) retrieved in the previous step. See [Retrieving an Active SNOMED CT Description for a Given SNOMED CT Concept Identifier](#) for additional instruction about retrieving the description.

Example—Retrieve an Active Parent SNOMED CT Concept Identifier

For purposes of demonstrating this application, the following scenario is used: A physician received a SNOMED CT Concept Identifier for Felty’s syndrome (57160007) and wants to obtain an associated parent SNOMED CT Concept Identifier.

This example represents three levels from the SNOMED CT Concept Identifier provided. Additional relationships may exist.

Part 1: Retrieve the parent SNOMED CT Identifier(s)

1. Retrieve the NLM Destination Identifier ([NLM_DESTINATION_ID](#)) from the [NLM SNOMED CT Relationship Table](#) (RIMKSRS0_NLM_SCT_RELATIONSHIP) where:
 - The NLM Source Identifier ([NLM_SOURCE_ID](#)) value equals 57160007 (the child SNOMED Concept Identifier).
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) value equals 116680003 (the “is a” relationship).
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (active).

NLM_SOURCE_ID	NLM_TYPE_ID	NLM_ACTIVE_ID	NLM_DESTINATION_ID
57160007	116680003	1	69896004

2. Retrieve the NLM Term ([NLM_TERM](#)) value from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) value equals 90000000000003001 (fully specified

name).

- The NLM Concept Identifier (**NLM_CONCEPT_ID**) value equals the NLM Destination Identifier (**NLM_DESTINATION_ID**) value retrieved in the previous step.

NLM_TYPE_ID	NLM_CONCEPT_ID	NLM_TERM
9000000000000003001	69896004	Rheumatoid arthritis (disorder)

- Select the appropriate SNOMED CONCEPT Identifier (**NLM_CONCEPT_ID**) from the results provided in step 2.

NLM_TYPE_ID	NLM_CONCEPT_ID	NLM_TERM
9000000000000003001	69896004	Rheumatoid arthritis (disorder)

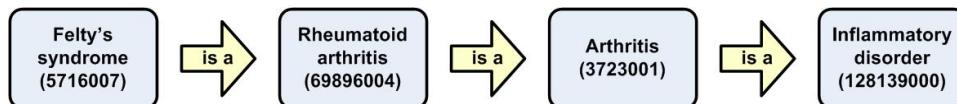
Part 2: Substitute Values to Retrieve Parent Concept Identifier

- Repeat steps 1 – 3 from Part 1, substituting the NLM Source Identifier (**NLM_SOURCE_ID**) value with the newly-retrieved parent SNOMED CT Concept Identifier (**NLM_CONCEPT_ID**) value selected until the specific concept is identified or no parent values remain. Results provide a collection of related, less specific SNOMED CT values.

NLM_SOURCE_ID	NLM_DESTINATION_ID	NLM_TERM
69896004	85828009	Autoimmune disease (disorder)
69896004	53338001	Arthropathy associated with a hypersensitivity reaction (disorder)
69896004	3723001	Arthritis (disorder)

NLM_SOURCE_ID	NLM_DESTINATION_ID	NLM_TERM
3723001	128139000	Inflammatory disorder (disorder)

The following diagram illustrates the relationship of these example values:



Retrieving a Single Description for a SNOMED CT Concept Identifier

This application illustrates how to retrieve a single preferred concept term description for an active SNOMED CT Concept Identifier.

1. Retrieve the NLM Concept Identifier ([NLM_CONCEPT_ID](#)) and the NLM Effective Time ([NLM_EFFECTIVE_TIME](#)) from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (*active*).
 - The NLM Effective Time ([NLM_EFFECTIVE_TIME](#)) value equals the most current effective date.
2. Retrieve the NLM Description Identifier ([NLM_DESCRIPTION_ID](#)), NLM Effective Time ([NLM_EFFECTIVE_TIME](#)), NLM Concept Identifier ([NLM_CONCEPT_ID](#)) NLM Active Indicator ([NLM_ACTIVE_IND](#)), and NLM Terminology ([NLM_TERM](#)) values from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:
 - The NLM CONCEPT Identifier ([NLM_CONCEPT_ID](#)) from step 1 equals the NLM CONCEPT Identifier ([NLM_CONCEPT_ID](#)).
 - NLM Effective Time ([NLM_EFFECTIVE_TIME](#)) retrieved in step 1 equals the NLM Effective Time ([NLM_EFFECTIVE_TIME](#)).
 - The NLM Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (*active*).
 - The NLM Type Identifier ([NLM_TYPE_ID](#)) value equals to 90000000000003001 (fully specified name).
3. Retrieve the NLM Referenced Component Identifier ([NLM_REFERENCED_COMPONENT_ID](#)) from the [NLM SNOMED CT Language Table](#) (RIMKSLG0_NLM_SCT_LANGUAGE) where:
 - The NLM Acceptability Identifier ([NLM_ACCEPTABILITY_ID](#)) value equals 900000000000548007 (*preferred term*).
 - The NLM Refset Identifier ([NLM_REFSET_ID](#)) value equals 900000000000509007 (*US English*).
4. Retrieve the NLM Referenced Component Identifier ([NLM_REFERENCED_COMPONENT_ID](#)) and NLM Terminology ([NLM_TERM](#)) value from step 2 where:
 - The NLM CONCEPT Identifier ([NLM_CONCEPT_ID](#)) value equals the given SNOMED CT CONCEPT Identifier.
 - The NLM Description Identifier ([NLM_DESCRIPTION_ID](#)) retrieved in step 2 equals the NLM Referenced Component Identifier ([NLM_REFERENCED_COMPONENT_ID](#)) retrieved in step 3.

Example—Retrieving a Single Description for the Fully Specified Name of a SNOMED CT Concept Identifier

For purposes of demonstrating this application, the following scenario is used: A physician has been provided a SNOMED CT Concept Identifier 21522001 and wants only the preferred term returned.

1. Retrieve the NLM Concept Identifier ([NLM_CONCEPT_ID](#)) value from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:

- The Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (*active*).
- The NLM Effective Time ([NLM_EFFECTIVE_TIME](#)) value is the most current effective date.

NLM_ACTIVE_IND	NLM_EFFECTIVE_TIME	NLM_CONCEPT_ID
1	20020131	21522001

2. Retrieve the NLM Description Identifier ([NLM_DESCRIPTION_ID](#)), NLM Effective Time ([NLM_EFFECTIVE_TIME](#)), NLM Concept Identifier ([NLM_CONCEPT_ID](#)) NLM Active Indicator ([NLM_ACTIVE_IND](#)), and NLM Terminology ([NLM_TERM](#)) values from the [NLM SNOMED CT Concept Description Table](#) (RIMKSD0_NLM_SCT_CONCEPT_DESC) where:

- The NLM Concept Identifier ([NLM_CONCEPT_ID](#)) from step 1 equals the NLM Concept Identifier ([NLM_CONCEPT_ID](#)).
- The NLM Effective Time ([NLM_EFFECTIVE_TIME](#)) from step 1 equals the NLM Effective Time ([NLM_EFFECTIVE_TIME](#)).
- The Active Indicator ([NLM_ACTIVE_IND](#)) value equals 1 (*active*).
- The NLM Type Identifier ([NLM_TYPE_ID](#)) value equals 90000000000003001 (fully specified name).

NLM_CONCEPT_ID	NLM_EFFECTIVE_TIME	NLM_ACTIVE_IND	NLM_TYPE_ID	NLM_DESCRIPTION_ID	NLM_TERM
21522001	20020131	1	9000000000000000 13009	36112013	Abdominal pain
21522001	20020131	1	9000000000000000 13009	481053019	AP - Abdominal pain
21522001	20020131	1	9000000000000000 03001	750827015	Abdominal pain (finding)

3. Retrieve the NLM Referenced Component Identifier ([NLM_REFERENCED_COMPONENT_ID](#)) from the [NLM SNOMED CT Language Table](#) (RIMKSLG0_NLM_SCT_LANGUAGE) where:

- The NLM Acceptability Identifier ([NLM_ACCEPTABILITY_ID](#)) value equals 900000000000548007 (*preferred term*).
- NLM Reference Set Identifier ([NLM_REFERENCED_COMPONENT_ID](#)) value equals 900000000000509007 (*US English*).

NLM_ACCEPTABILITY_ID	NLM_REFSET_ID	NLM_TERM	NLM_REFERENCED_COMPONENT_ID
900000000000549004	900000000000509007	AP - Abdominal pain	481053019
900000000000548007	900000000000509007	Abdominal pain (finding)	750827015
900000000000548007	900000000000509007	Abdominal pain	36112013

4. Retrieve the NLM Terminology ([NLM_TERM](#)) value from step 2 where:

- The NLM Concept Identifier (**NLM_CONCEPT_ID**) value equals the given SNOMED CT Concept Identifier (21522001).
- The NLM Description Identifier (**NLM_DESCRIPTION_ID**) retrieved in step 2 (750827015) equals the NLM Referenced Component Identifier (**NLM_REFERENCED_COMPONENT_ID**) retrieved in step 3.

NLM_CONCEPT_ID	NLM_REFERENCED_COMPONENT_ID	NLM_ACCEPTABILITY_ID	NLM_TERM
21522001	750827015	900000000000548007	Abdominal pain (finding)

Retrieving a SNOMED CT Concept Identifiers Associated DXIDs

This application illustrates how to retrieve an input SNOMED CT Concept Identifier's associated DXIDs as a method of entry into any of the FDB disease decision support or dosing modules.

1. Using the given SNOMED CT Concept as the Search SNOMED CT Concept Identifier ([SEARCH_SCT_CONCEPT_ID](#)) and the SNOMED CT Concept Identifier Type ([SCT_CONCEPT_ID_TYPE](#)), retrieve the following columns from the [SNOMED CT to DXID Search Table](#) (RIMKSR0_SCT_DXID_SRCH):
 - FML Related DXID ([RELATED_DXID](#))
 - Clinical Code ([CLIN_CD](#)) - (used in step 2)
 - Navigation Code ([NAV_CD](#)) - (used in step 3)
2. Filter the results of step 1 on the CLIN_CD column, which identifies the RELATED_DXID's disease decision support or dosing module. See the Clinical Code Description ([CLIN_CD_DESC](#)) column's data dictionary description for information about the different CLIN_CD values.
3. Retrieve the Navigation Code Description ([NAV_CD](#)) for the given NAV_CODE using the [Navigation Code Description Table](#) (RIMKNVD0_NAVIGATION_DESC).

Example—Retrieving Associated DXIDs for a Given SNOMED CT Code for use in Drug-Disease Contraindications Screening

This application retrieves the DXIDs associated to SNOMED CT Concept Identifier [307762000](#) (bone marrow depression) for use in the Drug-Disease Contraindications Module (DDCM). For illustrative purposes, it also displays descriptive information about the DXID's relationship to the SNOMED CT Concept (broader, narrower, equal, or related).

1. Using the given SNOMED CT Concept as the Search SNOMED CT Concept Identifier ([SEARCH_SCT_CONCEPT_ID](#)) and the SNOMED CT Concept Identifier Type ([SCT_CONCEPT_ID_TYPE](#)), retrieve the following columns from the [SNOMED CT to DXID Search Table](#) (RIMKSR0_SCT_DXID_SRCH):
 - FML Related DXID ([RELATED_DXID](#))
 - Clinical Module Code ([CLIN_CD](#)) - (used in step 2)
 - Navigation Code ([NAV_CD](#)) - (used in step 3)

SEARCH_SCT_CO NCEPT_ID	SCT_CONCEPT_ID _TYPE	RELATED_DXID	CLIN_CD	NAV_CD
307762000	10	836	02	01
307762000	10	836	03	01
307762000	10	837	02	04
307762000	10	837	03	04
307762000	10	908	03	04



The results shown in this step represent a small sample of the full result set.

2. Filter the results of step 1 on the CLIN_CD column, which identifies the RELATED_DXID's disease decision support or dosing module. After filtering for CLIN_CD value of 03 (Contraindications Module), the resulting RELATED_DXID values are appropriate for use in DDCM. See the Clinical Code Description ([CLIN_CD_DESC](#)) column's data dictionary description for information about the different CLIN_CD values.

SEARCH_SCT_CO NCEPT_ID	SCT_CONCEPT_ID _TYPE	RELATED_DXID	CLIN_CD	NAV_CD
307762000	10	837	02	04
307762000	10	837	03	04
307762000	10	836	02	01
307762000	10	836	03	01
307762000	10	908	03	04

3. Retrieve the Navigation Code Description ([NAV_CD](#)) for the given NAV_CODE using the [Navigation Code Description Table](#) (RIMKNVDO_NAVIGATION_DESC). The NAV_CD column can be used to assist in constructing Disease Contraindication Alert messages (recall that this example's results have been filtered for the DDCM module). The following table shows this example's result set of DXIDs and their descriptive text.

Example—DXID values associated to SNOMED CT CONCEPT Identifiers for use in the DDCM module

SEARCH_SCT_ CONCEPT_ID	SCT_CONCEPT _ID_TYPE	RELATED_DXID	DXID_DESC100	CLIN_CD	NAV_CD
307762000	10	837	Severe Bone Marrow Depression	04	Related
307762000	10	836	Bone Marrow Depression	01	Equal
307762000	10	908	Blood Dyscrasias	04	Related

SNOMED CT Module ERD and Technical Specifications

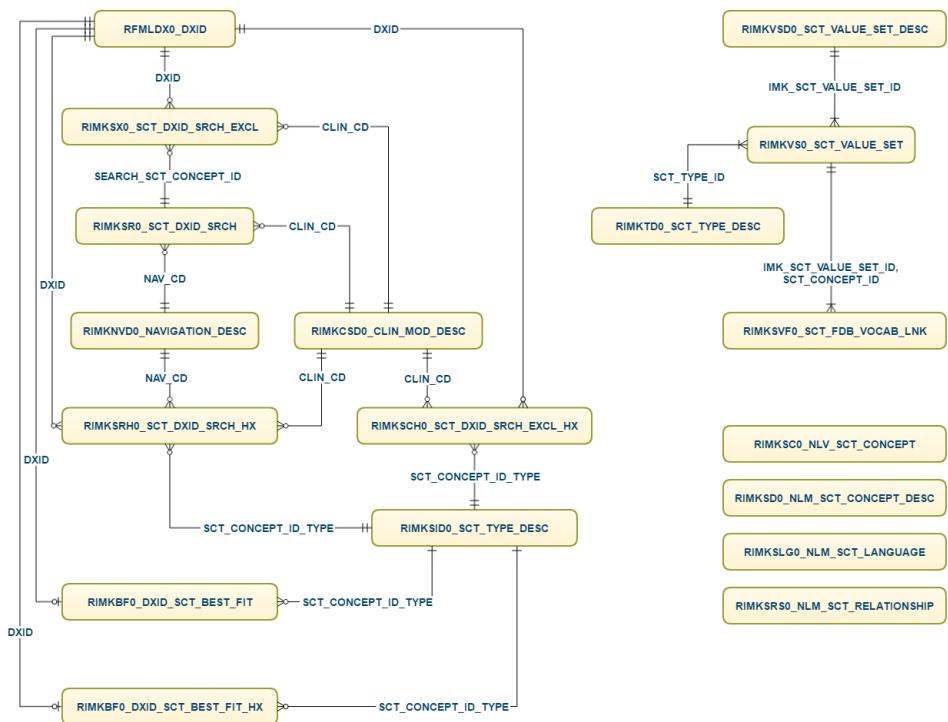
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- SNOMED CT Module Tables
- SNOMED CT Module ERD

SNOMED CT Module Tables

- Clinical Module Code Description Table
- DXID to SNOMED CT Best Fit History Table
- DXID to SNOMED CT Best Fit Table
- Navigation Code Description Table
- NLM SNOMED CT Concept Description Table
- NLM SNOMED CT Concept Table
- NLM SNOMED CT Language Table
- NLM SNOMED CT Relationship Table
- SNOMED CT Concept Type Description Table
- SNOMED CT to DXID Search Exclusion History Table
- SNOMED CT to DXID Search Exclusion Table
- SNOMED CT to DXID Search History Table
- SNOMED CT to DXID Search Table
- SNOMED CT to FDB Link Table
- SNOMED CT Type Description Table
- SNOMED CT Value Set Description Table
- SNOMED CT Value Set Table

SNOMED CT Module ERD



Clinical Module Code Description Table

Table Name	RIMKCMD0_CLIN_MOD_DESC
Revision Activity	add.06-02-2013
Purpose	Relates the Clinical Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	CLIN_CD	Clinical Code	AN	2	X(2)
	CLIN_CD_DESC	Clinical Code Description	AN	50	X(50)

DXID to SNOMED CT Best Fit History Table

Table Name	RIMKBFH0_DXID_SCT_BEST_FIT_HX
Revision Activity	add.06-20-2013
Purpose	Provides historical view of Best Fit links between FDB DXID and SNOMED CT Concept ID.

Key	Column Name	Column Description	Format	Length	Picture
PF	DXID	FML Disease Identifier	N	8	9(8)
P	SCT_CONCEPT_ID	SNOMED CT Concept Identifier	N	18	9(18)
PF	SCT_CONCEPT_ID_TYPE	SNOMED CT Concept Identifier Type	AN	2	X(2)
PF	LINK_FIRST_ACTIVE_DT	Link First Active Date	N	8	9(8)
	LINK_IND	DXID to SNOMED CT Concept ID Link Indicator	AN	1	X(1)
	LINK_LAST_ACTIVE_DT	Link Last Active Date	N	8	9(8)

DXID to SNOMED CT Best Fit Table

Table Name	RIMKBF0_DXID_SCT_BEST_FIT
Revision Activity	add.06-20-2013
Purpose	Provides Best Fit links between FDB DXID and SNOMED CT Concept ID.

Key	Column Name	Column Description	Format	Length	Picture
PF	DXID	FML Disease Identifier	N	8	9(8)
P	SCT_CONCEPT_ID	SNOMED CT Concept Identifier	N	18	9(18)
PF	SCT_CONCEPT_ID_TYPE	SNOMED CT Concept Identifier Type	AN	2	X(2)
	LINK_IND	DXID to SNOMED CT Concept ID Link Indicator	AN	1	X(1)

Navigation Code Description Table

Table Name	RIMKNVD0_NAVIGATION_DESC
Revision Activity	add.06-20-2013
Purpose	Relates the Navigation Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	NAV_CD	Navigation Code	AN	2	X(2)
	NAV_CD_DESC	Navigation Code Description	AN	50	X(50)

NLM SNOMED CT Concept Description Table

Table Name	RIMKSD0_NLM_SCT_CONCEPT_DESC
Revision Activity	add.06-20-2013
Purpose	Relates a list of SNOMED CT Concept Description within the SNOWMED CT Release Format 2.

Key	Column Name	Column Description	Format	Length	Picture
P	NLM_DESCRIPTOR_ID	NLM Description Identifier	N	18	9(18)
P	NLM_EFFECTIVE_TIME	NLM Effective Time	N	8	9(8)
	NLM_ACTIVE_IND	NLM Active Indicator	AN	1	X(1)
	NLM_MODULE_ID	NLM Module Identifier	N	18	9(18)
	NLM_CONCEPT_ID	NLM Concept Identifier	N	18	9(18)
	NLM_LANGUAGE_CD	NLM Language Code	AN	50	X(50)
	NLM_TYPE_ID	NLM Type Identifier	N	18	9(18)
	NLM_TERM	NLM Terminology	AN	255	X(255)
	NLM_CASE_SIGNIFICANCE_ID	NLM Case Significance Identifier	N	18	9(18)

NLM SNOMED CT Concept Table

Table Name	RIMKSC0_NLM_SCT_CONCEPT
Revision Activity	add.06-20-2013
Purpose	Provides a list of SNOMED CT Concepts within the SNOMED CT Release Format 2.

Key	Column Name	Column Description	Format	Length	Picture
P	NLM_CONCEPT_ID	NLM Concept Identifier	N	18	9(18)
P	NLM_EFFECTIVE_TIME	NLM Effective Time	N	8	9(8)
	NLM_ACTIVE_IND	NLM Active Indicator	AN	1	X(1)
	NLM_MODULE_ID	NLM Module Identifier	N	18	9(18)
	NLM_DEFINITION_STATUS_ID	NLM Definition Status Identifier	N	18	9(18)

NLM SNOMED CT Language Table

Table Name	RIMKSLG0_NLM_SCT_LANGUAGE				
Revision Activity	add.06-20-2013				
Purpose	Provides language description and preference within a particular context.				

Key	Column Name	Column Description	Format	Length	Picture
P	NLM_LANGUAGE_ID	NLM Language Identifier	AN	36	X(36)
P	NLM_EFFECTIVE_TIME	NLM Effective Time	N	8	9(8)
	NLM_ACTIVE_IND	NLM Active Indicator	AN	1	X(1)
	NLM_MODULE_ID	NLM Module Identifier	N	18	9(18)
	NLM_REFSET_ID	NLM Reference Set Identifier	N	18	9(18)
	NLM_REFERENCED_COMPONENT_ID	NLM Referenced Component Identifier	N	18	9(18)
	NLM_ACCEPTABILITY_ID	NLM Acceptability Identifier	N	18	9(18)

NLM SNOMED CT Relationship Table

Table Name	RIMKSRS0_NLM_SCT_RELATIONSHIP
Revision Activity	add.06-20-2013
Purpose	Provides relationships between SNOMED CT Concepts within the SNOMED CT Release Format 2.

Key	Column Name	Column Description	Format	Length	Picture
P	NLM_RELATIONSHIP_ID	NLM Relationship Identifier	N	18	9(18)
P	NLM_EFFECTIVE_TIME	NLM Effective Time	N	8	9(8)
	NLM_ACTIVE_IND	NLM Action Indicator	AN	1	X(1)
	NLM_MODULE_ID	NLM Module Identifier	N	18	9(18)
	NLM_SOURCE_ID	NLM Source Identifier	N	18	9(18)
	NLM_DESTINATION_ID	NLM Destination Identifier	N	18	9(18)
	NLM_RELATIONSHIP_GROUP	NLM Relationship Group	AN	50	X(50)
	NLM_TYPE_ID	NLM Type Identifier	N	18	9(18)
	NLM_CHARACTERISTIC_TYPE_ID	NLM Characteristic Type Identifier	N	18	9(18)
	NLM_MODIFIER_ID	NLM Modifier Identifier	N	18	9(18)

SNOMED CT Concept Type Description Table

Table Name	RIMKSID0_SCT_TYPE_DESC
Revision Activity	add.06-20-2013
Purpose	Relates the SNOMED CT Concept Type Identifier to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	SCT_CONCEPT_ID_TYPE	SNOMED CT Concept Identifier Type	AN	2	X(2)
	SCT_CONCEPT_ID_TYPE_DESC	SNOMED CT Concept Identifier Type Description	AN	50	X(50)

SNOMED CT to DXID Search Exclusion History Table

Table Name	RIMKSXH0_SCT_DXID_SRCH_EXCL_HX
Revision Activity	add.06-20-2013
Purpose	Provides historical view of links between SNOMED CT Concept and FDB DXID within specific clinical/drug group codes that are excluded from the main search result set of Related DXIDs.

Key	Column Name	Column Description	Format	Length	Picture
P	SEARCH_SCT_C ONCEPT_ID	Search SNOMED CT Concept Identifier	N	18	9(18)
PF	SCT_CONCEPT_ ID_TYPE	SNOMED CT Concept Identifier Type	AN	2	X(2)
PF	RELATED_DXID	FML Related DXID	N	8	9(8)
PF	CLIN_CD	Clinical Code	AN	2	X(2)
P	CLIN_DRUG_GR P	Clinical Drug Group	N	5	9(5)
P	LINK_FIRST_AC TIVE_DT	Link First Active Date	N	8	9(8)
	LINK_LAST_ACTI VE_DT	Link Last Active Date	N	8	9(8)

SNOMED CT to DXID Search Exclusion Table

Table Name	RIMKSX0_SCT_DXID_SRCH_EXCL
Revision Activity	add.06-20-2013
Purpose	Provides links between SNOMED CT Concept and FDB DXID within specific clinical/drug group codes that are excluded from the main search result set of Related DXIDs.

Key	Column Name	Column Description	Format	Length	Picture
PF	SEARCH_SCT_C ONCEPT_ID	Search SNOMED CT Concept Identifier	N	18	9(18)
PF	SCT_CONCEPT_ ID_TYPE	SNOMED Concept Identifier Type	AN	2	X(2)
PF	RELATED_DXID	FML Related DXID	N	8	9(8)
PF	CLIN_CD	Clinical Code	AN	2	X(2)
P	CLIN_DRUG_GR P	Clinical Drug Group	N	5	9(5)

SNOMED CT to DXID Search History Table

Table Name	RIMKSRH0_SCT_DXID_SRCH_HX
Revision Activity	add.06-20-2013
Purpose	Provides historical view of links between SNOMED CT Concept and FDB DXID within specific clinical content.

Key	Column Name	Column Description	Format	Length	Picture
P	SEARCH_SCT_C ONCEPT_ID	Search SNOMED CT Concept Identifier	N	18	9(18)
PF	SCT_CONCEPT_ ID_TYPE	SNOMED CT Concept Identifier Type	AN	2	X(2)
PF	RELATED_DXID	Related FML DXID	N	8	9(8)
PF	CLIN_CD	Clinical Code	AN	2	X(2)
P	LINK_FIRST_AC TIVE_DT	Link First Active Date	N	8	9(8)
F	NAV_CD	Navigation Code	AN	2	X(2)
	LINK_LAST_ACTI VE_DT	Link Last Active Date	N	8	9(8)

SNOMED CT to DXID Search Table

Table Name	RIMKSR0_SCT_DXID_SRCH
Revision Activity	add.06-20-2013
Purpose	Provides links between SNOMED CT Concept and FDB DXID within specific clinical content.

Key	Column Name	Column Description	Format	Length	Picture
P	SEARCH_SCT_C ONCEPT_ID	Search SNOMED CT Concept Identifier	N	18	9(18)
PF	SCT_CONCEPT_ ID_TYPE	SNOMED CT Concept Identifier Type	AN	2	X(2)
PF	RELATED_DXID	FML Related DXID	N	8	9(8)
PF	CLIN_CD	Clinical Code	AN	2	X(2)
F	NAV_CD	Navigation Code	AN	2	X(2)

SNOMED CT to FDB Link Table

Table Name	RIMKSVF0_SCT_FDB_VOCAB_LINK				
Revision Activity	add.10-18-2012				
Purpose	Supports allergy filing for non-medication reconciliation.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IMK_SCT_VALUE_SET_ID	IMK SNOMED CT Value Set Identifier	N	4	9(4)
P	SCT_CONCEPT_ID	SNOMED CT Concept Identifier	N	18	9(18)
P	IMK_FDB_VOCAB_NO_ID	IMK FDB Vocabulary Identifier	N	8	9(8)
PF	EVD_FDB_VOCAB_TYPE_ID	EVD FDB Vocabulary Type Identifier	N	4	9(4)
	IMK_EXT_VOCAB_DESC	IMK External Vocabulary Description	AN	255	X(255)
F	IMK_EXT_VOCAB_STATUS_CD	IMK External Vocabulary Status Code	N	1	9(1)
	IMK_FDB_VOCAB_DESC	IMK FDB Vocabulary Description	AN	255	X(255)
F	IMK_FDB_VOCAB_STATUS_CD	FDB Vocabulary Status Code	N	1	9(1)
	IMK_PREFERRED_IND	IMK Preferred Indicator	AN	1	X(1)
	IMK RELATED_IND	IMK Related Indicator	AN	1	X(1)
	LINK_ADD_DATE	Link Add Date	N	8	9(8)
	LINK_INACTIVE_DATE	Link Inactive Date	N	8	9(8)

SNOMED CT Type Description Table

Table Name	RIMKTD0_SCT_TYPE_DESC
Revision Activity	add.10-18-2012
Purpose	Relates the SNOMED CT Type Identifier to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	SCT_TYPE_ID	SNOMED CT Description Type Identifier	N	1	9(1)
	SCT_TYPE_DESCRIPTION	SNOMED CT Type Description	AN	50	X(50)

SNOMED CT Value Set Description Table

Table Name	RIMKVSD0_SCT_VALUE_SET_DESC
Revision Activity	add.10-18-2012
Purpose	Provides the name and definition for an associated SNOMED CT value set.

Key	Column Name	Column Description	Format	Length	Picture
P	IMK_SCT_VALUE_SET_ID	IMK SNOMED CT Value Set Identifier	N	4	9(4)
	IMK_SCT_VALUE_SET_DESC	IMK SNOMED CT Value Set Description	AN	255	X(255)
	IMK_SCT_VALUE_SET_COMMENT	IMK SNOMED CT Value Set Comment	AN	255	X(255)
F	EVD_EXT_VOCAB_TYPE_ID	EVD External Vocabulary Type Identifier	N	4	9(4)
	IMK_ADD_DATE	IMK Add Date	N	8	9(8)
	IMK_INACTIVE_DATE	IMK Inactive Date	N	8	9(8)

SNOMED CT Value Set Table

Table Name	RIMKVS0_SCT_VALUE_SET				
Revision Activity	add.10-18-2012				
Purpose	Provides the name and definition for an associated SNOMED CT value set.				

Key	Column Name	Column Description	Format	Length	Picture
PF	IMK_SCT_VALUE_SET_ID	IMK SNOMED CT Value Set Identifier	N	4	9(4)
P	SCT_CONCEPT_ID	SNOMED CT Concept Identifier	N	18	9(18)
P	SCT_DESCRIPTION_ID	SNOMED CT Description Identifier	N	18	9(18)
F	SCT_TYPE_ID	SNOMED CT Description Type Identifier	N	1	9(1)
	SCT_TERM	SNOMED CT Description	AN	255	X(255)
	IMK_ADD_DATE	IMK Add Date	N	8	9(8)
	IMK_INACTIVE_DATE	IMK Inactive Date	N	8	9(8)

Patient Education Module (PEM) 2.0

- Patient Education Module Editorial Policies
- Applications
- ERD and Technical Specifications

PEM Editorial Policies

- Overview
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance

Overview

The Patient Education Module (PEM) provides monographs that contain drug information for use by patients, in conjunction with verbal counseling from a healthcare professional. PEM provides practical information in a format that is easy to read and remember. Patient information is displayed in the First Databank (FDB) Standard Monograph XML and ASCII File Formats.

PEM is a reporting mechanism that is supported by a master and monograph table. There is no patient profile interface. PEM monograph files are referenced by patient education monograph codes found in the master table or in the GCN_SEQNO/Patient Education Monograph Code Relation Table (RPEMOGC0_MONO_GCNSEQNO_LINK). Patient education codes are assigned sequentially. The monograph files (ASCII files only) also contain print codes/text identifiers, which are used to identify specific monograph text sections. These monographs are based on an Editorial Policy which is in compliance with the Action Plan for the Provision of Useful Prescription Medicine Information (Keystone Guidelines).

PEM is designed to convey drug information that is specific to dosage form and route of administration (and as applicable, strength) to the patient so that the most beneficial therapeutic response is achieved with minimization of preventable adverse effects. Information is presented in non-scientific terms, so patients will find it easy to comprehend. When professional terms are useful in order to clarify or specify information, they will be included in parentheses following the consumer term. This module, in combination with effective verbal counseling, provides state-of-the-art comprehensive patient drug education at the point of care.

PEM consists of the following formats:

- FDB Standard Monographs (available in English and French languages)
- FDB Standard Monographs in XML format (available in English and French languages)

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the FDB knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Inclusion Criteria

This section provides information detailing the criteria that guided the inclusion of the data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

PEM monographs serve as an adjunct to professional oral counseling, not a substitute for oral counseling. PEM monographs are not intended to be comprehensive, but instead are a summary of key information (presented in lay language) related to drug products

In synchronization with the PKBS Inclusion policy, PEM can include the following products:

- Rx products with a New Drug Application (NDA), Abbreviated New Drug Application (ANDA), or Biologic License Application (BLA)
- Over-the-counter (OTC) products registered with the FDA and possessing an FDA OTC Monograph
- Herbal products consistent with the FDB list of covered herbal products (see [Herbal Products Inclusion List](#))
- Single and multi-vitamins containing iron and folic acids in specified strengths
- Combination products in which all components meet the criteria for individual inclusion
- Health-Canada approved and marketed Rx and OTC products

PEM includes consumer drug monographs written for specific ingredients and routes of administration, and as necessary, specific dosage forms and ingredient strengths. Monographs are primarily based on high-volume-use ambulatory care drug products which include (but are not limited to) oral, topical or inhaled dosage forms used for common disease conditions.

Exclusion Criteria

PEM does not include monographs covering medical supplies or devices, or bulk chemical products. PEM does not include monographs related to drug products that are administered and monitored solely by a healthcare professional (as opposed to a patient or lay caregiver). An example would be general anesthetic gases or parenteral products.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

FDB's Standard Monograph

The FDB Standard Monograph provides an in-depth discussion of a drug. It contains practical, clinically significant information needed to assist in safe and effective drug use. This monograph is strongly recommended since it is an excellent tool for providing useful patient education and risk management in conjunction with verbal counseling via a healthcare professional. These monographs are based on an Editorial Policy which is in compliance with the Action Plan for the Provision of Useful Prescription Medicine Information (Keystone Guidelines).

FDB provides ASCII format monographs in English and French languages. All monographs are also available in eXtensible Markup Language (XML) format (PEM-XML). PEM-XML offers the same patient drug education content as the traditional FDB standard monographs but is formatted for use in internet applications.

FDB also provides a default monograph that can be used to present a message when a monograph is not available for a given product. FDB does not recommend displaying the full default monograph. See [Displaying the](#)

Patient Education Standard Monograph for more information.

Finding Standard Monograph ASCII Text

FDB associates PEM Monographs with drugs at the Clinical Formulation ID ([GCN_SEQNO](#)) MedKnowledge concept level in the [GCN_SEQNO/Patient Education Code Relation Table](#) (RPEMGC0_GCNSEQNO_LINK).

The Patient Education Code ([PEC](#)) is used to identify a drug with its available standard monograph text for patient drug education. Monograph text is accessed using the following codes:

- Patient Education Monograph Code ([PEMONO](#))
- Patient Education French Language Monograph Code ([PEMONOFRA](#))

Understanding the Standard Monograph Elements

The FDB Standard Monograph consists of the following sections, described in detail below:

Disclaimer (Important Note)

This section provides a statement that the monograph is intended to supplement, not substitute for, professional medical advice. It also indicates that patients should consult with their healthcare professionals when questions arise.

Title

The monograph title consists of the formulation drug name and route of administration.

Phonetic Spelling

This section provides a phonetic spelling to assist in the pronunciation of drug product generic names. This allows for greater accuracy and ease of communication between healthcare professionals and patients. The phonetic spelling criteria include consideration of standard medical and pharmacy references' conventions, consensus of clinical practitioners, and especially the easy to recognize phonetic phrases. Phonetic terms are consistent from one generic entity to the next. The phonetic terms are practical and consistent with the text for a sixth-grade level of understanding. Therefore, traditional phonetic didactic rules are not used. This feature appears directly below the monograph title.

Common Brand Names

This section lists the common product names of the drug, which allow for the rapid and accurate identification of generic drug products. The list of brand names is alphabetized and is not necessarily comprehensive where multiple brands exist.

Warning

This section is included in the monograph when applicable to convey consumer-friendly translations and distillation of important warning information from the professional drug labeling (such as "black box warnings"). This includes relevant symptoms that the patient can report to a healthcare professional.

Uses

This section does not list all possible FDA-approved indications, however, it does list those indications that are the most commonly used in the vast majority of patients. The **Uses** section also provides valuable information regarding the benefits obtained from the medication in question, as well as how the drug works, and the drug classification.

Other Uses

This section lists the commonly accepted unlabeled uses that are of interest to a patient. These uses are derived from secondary compendia sources.

How to Use

This section deals with the method of ingesting, injecting, inserting, or applying each medication. Drug interactions may be included in this section as well, when the interaction relates logically to medication dosing, such as interactions involving foods or nonprescription products such as vitamins. Any special circumstances or adjuncts related to administration of medication are explained including disposal of syringes, as applicable. Also included are onsets of effect and dependence/tolerance/addiction information as necessary.

Side Effects

This section includes common side effects as well as uncommon side effects that would be especially deleterious or life threatening. An example of this case is the antifungal agent ketoconazole. Although hepatotoxicity occurs in only one in 10,000 cases (0.01%) and is reversible upon discontinuation of treatment, its potential side effect of liver toxicity is mentioned in the monograph. The monograph informs the patient which parameters need to be monitored or reported in reference to side effects. Again, using ketoconazole as an example, these parameters would include symptoms of liver compromise (such as dark urine, yellowing eyes or skin, abdominal pain, extreme fatigue, fever, and nausea).

Minor or transient adverse effects are listed separately. The more serious and/or life-threatening adverse effects are listed at two levels of frequency:

- unlikely (greater than 1% if frequency is available)
- rare and/or life-threatening effects (less than 1% if frequency available)

A statement precedes the serious side effects section which indicates that the majority of people do not develop serious side effects, and that their physician has determined that the benefits of using the medication outweigh the risk of side effects. This statement is intended to help balance the considerable amount of risk information present in the professional literature and the PEM monographs.

The urgency of reporting specific symptoms as well as advice to mitigate adverse effects (as applicable) are also conveyed in this section.

Precautions

This section contains all common therapeutic contraindications, along with selected cautions that may preclude the use of the medication by the patient. Included are disease contraindications/cautions, allergy contraindications

(including cross-sensitivity reactions), relevant drug-specific advisories such as photosensitivity precautions, and drug-alcohol information. Additionally, pregnancy and lactation information (standardized to FDA categories) is provided, and relevant gender-specific, pediatric, or geriatric precautions are also included.

Drug Interactions

This section warns of significant drug interactions. Drug interaction contraindications and certain cautions are included. An example of this relates to the patient about to take erythromycin or ketoconazole products while taking the antiarrhythmic agent dofetilide. Since a rare but life-threatening interaction can occur, this information would fall under the QT prolongation subsection of Drug Interactions. Pharmacokinetic (in vitro) drug interactions are included should the data reach the cutoff criteria delineated by the PEM clinical editors.

Drug-food and drug-laboratory interactions are also included. Detailed descriptions of drug interactions are found in other clinical knowledge bases.

Overdose

This section includes valuable advice on what action to take should an overdose be suspected, as well as relevant overdose symptoms.

Notes

This section includes general and/or customized information (for example, lifestyle modification as appropriate for specific diseases) as it applies to specific classes of drugs. The information is practical and complements the other sections. Included in this section are antibiotic-specific information statements and medical appointment/laboratory monitoring recommendations. Some of these monitoring advisories relate to critical drug adverse effects.

Missed Dose

This section provides specific directions and protocols to follow when a dose is omitted. For example, in the case of birth control medication, a specific sequence of steps must be followed when one or two tablets are missed in succession.

Storage

This section addresses proper storage of a medication. For example, the requirement that certain antibiotic suspensions need to be refrigerated is specified in this section, as well as what to do with any unused or outdated portion. Also included is information about odor, color, and appearance changes and the toxicity of certain drugs after the expiration date.

Medical Alert

As a public service, we have included a MedicAlert® statement in selected drug monographs. The drugs were selected on the basis of the seriousness of the condition for which the drug is being used, and whether the patient may be unresponsive to emergency personnel due to the condition. MedicAlert is a non-profit organization.

Document Information

This section provides the last revised date and the copyright year associated with each PEM monograph. This

information should be placed uniformly at the end of the final PEM section and does not have a title.

Understanding Standard Monograph PEM-XML Format

The FDB Standard Monograph is also available in eXtensible Markup Language (XML) format (PEM-XML). PEM-XML is an optional offering of the Patient Education Module. XML monographs provide the same patient drug education content as the traditional FDB Standard Monographs, formatted for use in Internet applications. These monographs provide optimal formatting customization, as well as bullet-point format for easier readability and patient recall. Such formats are recommended within the Keystone Guidelines. PEM-XML requires Microsoft Internet Explorer 5.0 or higher for viewing the monographs. FDB delivers the approximate 2400 XML monograph files (representing all of the FDB Standard Monographs) on CD or via FTP, which includes one DTD file, four XSL files, and 12 icon files in JPEG format.

Updating PEM-XML content requires a total file replacement. Each update cycle you will receive all XML files, XSL files, and the DTD file.

PEM-XML DTD File

The Document Type Definition (DTD) file for PEM-XML provides the structure and usage guidelines for the information contained in the XML monographs. It identifies the mandatory and optional sections within each monograph. The DTD file is read-only and must be placed in the root directory with the XML files to allow the monographs to display properly. The following table explains the DTD in PEM-XML.

The XML monograph MUST contain...	The XML monograph CAN contain...
Monograph Number	Phonetic Spelling
Disclaimer	Common Names
Monograph Title	Warning
Uses	Other Uses
How to Use	Medical Alert
Side Effects	
Precautions	
Storage	
Drug Interactions	
Overdose	
Notes	
Missed Dose Information	

PEM-XML Stylesheets (XSL Files)

FDB provides four monograph stylesheets (XSL files) with PEM-XML. Each stylesheet contains unique formatting, graphic representation, and functionality. Each of the four stylesheets (XSL files) is described below.

Default Monograph Stylesheet (MONOGRAPH.xsl)

MONOGRAPH.xsl is the default monograph stylesheet. It displays section headings in blue with section text appearing directly below each heading.

Drop-Down Monograph Stylesheet (MONODropDown.xsl)

The Drop-Down Monograph Stylesheet displays section headings in blue. The section text is “hidden” in the monograph. Click a heading to make the corresponding section text appear directly below the heading. Click the section heading to hide the section text.

Icon Monograph Stylesheet (MONOIcon.xsl)

The Icon Monograph Stylesheet displays icons on the first page that represent each monograph section. Section headings appear below the icons on the same page. The section text appears sequentially in the monograph. Click either the icon or the heading to go to the corresponding section of the monograph. Click the section heading to return to the first page of icons and headings.

Slide Monograph Stylesheet (MonoSlide.xsl)

The Slide Monograph Stylesheet displays a list of the section headings in blue on the first monograph page. The section text appears sequentially in the monograph. Click a heading to go directly to the corresponding section of the monograph. Click the heading to return to the first page.

ASHP MedTeach Monograph (v3.0)

The ASHP MedTeach Monograph is authored by the American Society of Health-System Pharmacists (ASHP). It provides detailed information about certain aspects of prescription drug use, and contains instructions for dosage forms of each drug within one monograph. According to ASHP, this monograph meets the criteria set forth in the Action Plan for the Provision of Useful Prescription Medicine Information (Keystone Guidelines). There are over 790 ASHP MedTeach Monographs.

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MedTeach Monograph Disclaimer

Any use of MedTeach monographs must include the following notice, which must appear on any computer screen for a sufficient period of time to be read by an average person:

MedTeach Version 3.0 is copyrighted by the American Society of Health-System Pharmacists, Inc. 2007 ©, ASHP, Bethesda, Maryland 20814. All Rights Reserved. Duplication must be authorized by ASHP. The American Society of Health-System Pharmacists, Inc. represents that the database provided hereunder was formulated with a reasonable standard of care, and in conformity with professional standards in the field. The American Society of Health-System Pharmacists, Inc. makes no representations or warranties, express or implied, including, but not limited to, any implied warranty of merchantability and/or fitness for a particular purpose, with respect to such database and specifically disclaims all such warranties and representations. Users are advised that decisions regarding drug therapy are complex medical decisions requiring the independent, informed decision of an appropriate health care professional, and the database is provided for informational purposes only. The entire monograph for a drug should be reviewed for a thorough understanding of the drug's actions, uses and side effects. The American Society of Health-System Pharmacists, Inc. does not endorse or recommend the use of any drug in the database. The information contained in the database is not a substitute for medical care.

In addition, any time any part of a MedTeach monograph is displayed, the copyright notice must be displayed as shown below with the year changed to correspond to the date of the most recent update:

Copyright 2007, American Society of Health-System Pharmacists, Inc., Bethesda, Maryland. All rights reserved.

Rule Sets

This section provides rules that the clinical team uses in regard to creating the module's data, both general rules and rules specific to data elements.

Rules of General Applicability

This section describes editorial policies that have a broad impact on the module data or by nature are less specific than those policies in other sections.

The Action Plan for the Provision of Useful Prescription Medication Information (also known as the Keystone Guidelines) and the 2006 FDA CMI Guidance document form the industry guidelines for authoring and editing patient education monographs. PEM editorial policy and work instructions reflect the recommendations within these documents.

- The monograph authorship/editing function is accomplished via the following approach:
- The primary reference source for initial monograph authorship and routine clinical updates/edits (from FDA Medwatch or Health Canada) is the professional labeling (this includes FDA/Health Canada safety alert letters).

AHFS Drug Information compendium is also consulted whenever an applicable AHFS professional monograph exists, as well as Briggs' Pregnancy and Lactation monographs.

Consensus Guidelines can be consulted regarding clinical information relevant to PEM monographs. The usual scenario for such consultation would be related to the reconciliation of standard clinical practices vs. discordant professional labeling statements. Examples of Consensus Guidelines include: JNC Guidelines for Hypertension Diagnosis and Treatment, NCEP Treatment Guidelines (Hyperlipidemia), NIH Asthma Guidelines, GOLD Guidelines (COPD), ACC Anticoagulation Guidelines (published in the Chest journal biannually), and ADA Diabetes Mellitus Guidelines.

Primary literature is consulted mainly when specific clinical inquiries from customers are being researched and a literature search and evaluation is necessary to resolve the question. Overall, primary literature is consulted

infrequently, and FDB does not (and should not) monitor the universe of primary literature for PEM monograph content development and maintenance.

Preference is given to: 1) randomized, double-blind, placebo-controlled studies 2) review articles within reputable journals (Resources). The rationale for focusing on well-substantiated information is that PEM is intended as a concise summary of medical information for the consumer; hence it should be based on well-established clinical information. Reputable preferred journals include New England Journal of Medicine, Journal of the American Medical Association, Annals of Internal Medicine, British Medical Journal, Annals of Pharmacotherapy, Drugs, Clinical Pharmacology and Therapeutics.

Rules for Data Elements

This section describes editorial policies that are more specific towards their effect on the data elements contained in the module.

The following are a list of rules for data elements:

- PEM monographs are linked to clinical formulations meeting PEM inclusion criteria and further linked to NDCs or DINs which are active, or those that have been inactive less than two years.
- Clinical formulations consisting of products without NDA, ANDA, BLA, or an OTC Monograph are excluded.
- PEM monographs are linked to ingredient(s), route of administration, dosage form, and ingredient strength (i.e., a clinical formulation). The PEMONO numeric value is the same as the first four bytes of the Patient Education Code value.
- Monographs are retired and stored in an archive database if all attached products (NDCs and/or DINs) become greater than two years obsolete, or the products have been officially withdrawn from the U.S. and Canadian markets for greater than one year.
- PEM French monographs utilize the same Patient Education Code and Patient Education Monograph Code numeric value as the corresponding English monograph.
- ASHP MedTeach monographs are linked to clinical formulations via the associated PEM(s) if at least one associated PEM exists.

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health Canada are reviewed and if such information meets inclusion criteria, PEM data is updated on a weekly basis.
- Ad hoc customer or manufacturer clinical inquiries are reviewed daily and the database is updated weekly as appropriate.
- FDA MedWatch Safety Alerts are reviewed and if such information meets inclusion criteria, PEM data is

updated on a weekly basis.

- FDA MedWatch Safety Data—monthly professional labeling changes are reviewed and if such information meets inclusion criteria, PEM data is updated on a monthly basis.

Internal Triggers for Clinical Review

The internal triggers that prompt the clinical editors to add or review data are the following:

- New clinical formulations are reviewed against the PEM inclusion criteria on a daily basis. Monographs are authored and attached to clinical formulations meeting inclusion criteria.
- Changes to existing clinical formulations that result in potential PEM linkage changes are reviewed on a daily basis.

PEM Applications

This section provides information about the practical application of data contained in this module.

- Displaying the Patient Education Standard Monograph
- Implementing a PEM-XML Stylesheet
- Changing Icons in the PEM-XML Icon Monograph Stylesheet

Displaying the Patient Education Standard Monograph

This application illustrates how to display the full standard ASCII Patient Education monograph in the desired language (English or French).

FDB associates PEM monographs with drugs at the Clinical Formulation ID ([GCN_SEQNO](#)) level. If a monograph is not available, the title of the FDB default monograph should be displayed to the end user. FDB does not recommend displaying the full FDB default monograph.

-  This application assumes familiarity with the various drug concepts and their identifiers. (See [Multiple Access Points™ \(MAPs™\)](#) for more information.)

The following examples demonstrate this application by retrieving U.S. monograph information with the Clinical Formulation ID ([GCN_SEQNO](#)):

- Example—Displaying the Patient Education Standard Monograph
- Example—What to Display When There is No Monograph

1. Do one of the following:

- a. Select the Patient Education Monograph Code ([PEMONO](#)) from the [GCN_SEQNO/Patient Education Monograph Code Relation Table](#) ([RPEMOGC0_MONO_GCNSEQNO_LINK](#)) where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) value of the drug product.
- b. Select the Patient Education French Language Monograph Code ([PEMONOFRA](#)) from the [GCN_SEQNO/Patient Education French Monograph Code Relation Table](#) ([FPEMOGC0_FRENCH_GCNSEQNO_LINK](#)) where the GCN_SEQNO column equals the Clinical Formulation ID (GCN_SEQNO) value of the drug product.

Proceed as follows:

- If no monograph value is returned, proceed to step 2 to display the FDB default monograph title.
- Otherwise, proceed to step 3 to retrieve monograph information.

2. Do one of the following to display the FDB default monograph title:

- a. Select the Patient Education Text (Standard) ([PEMTXTE](#)) value from the [Patient Education Standard Monograph Text Canada Brand Names Table](#) ([RPEMMOE2_MONO](#)) where the PEMONO column equals 0000 (zeroes) and the Patient Education Text Identifier (Standard) ([PEMTXTEI](#)) column equals T.
 - b. Select the PEMTXTE value from the [Patient Education French Language Standard Monograph Text Table](#) ([FPEMMOE1_FRENCH_MONO](#)) where the PEMONOFRA column equals 0000 (zeroes) and the PEMTXTEI column equals T.
3. Select the Patient Education Text Sequence Number (Standard) ([PEMONOE_SN](#)), PEMTXTEI, and PEMTXTE columns from the monograph's text table where one of the following is true:

- a. Where the PEMONO column from the RPEMMOE2_MONO table equals the PEMONO value of the patient education monograph.
 - b. Where the PEMONOFRA column from the FPEMMOE1_FRENCH_MONO table equals the PEMONOFRA value from step 1.
4. Display monograph details to the end-user in the order indicated by the sequence number column.

Example—Displaying the Patient Education Standard Monograph

A clinician wishes to generate a patient education ASCII monograph for Simethicone Drops (GCN_SEQNO 002815).

1. Select the Patient Education Monograph Code (**PEMONO**) value from the [GCN_SEQNO/Patient Education Monograph Code Relation Table](#) (RPEMOGC0_MONO_GCNSEQNO_LINK) value where the GCN_SEQNO column equals the Clinical Formulation ID ([GCN_SEQNO](#)) value of the drug product.

Proceed as follows:

- If no monograph value is returned, proceed to step 2 to display the FDB default monograph title.
- Otherwise, proceed to step 3 to retrieve monograph information.

GCN_SEQNO	PEMONO
002815	0265

In this example, a monograph is returned. The application proceeds to step 3.

2. Select the Patient Education Text (Standard) (**PEMTXTE**) value from the [Patient Education Standard Monograph Text Canada Brand Names Table](#) (RPEMMOE2_MONO) where the PEMONO column equals 0000 (zeroes) and the Patient Education Text Identifier (Standard) (PEMTXTEI) column equals T.
3. Select the Patient Education Text Sequence Number (Standard) (**PEMONOE_SN**), Patient Education Text Identifier (Standard) (**PEMTXTEI**), and Patient Education Text (Standard) (PEMTXTE) columns from the [Patient Education Standard Monograph Text Canada Brand Names Table](#) (RPEMMOE2_MONO) where the PEMONO column equals the PEMONO value of the patient education monograph.

A sample of the monograph is shown below:

PEMONO	PEMONOE_SN	PEMTXTEI	PEMTXTE
0265	001	Z	IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and
0265	002	Z	does NOT have all possible information about this product. This

0265	003	Z	information does not assure that this product is safe, effective,
0265	004	Z	or appropriate for you. This information is not individual
0265	005	Z	medical advice and does not substitute for the advice of your
0265	006	Z	health care professional. Always ask your health care
0265	007	Z	professional for complete information about this product and your
0265	008	Z	specific health needs.
0265	009	B	
0265	010	T	SIMETHICONE DROPS - ORAL
0265	011	F	(sye-METH-i-kone)
0265	012	B	
0265	013	C	COMMON BRAND NAME(S): Mylicon
0265	014	B	

4. Display monograph details to the end-user in the order indicated by the PEMONOE_SN value. The example below provides a sample display of the monograph text.

IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and does NOT have all possible information about this product. This information does not assure that this product is safe, effective, or appropriate for you. This information is not individual medical advice and does not substitute for the advice of your health care professional. Always ask your health care professional for complete information about this product and your specific health needs.

SIMETHICONE DROPS (sye-METH-i-kone)

COMMON BRAND NAMES: Mylicon

USES: This product is used to relieve symptoms of extra gas caused by air swallowing or certain foods/infant formulas. Simethicone helps break up gas bubbles in the gut.

HOW TO USE: Shake the container well before each use. Give this product by mouth as needed, usually after meals and at bedtime, or as directed by the doctor. Follow all directions on the product package. If you are uncertain about any of the information, consult the doctor or pharmacist.

Fill the dropper to the correct usage and squeeze the liquid slowly into the baby's mouth, towards the inner cheek. You can also measure the correct dosage with the dropper and mix it in 1 ounce of cool water, infant formula, or juice. Mix well and give the solution to your baby. The proper dosage is based on your child's age and weight.

If you are treating the child yourself (without direction from a doctor), do not use more than 12 doses of simethicone per day.

Clean the dropper well after each use and close the bottle tightly.

If your child's condition persists or worsens, or if you think there may be a serious medical problem, seek immediate medical attention.

SIDE EFFECTS: There are no reports of any side effects due to this medication. However, tell the doctor if your child experiences any unpleasant effects while taking this medication.

A very serious allergic reaction to this product is rare. However, seek immediate medical attention if you notice any of the following symptoms of a serious allergic reaction: rash, itching, swelling (especially of throat/face), severe dizziness, trouble breathing.

If you notice other effects not listed above, contact your doctor or pharmacist.

Example—What to Display When There is No Monograph

A hospital nurse, wishing to provide information on Digoxin Ampul (Clinical Formulation ID ([GCN_SEQNO](#)) 000015) to a patient's family, attempts to generate a patient education ASCII monograph.

1. Select the Patient Education Monograph Code ([PEMONO](#)) from the [GCN_SEQNO/Patient Education Monograph Code Relation Table](#) (RPEMOGC0_MONO_GCNSEQNO_LINK) where the GCN_SEQNO

column equals the Clinical Formulation ID (GCN_SEQNO) value of the drug product.

Proceed as follows:

- If no monograph value is returned, proceed to step 2 to display the FDB default monograph title.
 - Otherwise, proceed to step 3 to retrieve monograph information.
- In this example, **no** monograph was returned. The application proceeds to step 2.

2. Select the Patient Education Text (Standard) (PEMTXTE) value from the **Patient Education Standard Monograph Text Canada Brand Names Table** (RPEMMOE2_MONO) where the PEMONO column equals 0000 (zeroes) and the Patient Education Text Identifier (Standard) (PEMTXTEI) column equals T.

PEMONO	PEMTXTEI	PEMTXTE
0000	T	NO MONOGRAPH AVAILABLE AT THIS TIME

The example below provides a sample display of the monograph text. *The application ends.*

NO MONOGRAPH AVAILABLE AT THIS TIME FOR ONDANSETRON HCL POWDER.

3. Select the Patient Education Text Sequence Number (Standard) (PEMONOE_SN), PEMTXTEI, and PEMTXTE columns from the monograph's text table where one of the following is true:
 - a. Where the PEMONO column from the RPEMMOE2_MONO table equals the PEMONO value of the patient education monograph.
 - b. Where the PEMONOFRA column from the FPEMMOE1_FRENCH_MONO table equals the PEMONOFRA value from step 1.
4. Display the monograph in the order indicated by the sequence number column.

Implementing a PEM-XML Stylesheet

This application illustrates how to change an XML stylesheet.

The Default Monograph stylesheet is found in the CD root directory with the XML files. To use a different stylesheet, you must copy the desired stylesheet (XSL) file from the XSL_FILES folder into the root directory. See "Understanding Standard Monograph PEM-XML Format" in the [PEM Data Elements](#) for more information on the available stylesheets.

1. In the root directory, rename Monograph.xsl to **monograph_def.xsl**. folder.
2. In the **XSL_FILES** folder, click the XSL file that you wish to use as your stylesheet.
3. Select **Edit/Copy** to copy the selected XSL file.
4. Paste the selected XSL file into the root directory.
5. Change the name of the pasted XSL file to **MONOGRAPH.xsl**.
6. Click an XML file to open the monograph in the new stylesheet format.

 The icon JPEG files must be moved into the root directory with the XML files when implementing the Icon Monograph stylesheet.

Changing Icons in the PEM-XML Icon Monograph Stylesheet

This application illustrates how to change the icons in the Icon monograph stylesheet.

The **MONOIcon.xsl** file displays the Icon Monograph stylesheet. FDB supplies “dummy” icons as placeholders in the stylesheet; you must replace these with your own icons.

1. Move the placeholder JPEG files out of the **XSL_FILES** folder. (Do not delete the files.)
2. Copy the new JPEG files into the **XSL_FILES** folder.
3. Rename the new JPEG files, using the names of the placeholder JPEG files they replace. (Be sure to use the same capitalization and spelling when renaming the files.)
4. Implement the Monograph Icon stylesheet with the new JPEG files.

PEM ERD and Technical Specifications

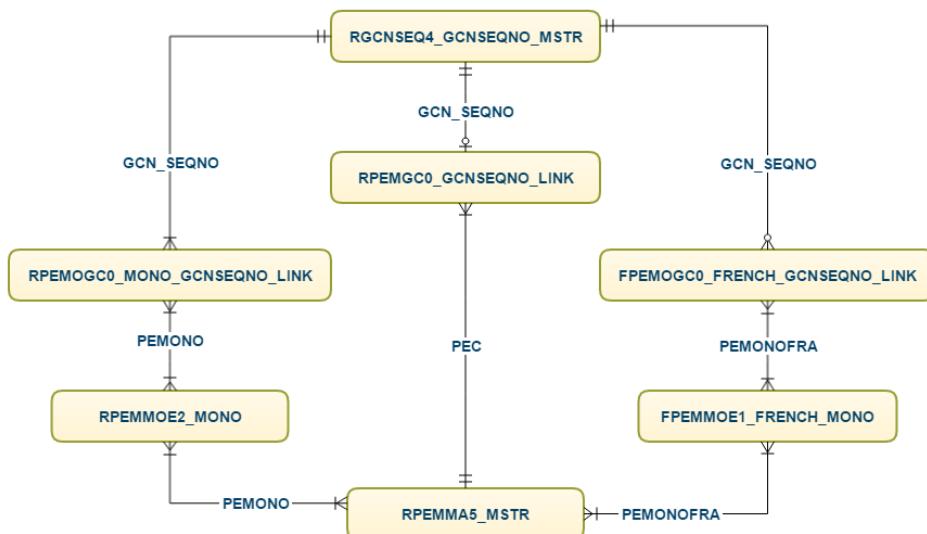
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- PEM Tables
- PEM ERD

PEM Tables

- GCN_SEQNO/Patient Education Code Relation Table
- GCN_SEQNO/Patient Education French Monograph Code Relation Table
- GCN_SEQNO/Patient Education Monograph Code Relation Table
- Patient Education French Language Standard Monograph Text Table
- Patient Education Master Table
- Patient Education Standard Monograph Text Canada Brand Names Table

PEM ERD



GCN_SEQNO-Patient Education Code Relation Table

Table Name	RPEMGC0_GCNSEQNO_LINK
Revision Activity	original
Purpose	Links a clinical formulation to patient education information.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID	N	6	9(6)
PF	PEC	Patient Education Code	N	6	9(6)

GCN_SEQNO-Patient Education Monograph Code Relation Table

Table Name	RPEMOGC0_MONO_GCNSEQNO_LINK
Revision Activity	add.10-01-1995
Purpose	Links a clinical formulation directly to the FDB patient education monograph.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	PEMONO	Patient Education Monograph Code	N	4	9(4)

Patient Education Master Table

Table Name	RPEMMA5_MSTR				
Revision Activity	rev.02-25-2000				
Purpose	Associates the drug or drug class with the available monographs for patient drug education.				

Key	Column Name	Column Description	Format	Length	Picture
P	PEC	Patient Education Code	N	6	9(6)
	DGNAME	Drug Name	AN	30	X(30)
	LBLMSG1	Patient Education Message Line #1	AN	27	X(27)
	LBLMSG2	Patient Education Message Line #2	AN	27	X(27)
	PEMONO	Patient Education Monograph Code	N	4	9(4)
	AMACDE	This column is not currently being used	AN	3	X(3)
F	PHMXCDE	This column is not currently being used	AN	3	X(3)
	USPCDE	This column is not currently being used	AN	4	X(4)
	NARDCDE	This column is not currently being used	AN	3	X(3)
F	ASHPCDE3	This column is not currently being used	N	6	9(6)
F	PEMONOS	This column is not currently being used	N	4	9(4)
F	PEMONOFRA	Patient Education French Language Monograph code	N	4	9(4)

Patient Education Standard Monograph Text Canada Brand Names Table

Table Name	RPEMMOE2_MONO
Revision Activity	rev.05-01-1999
Purpose	Provides attributes for the FDB standard monographs.

Key	Column Name	Column Description	Format	Length	Picture
P	PEMONO	Patient Education Monograph Code	N	4	9(4)
P	PEMONOE_SN	Patient Education Text Sequence Number (Standard)	N	3	9(3)
	PEMTXTEI	Patient Education Text Identifier (Standard)	AN	1	X(1)
	PEMTXTE	Patient Education Text (Standard)	AN	76	X(76)
	PEMGNDR	This column is not currently being used	AN	1	X(1)
	PEMAGE	This column is not currently being used	AN	1	X(1)

Prescriber Order Entry Module (POEM) 2.0

- General Information
- Prescriber Order Entry Module Editorial Policies
- POEM Applications
- ERD and Technical Specifications

General Information

The General Information section contains high-level information about the module.

- Overview
- Definitions
- Concepts
- Example—Retrieving a Default Dosage Order String Text

Overview

The Prescriber Order Entry Module (POEM) provides a set of clinically validated drug dosage orders and dosage data. First Databank (FDB) clinicians create and maintain the dosage information available in POEM, providing a high level of confidence for developers that the data contained in POEM is accurate.

POEM can be implemented within:

- an inpatient order-entry system, allowing for the creation of convenient lists of drug dosage orders
- an outpatient prescription-writing system, allowing for the creation of convenient lists of prescriptions

In either case, provided lists consist of common dosage orders specific to the drug formulation and intended route of administration. If desired, the prescriber's system can allow the list of orders to be filtered using known patient information, such as medical condition (indication) and age. Filtering the list of dosing orders by information known about the patient (such as age and medical condition) presents the prescriber with a smaller, more patient-specific set of orders, reducing the possibility of a prescribing error, and simplifying the dosage order process.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Definitions

This section defines important terms related to the module that users should understand. Some industry terms that have a specific connotation in regards to the module may also be defined.

Dose Type

Dose type is defined by its purpose for being administered to a patient. For example, a loading dose is the initial total dose required to rapidly achieve a desired plasma concentration.

Dose type is identified by the POEM Dose Type Code ([POEDOSETYP](#)). Only the Maintenance Dose Type ([POEDOSETYP=02](#)) is used in the POEM Order Set data.

Indication

A condition that can be treated or alleviated by drug therapy; a reason a drug is prescribed, whether its use is approved or off-label.

The relationship between Clinical Formulation IDs ([GCN_SEQNO](#)) and indications—the DXID and FDBDX columns—in POEM resides in the [POEM GCN_SEQNO POEM Source Table](#) ([RPOEGSQ2_GCNSEQNO_MSTR](#)).

Route of Administration

The route of administration refers to the normal site or method by which a drug is administered in the body, such as oral, injection, or topical. A Route of Administration Code ([GCRT](#)) is associated to each Clinical Formulation ID ([GCN_SEQNO](#)) to identify that component of the clinical formulation.

For example, “intramuscular” and “continuous infusion” are examples of route of administration.

Concepts

This section describes concepts and database elements that are important for understanding the module.

Clinical Formulation Identifier ([GCN_SEQNO](#))

A Clinical Formulation Identifier ([GCN_SEQNO](#)) represents a drug formulation, which is the combination of the ingredient list, route of administration, dosage form, and strength.

The [POEM GCN_SEQNO POEM Source Table](#) ([RPOEGSQ2_GCNSEQNO_MSTR](#)) and the [POEM GCN_SEQNO Standard Order Table](#) ([RPOEGCS1_STANDARD_ORDER](#)) associate Clinical Formulation IDs ([GCN_SEQNOs](#)) to POEM Order Set Identifiers ([POEOSETID](#)).

A Clinical Formulation ID ([GCN_SEQNO](#)) is a requirement for retrieving dosage orders from the POEM database.

Dosage Orders

POEM contains two types of dosage orders:

- **Dosage Orders** are associated with indications. These orders have been determined by FDB clinicians to be the common Dosage Orders for the Clinical Formulation ID ([GCN_SEQNO](#))/indication combinations in question. A Clinical Formulation ID ([GCN_SEQNO](#)) can have several Dosage Orders associated with it based on the different indications associated with it.
- **Default Dosage Orders** are independent of indications and have been determined by FDB clinicians to be the most commonly used order for a specified Clinical Formulation ID ([GCN_SEQNO](#)). Some Clinical Formulation IDs ([GCN_SEQNOs](#)) may not have a Default Dosage Order available since, in some instances, a drug may not yet have enough adequate common dosage research available from which to determine a default. By definition, a Clinical Formulation ID ([GCN_SEQNO](#)) can have only one Default Dosage Order in the database.

Dosage orders are provided in two formats. The first is as a pre-constructed text string and the second is as individual data elements.

POEM Standard Order Table

The source table for Default Dosage Orders. The linkage between a Clinical Formulation ID (GCN_SEQNO) and a Default Dosage POEOSETID, independent of indication, resides in the RPOEGCS1_STANDARD_ORDER table.

The source information linked to a Clinical Formulation ID (GCN_SEQNO) in the RPOEGCS1_STANDARD_ORDER table are:

- POEM Order Set Identifier ([POEOSETID](#))
- POEM Clinical Context Identifier ([POECLINID](#))

Refer to the Common Usage Example below for more information about Default Dosage Orders.

POEM GCN_SEQNO POEM Source Table

The source table for Dosage Orders. Unlike Default Dosage Orders, Dosage Orders are associated to medical conditions (indications). The linkage between a Clinical Formulation ID (GCN_SEQNO), a POEOSETID, and indication resides in the [RPOEGSQ2_GCNSEQNO_MSTR](#) table.

The source information linked to a Clinical Formulation ID (GCN_SEQNO) in the [RGCNSEQ4_GCNSEQNO_MSTR](#) table is:

- First Databank Disease Code ([FDBDX](#))
- POEM Order Set Identifier ([POEOSETID](#))
- POEM Clinical Context Identifier ([POECLINID](#))
- Disease Identifier ([DXID](#))

POEM Order String Table

The [POEM Order String Table](#) (RPOEOSR1_ORDER_STRING) contains most of the parsed data available for use in creating custom dosage orders.

i There are two specialized tables that also contain parsed data: The [POEM Administration Rate Table](#) (RPOEAR1_ADMINISTRATION_RATE) and the [POEM Context Table](#) (RPOECL1_CLIN_CONTEXT). Refer to [ERD and Technical Specifications](#) for more information about these tables.

Parsed data includes dosage data elements such as route, doses, intervals, frequencies, etc.

A POEM Order String Identifier ([POEOSRID](#)) identifies a row of parsed data in the RPOEOSR1_ORDER_STRING table. All of the data elements contained in the identified row correspond to the specified Clinical Formulation ID ([GCN_SEQNO](#))—and any other parameters specified, such as indication—used as input to the database.

i Some data elements in a row may not contain data. For example, a High Frequency value ([POEHIGHF](#)) may not be available for some Clinical Formulation IDs (GCN_SEQNOs).

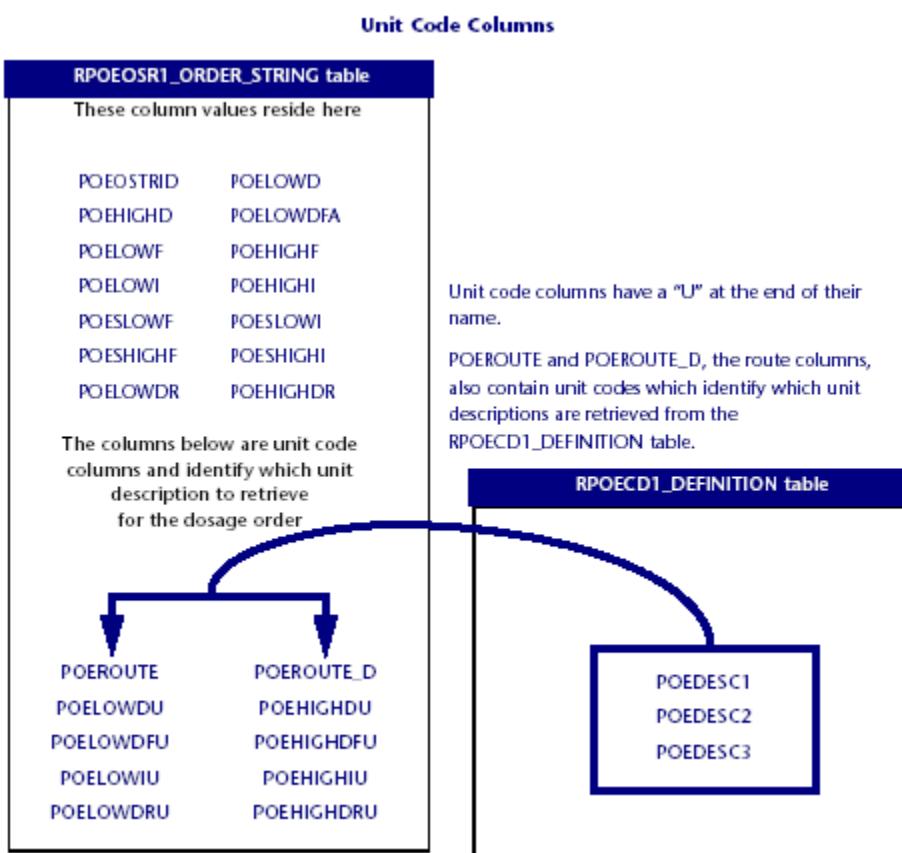
Unit code columns and route columns contained in the [POEM Order String Table](#)

(RPOEOSR1_ORDER_STRING) table are populated with unit codes that identify from which table rows in the **POEM Code Definition Table** (RPOECD1_DEFINITION) unit descriptions are retrieved.

High Dose Units Code column, containing unit codes that identify the table rows in the **POEM Code Definition Table** (RPOECD1_DEFINITION) table from which unit descriptions are being retrieved.

- i** POEROUTE and POEROUTE_D, the route columns, also contain unit codes that identify which descriptions are retrieved from the RPOECD1_DEFINITION table.

The following diagram illustrates the relationship between unit code columns and route columns in the RPOEOSR1_ORDER_STRING table and description columns in the RPOECD1_DEFINITION table:



POEM Code Definition Table

The **POEM Code Definition Table** (RPOECD1_DEFINITION) contains definitions for all of the parsed data route and unit code columns that are contained primarily in the RPOEOSR1_ORDER_STRING table.

- i** There are two specialized tables that also contain parsed data: The **POEM Administration Rate Table** (RPOEAR1_ADMINISTRATION_RATE) and the **POEM Context Table** (RPOECL1_CLIN_CONTEXT). Refer to [ERD and Technical Specifications](#) for more information about these tables.

Most of the unit code columns in the **POEM Order String Table** (RPOEOSR1_ORDER_STRING) have a "U" at the end of their name. For example, **POELOWDU** is the POEM Low Dose Units Code column, containing unit codes that identify the table rows in the RPOECD1_DEFINITION table from which unit descriptions are being retrieved.

i **POEROUTE** and **POEROUTE_D**, the route columns, also contain unit codes that identify which descriptions are retrieved from the RPOECD1_DEFINITION table.

The descriptions for the unit code columns in the RPOEOSR1_ORDER_STRING table are accessed via the POEM Unit Code (**POEUNITCDE**) column in the RPOECD1_DEFINITION table. To access a description, you must create a relationship between the unit code column in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table.

In the table shown below, the POEM Low Dose Units Code (**POELOWDU**) contains the number **0080** in its field in the row of parsed data for the POEM Order String Identifier (**POEOSTRID**) value of **0000018195** in the RPOEOSR1_ORDER_STRING table. The POEM Low Dose (**POELOWD**) column is also shown since the POEM Low Dose Units Code (**POELOWDU**) column defines the unit of measure for the low dose.

RPOEOSR1_ORDER_STRING Table

POEOSTRID	POELOWD	POELOWDU
0000018195	0000000000195	0080

In the RPOECD1_DEFINITION table, the POEM Unit Code (POEUNITCDE) **0080** identifies the row from which the unit description for POELOWDU is retrieved. For example:

RPOECD1_DEFINITION Table

POEUNITCDE	POEUNITTYP	POEDESC1	POEDESC2	POEDESC3
0080	2	MG		

The POEUNITTYP **2** indicates the row contains **Unit of Measure** information. The POEDESC1 column is the only description column populated in Unit of Measure table rows and is the description column that is retrieved. (See "POEM Compliance with TJC and ISMP" below.)

Once a relationship between the POELOWDU column in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table is created, querying the RPOECD1_DEFINITION table and retrieving the POEDESC1 column description produces the results as shown in the table below:

POEOSTRID	POELOWD	POEDESC1
0000018195	0000000000195	MG

How you create a relationship between the POELOWDU column, or any unit column, and the POEUNITCDE column depends on the tool being used to manipulate the data. For example, if using Microsoft Access, creating a

relationship would require adding a Join Line from one table to the other, linking the two columns.

The example above explains how to retrieve a single unit code column definition in a row of parsed data in the RPOEOSR1_ORDER_STRING table. For instructions on how to create a full custom dosage order consisting of multiple unit code columns, refer to [Creating Custom Dosage Orders](#) in the POEM Applications section.

POEM Compliance with TJC and ISMP

The PEOM Description 1 ([POEDESC1](#)) column contains a text description for dosage form unit, unit of measure, or route, depending on the value in the POEM Unit Code Type ([POEUNITTYP](#)) column. The information in the PEODESC1 column might include dosage form abbreviations (POEUNITTYPE = 1) or unit of measure abbreviations (POEUNITTYP = 2) considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP).

To comply with TJC and ISMP requirements, use the [Units Description Table](#) (RUNITSD0_UNITS_DESC), which provides the TJC-compliant alternatives to the dosage form or unit of measure abbreviations in the PEODESC1 column.

The RUNITSD0 table provides both an appropriate TJC-compliant abbreviation and a fully expanded description with no abbreviations at all. For example, POEM uses MMU/KG as a unit in the PEODESC1 column where POEUNITTYP = 2. The RUNITSD0 table contains the following corresponding unit descriptions:

- A TJC-compliant abbreviation (million units/kg) in the Unit Description Abbreviation ([UNIT_DESC_ABBREV](#)) column
- An expanded unit description (million units per kilogram) in the Units Description Expanded ([UNIT_DESC_EXPANDED](#)) column

Unit Code Type ([POEUNITTYP](#))

The POEM Unit Code Type ([POEUNITTYP](#)) column in the RPOECD1_DEFINITION table identifies the type of information the table row contains.

Clinical Context Identifier ([POECLINID](#))

The POEM Clinical Context Identifier ([POECLINID](#)) identifies clinical patient parameters which affect dosage.

Currently, POEM has one clinical context identifier (01) which indicates **Age**. All of the dosages currently contained in POEM are for the age category **Adult**.

Order Set Identifier ([POEOSETID](#))

The POEM Order Set Identifier ([POEOSETID](#)) identifies a drug/indication/clinical context combination that links to a POEM Order String Identifier ([POEOSTRID](#)) in the POEM database.

Currently, POEOSETIDs and POEOSTRIDs have a one-to-one relationship; each POEOSETID links to a single POEOSTRID. POEM has the potential to expand order sets to contain multiple links to order strings in future iterations of POEM. Once order sets contain multiple links to order strings, the relationship between order sets and order strings will change from a one-to-one to a one-to-many.

The relationship between a POEOSETID and a POEOSTRID, the identifier for parsed data in the RPOEOSR1_ORDER_STRING table and the POEM Text Code (POETEXTCDE) in the [POEM Order String to Text Table](#) (RPOEOSX1_TEXT_LINK), resides in the [POEM Order Set Table](#) (RPOEOS1_ORDER_SET).

Order String Identifier (POEOSTRID)

POEM Order String Identifier ([POEOSTRID](#)) identifies parsed data elements and the POETEXTCDE in the RPOEOSX1_TEXT_LINK table.

The Order String Identifier has different uses, depending on what type of information you are attempting to retrieve from the database.

For example, in the RPOEOSR1_ORDER_STRING table, the POEOSTRID is linked to parsed data elements. In the [POEM Order String to Text Table](#) (RPOEOSX1_TEXT_LINK), the POEOSTRID is linked to a POEM Text Code ([POETEXTCDE](#)), which identifies text contained in the [POEM Text Table](#) (RPOETXT1_TEXT).

Text Code (POETEXTCDE)

POEM Text Code ([POETEXTCDE](#)) identifies a line of text that resides in the POEM Text Table (RPOETXT1_TEXT).

There are two types of text residing in the text table: Order String Texts and Additional Instructions text. Text type is identified with the POEM Text Type Code (POETEXTTYP).

Text Type (POETEXTTYP)

POEM Text Type Code ([POETEXTTYP](#)) identifies text as one of the two types of text contained in the [POEM Text Table](#) (RPOETXT1_TEXT).

This column can indicate the text is order string text (a value of **80**) or additional instructions text (a value of **90**). Order string text is pre-constructed, clinically validated drug dosage order. For example, “take 1 capsule (200mg) by oral route 2 times per day” is an available Order String Text in the POEM database.

Additional instructions text is a small bit of text that contributes to a Parsed Data Drug Dosage Order. For example, “in the morning” is an available piece of Additional Instructions text in the POEM database.

Input Data Elements

Data input that can be used to filter/qualify the list of dosage orders that are presented to the prescriber. This information can be found in the patient's electronic medical record (EMR) or can be acquired by prompting the prescriber through the application user interface at the time of order entry.

Input Data Elements Description Table

Input	Description	Database Column Names
Drug	The minimum input into POEM is a drug formulation identifier for which dosing information is being requested.	GCN_SEQNO

Indication	Dosing instructions for the same drug may differ depending on the medical condition (indication) being treated. Therefore, POEM further qualifies drug dosing information by indication. In the absence of indication information, a list of common orders with their indications can be presented to the prescriber for selection.	FDBDX DXID
Dose Type	Dosing may vary based on the dose type. For example, glipizide given as an initial dose for the treatment of diabetes mellitus is 5MG/day, whereas the maintenance dose ranges from 5MG to 40MG/DAY. Fluconazole given for the treatment of disseminated candidiasis is given as a single 800MG loading dose followed by a maintenance dose of 200MG/DAY. The design of POEM assigns the dose type as an attribute of an individual order string. Only the Maintenance Dose Type (POEDOSETYP=02) is used in the POEM Order Set data.	POEDOSETYP
Route of Administration	The method of administering a drug to the patient.	POEROUTE
Patient Parameter	Dosing may differ by patient variables, such as age and organ function. POEM currently supports limited filtering of dosing order sets by age, indication, and route of administration. In applications designed without age information, the prescriber can be presented with all order sets specific to the ordered drug, regardless of indication and patient age.	POECLINTYP

Custom Dosage Orders

Custom dosage orders consist of a combination of:

- Parsed data, which resides in the **POEM Order String Table** (RPOEOSR1_ORDER_STRING), **POEM Administration Rate Table** (RPOEAR1_ADMINISTRATION_RATE), **POEM Context Table** (RPOECL1_CLIN_CONTEXT)
- Additional Instructions text, which resides in the **POEM Text Table** (RPOETXT1_TEXT).

The parsed data elements consist of individual dosing attributes useful in building custom dosage orders and conducting related calculations. Many of the data elements are contained in the RPOEOSR1_ORDER_STRING table: their columns contain actual data used for custom dosage orders.

However, parsed data unit code columns and the route columns contained in the RPOEOSR1_ORDER_STRING table contain unit codes that identify from which table row in the [POEM Code Definition Table \(RPOECD1_DEFINITION\)](#) descriptions are being retrieved. The descriptions are accessed via the POEUNITCDE column in the RPOECD1_DEFINITION table.

Most of the unit code columns in the RPOEOSR1_ORDER_STRING table have a “U” at the end of their name. For example, POELOWDU is the POEM Low Dose Units Code and contains a unit code.

- i POEROUTE and POEROUTE_D, the route columns, also contain unit codes that identify which descriptions are retrieved from the RPOECD1_DEFINITION table.

The descriptions in the RPOECD1_DEFINITION table are retrieved via the POEUNITCDE column. To access descriptions, you must create a relationship between the desired unit code column in the RPOEOSR1_ORDER_STRING table and the POEM Unit Code ([POEUNITCDE](#)) column in the RPOECD1_DEFINITION table.

For example, the POEM Low Dose Units Code ([POELOWDU](#)) contains the number 0080 in the field for a row of parsed data for POEOSTRID 0000018195 in the RPOEOSR1_ORDER_STRING table as shown below. The POEM Low Dose ([POELOWD](#)) column is also shown since the POELOWDU column defines the unit of measure for the low dose.

RPOEOSR1_ORDER_STRING Table

POEOSTRID	POELOWD	POELOWDU
0000018195	0000000000195	0080

195 is the low dose value, but in order to obtain the low dose unit, the RPOECD1_DEFINITION table must be queried. In the RPOECD1_DEFINITION table, the POEUNITCDE **0080** identifies the row from which the description is retrieved, as shown below.

RPOECD1_DEFINITION Table

POEUNITCDE	POEUNITTYP	POEDESC1	POEDESC2	POEDESC3
0080	2	MG		

The POEUNITTYP **2** indicates the row contains **Unit of Measure** information. The POEDESC1 column is the only description column populated in Unit of Measure table rows. Always retrieve POEDESC1 for units of measure. (See "POEM Compliance with TJC and ISMP" above.)

Once a relationship between the POELOWDU column in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table is created, querying the RPOECD1_DEFINITION table and retrieving the POEDESC1 column description produces the results as shown in the example below.

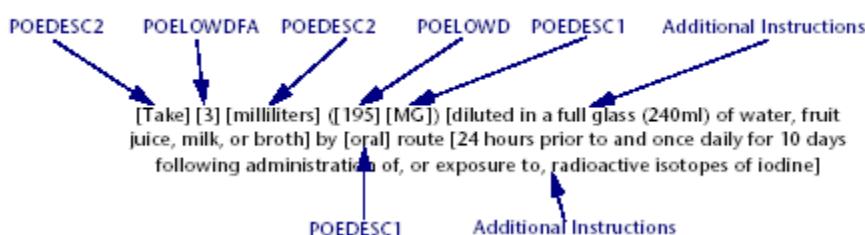
POEOSTRID	POELOWD	POEDESC1
0000018195	0000000000195	MG

How you create a relationship between the POELOWDU column, or any unit column, and the POEUNITCDE column depends on the tool being used to manipulate the data. For example, if using Microsoft Access, creating a relationship would require adding a Join Line from one table to the other, linking the two columns.

The preceding example is dealing with how to retrieve a single unit code column description. For instructions on how to create a full custom dosage order with multiple unit code columns, refer to [Creating Custom Dosage Orders](#) in the POEM Applications section.

An example of a custom dosage order, consisting of multiple parsed data elements, is shown below. Brackets ([]) are used to illustrate the individual pieces of data. Note that the “195 MG” in the dosage order is the same low dose information used for the example on the preceding pages, only presented here as part of a complete custom dosage order.

Custom Dosage Order



Parsed Data columns

Parsed data columns are defined in the following table. Column names marked with an asterisk (*) indicate the columns are unit code columns containing unit codes that identify from which table rows in the RPOECD1_DEFINITION table the unit descriptions are retrieved:

Parsed Data Columns

Parsed Data Output	Description	Database Column Names
--------------------	-------------	-----------------------

Clinical Route*	<p>Clinical route of administration. For example, Oral is the clinical route for Potassium Iodide. The POEROUTE column in the RPOEOSR1_ORDER_STRING table contains a unit code that corresponds to the POEUNITCDE column in the RPOECD1_DEFINITION table, identifying the proper row from which the route is retrieved. For example, a 2064 in the POEROUTE column identifies the row in the RPOECD1_DEFINITION table containing the POEUNITCDE 2064.</p> <p>Always retrieve POEDESC1 for the route. Retrieving POEDESC1 for the example above results in Oral being retrieved as the clinical route for Potassium Iodide.</p>	POERROUTE
Route Description*	<p>Indicates which of the two description columns—POEDESC2 or POEDESC3—to retrieve from the RPOECD1_DEFINITION table for the route description. For example, “take” and “chew” are two possible words that can be retrieved for dosage orders involving drugs taken by oral route.</p> <p>The POERROUTE_D column always contains a numeral 2 or 3.</p> <ul style="list-style-type: none"> • The numeral 2 indicates retrieval of the POEDESC2 column in the RPOECD1_DEFINITION table. • The numeral 3 indicates retrieval of the POEDESC3 column in the RPOECD1_DEFINITION table. 	POERROUTE_D
Dose Form Amount	Represents the number of dose form units required for each dose (for example, 2 tablets or 5 milliliters).	POELOWDFA POEHIGHDFA
Dose Form Amount Units*	Describes the dose form unit used for the Dose Form Amount (such as 2 tablets or 5 milliliters).	POELOWDFU POEHIGHDFU
Dose Amount	Numeric value for the dose. The dose can be represented as a “fixed” dose (for example, 500MG) or as a dose that requires further calculation based upon patient weight or body surface area (for example, 0.06MG/kg or 1.2 G/M2).	POELOWD POEHIGHD

Dose Amount Units*	Describes the dose unit of measure (such as 500 MG , 0.06 MG/KG , or 1.2 G/M²).	POELOWDU POEHIGHDU
Frequency	Indicates how often to give the dose within a specified time interval (for example, 1 time every 8 hours or 3 times every 1 day).	POELOWF POEHIGHF
Second Frequency	Available if a second frequency is applicable to a dosage order.	POESLOWF POESHIGHF
Interval	Describes numeric value for the period of time that each dose is to be administered (for example, 1 time every 8 hours or 3 times every 1 day).	POELOWI POEHIGHI
Interval Units*	Representative of the unit of measure used to describe each dose interval (for example, 1 time every 8 hours or 3 times every 1 day).	POELOWIU POEHIGHIU
Second Interval	Available if a second interval is applicable to a dosage order.	POESLOWI POESHIGHI
Second Interval Units*	Available if a second interval is applicable to a dosage order.	POESLOWIU POESHIGHIU
Duration	Defines numeric value of the length of therapy when applicable (for example, 7 days or 3 months).	POELOWDR POEHIGHDR
Duration Units*	Describes the unit of measure for the duration of therapy (for example, 7 days or 3 months).	POELOWDRU POEHIGHDRU

Additional parsed data can be presented for a custom drug dosage order using the POEM Administration Rate Table (RPOEAR1_ADMINISTRATION_RATE) and the POEM Context Table (RPOECL1_CLIN_CONTEXT). Highlighted rows indicate the columns are unit code columns containing unit codes that identify from which table rows in the RPOECD1_DEFINITION table the unit descriptions are retrieved. The additional parsed data columns include:

Parsed Data Output	Description	Database Column Name
Administration Rate	Numeric value of the rate of administration (for example, over 20 minutes or over 12 hours)	POEADRT (RPOEAR1_ADMINISTRATION_RATE table)
Admin Rate Units*	Describes the unit of measure for the administration rate (for example, over 20 minutes or over 12 hours)	POEADRTUNT (RPOEAR1_ADMINISTRATION_RATE table)

Clinical Context Range*	Describes the unit of measure for the clinical context range. (for example, between 5475 and 23724 days for age range).	POERANGUNT (RPOECL1_CLIN_CONTEXT)
-------------------------	--	--------------------------------------

Common Usage Example

The example presented in this section has been created to illustrate some important relationships between tables and columns within the tables. The example shows common pathways through some of the POEM database tables. The example is presented through the use of a Microsoft Access Query for two primary reasons:

- A precedent exists in the Sample Database section of this documentation for using Microsoft Access to provide screen shots of database tables and queries.
- To provide a visual representation of table/column relationships. Past feedback has indicated the POEM database structure is one of the more complex database structures of all of the available modules in the product. A high-level visual representation of a common pathway through the database may aid in developing an understanding of table/column relationships in conjunction with the POEM Technical Specifications and Entity Relationship Diagrams.

This example is **not** intended for use as an application algorithm. Refer to [POEM Applications](#) for detailed POEM application algorithms.

Example—Retrieving a Default Dosage Order String Text

The example is broken up into five parts that extend over the next several pages:

- [A Pathway Through the Database](#)
- [Specifying a Clinical Formulation ID \(GCN_SEQNO\)](#)
- [From Order Set ID to Order String ID](#)
- [From Order String ID to Order String Text](#)
- [Output](#)

Part 1: A Pathway Through the Database

Figure 1. [Default Dosage Order Pathway](#) shows the Select Query window containing all of the tables involved in the example. The tables and the Join Lines linking the tables represent a database pathway to a Default Dosage Order String Text.

Figure 1 shows the high level, big picture representation of the pathway.

Parts 2-4 begin to move you step by step through the pathway, focusing on individual tables and their relationships to one another.

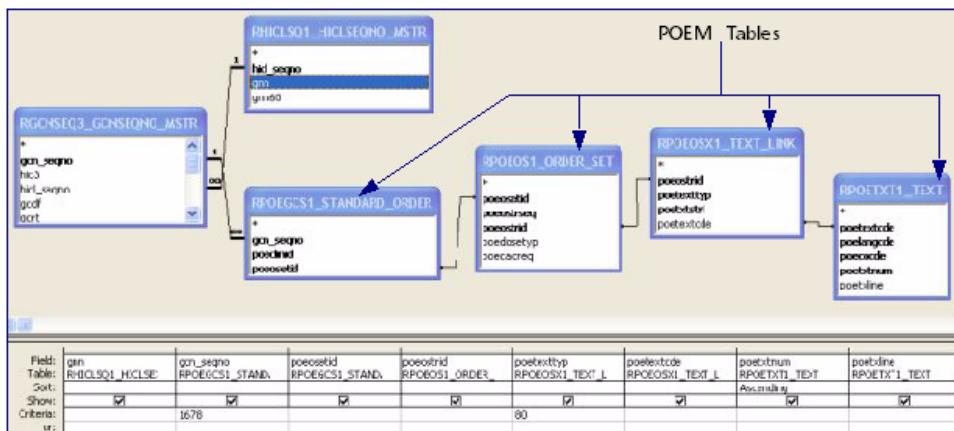
Part 5 shows the resultant output after running the Select Query.

As Figure 1 illustrates, two tables have been included in the example that are not defined as a part of the POEM module: the [Ingredient List Identifier Description Table \(RHICLSQ1_HICLSEQNO_MSTR\)](#) and the [Clinical](#)

Formulation ID Table (RGCNSEQ4_GCNSEQNO_MSTR). However, all you need to know for the purposes of this example is that those tables have been introduced here to provide a short version of the generic drug name in the Select Query output.

For a better understanding of these two tables as they relate to modules, refer to [Clinical Formulation and Ingredient Data](#).

Figure 1: Default Dosage Order Pathway



Continue to [Specifying a Clinical Formulation ID \(GCN_SEQNO\)](#).

Part 2: Specifying a Clinical Formulation ID (GCN_SEQNO)

The Clinical Formulation ID (GCN_SEQNO) is a vital piece of data input that is required for retrieving any output from the POEM database.

Figure 2: [Specifying a Clinical Formulation ID \(GCN_SEQNO\)](#) shows that the first two Select Query destination fields retrieve information from the GNN column in the RHICLSQ1_HICLSEQNO_MSTR table, which will provide a short version of the generic drug name in the output, and the GCN_SEQNO column in the **POEM GCN_SEQNO Standard Order Table** (RPOEGCS1_STANDARD_ORDER). GCN_SEQNO **1678** [Potassium Iodide] is specified as the Criteria.

Join Line 1 in Figure 2 was created to link the HICL_SEQNO columns in the RHICLSQ1_HICLSEQNO_MSTR table and the **RGCNSEQ4_GCNSEQNO_MSTR** table, establishing the relationship between the two tables.

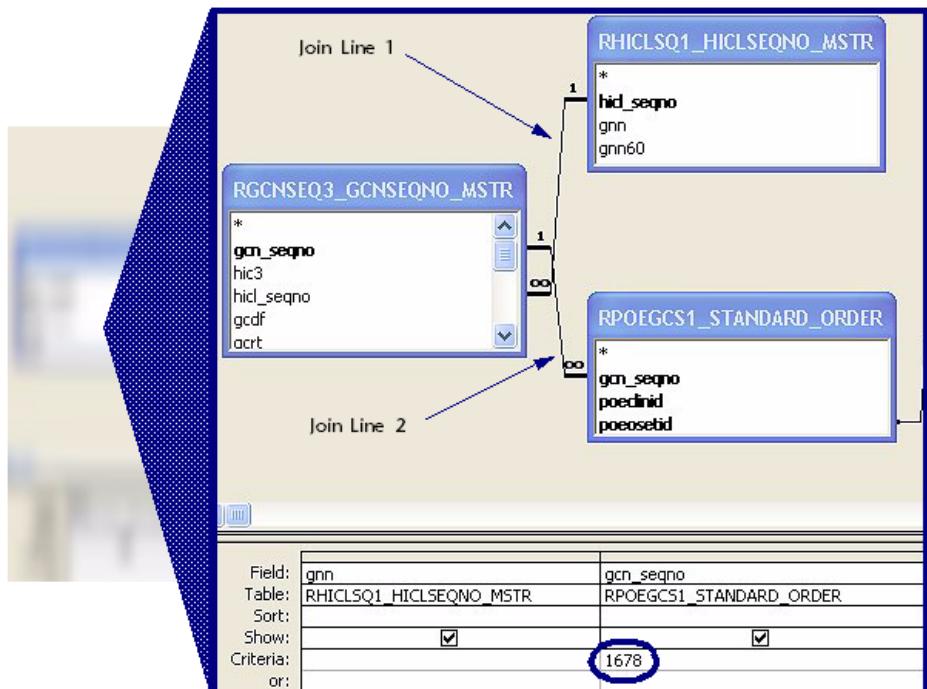
Join Line 2 in Figure 2 was created to link the GCN_SEQNO columns in the **RGCNSEQ4_GCNSEQNO_MSTR** table and the RPOEGCS1_STANDARD_ORDER table, establishing the relationship between those two tables.

The RPOEGCS1_STANDARD_ORDER table is the table in POEM from which the pathway between all Clinical Formulation IDs (GCN_SEQNOs) and their Default Dosage Order String Texts, which are contained in the POEM Text Table (RPOETXT1_TEXT), originates. The source information linked to a Clinical Formulation ID (GCN_SEQNO) in the RPOEGCS1_STANDARD_ORDER table are:

- POEM Clinical Context Identifier (**POECLINID**)

- POEM Order Set Identifier (**POEOSETID**)

Figure 2: Specifying a Clinical Formulation ID (GCN_SEQNO)



Continue to [From Order Set ID to Order String ID](#).

Part 3: From Order Set ID to Order String ID

Figure 3: [From Order Set ID to Order String ID](#) shows that the next three destination fields specified for the Select Query are retrieving information from the **POEOSETID**, **POEM Order String Identifier (POEOSTRID)**, and **POEM Text Type Code (POETEXTTYP)** columns.

Join Line 3 in Figure 3 was created to link the **POEOSETID** columns in the **RPOEGCS1_STANDARD_ORDER** table and the **POEM Order Set Table** (**RPOEOS1_ORDER_SET**) to each other. In this example, the one-to-one relationship between the **POEOSETID** and the **POEOSTRID** resides in the **RPOEOS1_ORDER_SET** table.

Join Line 4 in Figure 3 was created to link the **POEOSTRID** columns in the **RPOEOS1_ORDER_SET** and the **POEM Order String to Text Table** (**RPOEOSX1_TEXT_LINK**) to each other.

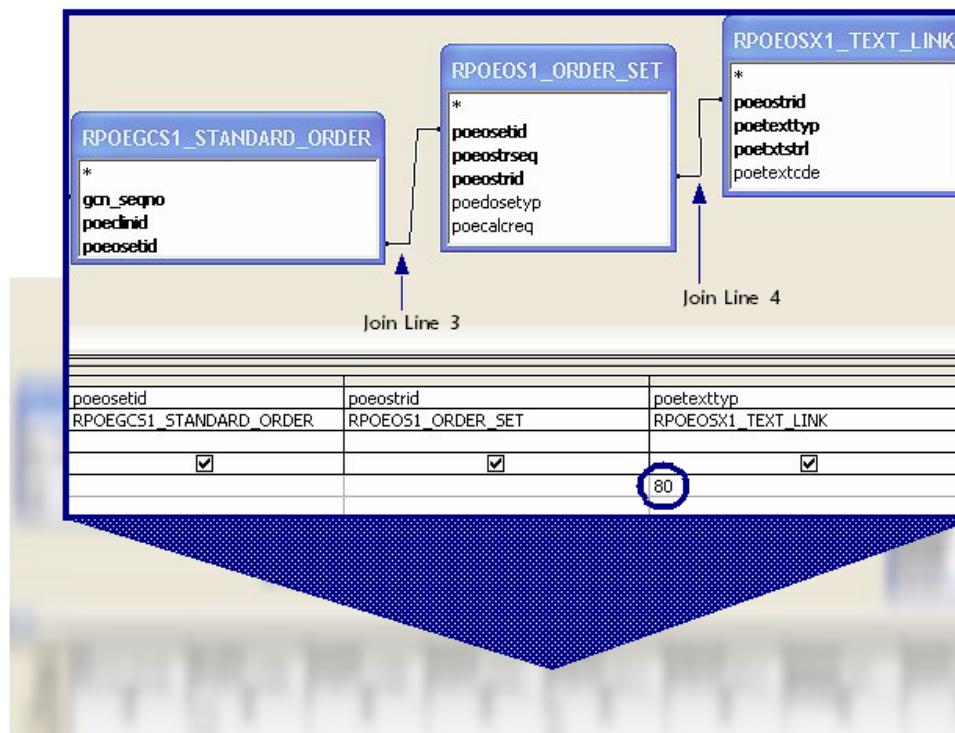
The relationship between the **POEOSTRID** and the **POEM Text Code (POETEXTCDE)** resides in the **RPOEOSX1_TEXT_LINK** table.

The **POETEXTTYP** column also resides in the **RPOEOSX1_TEXT_LINK** table and it identifies to which type of text the **POETEXTCDE** is linking. There are two types of text contained in POEM: **Order String Text** and **Additional Instructions text**. This example is linking to Order String Text, which are text lines of pre-constructed,

clinically validated dosage orders. Order String Text has a POETEXTTYP of 80. In Figure 2, the Criteria for POETEXTTYP field is specified as **80**, since the purpose of this example is to retrieve a Default Dosage Order String Text.

- i Additional Instructions text, which have a POETEXTTYP of **90**, are assigned their own POETEXTCDEs and are available for use as part of custom dosage orders. For example, “in the morning” is an available piece of Additional Instructions text.

Figure 3: From Order Set ID to Order String ID



Continue to [From Order String ID to Order String Text](#).

Part 4: From Order String ID to Order String Text

Figure 4 (shown below) shows the final three Select Query destination fields are retrieving information from the POETEXTCDE, POEM Text Line Number (**POETXTNUM**), and POEM Text Line (**POETXLINE**) columns.

Join Line 5 in Figure 4 was created to link the POETEXTCDE columns in the RPOEOSX1_TEXT_LINK table and the **POEM Text Table** (RPOETXT1_TEXT) to each other. The relationship between the POETEXTCDEs and the POETXLINES resides in the RPOETXT1_TEXT table.

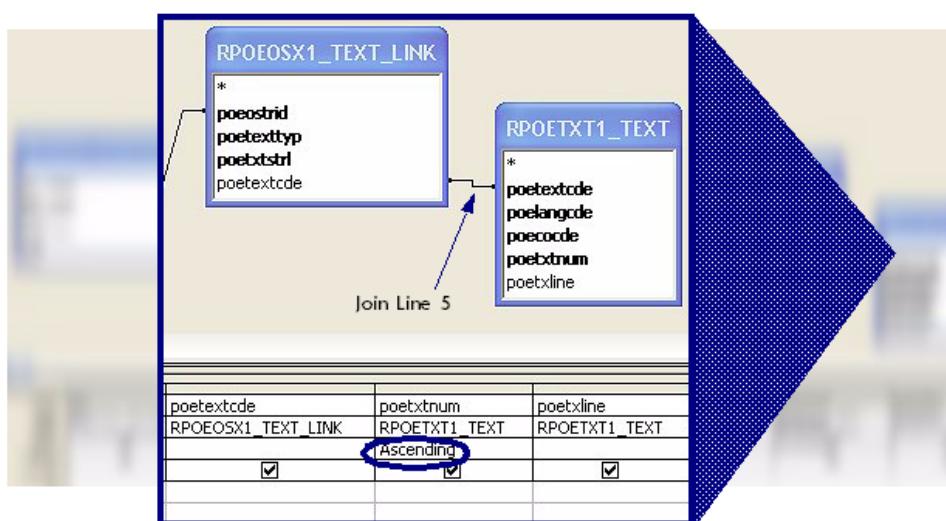
Within the RPOETXT1_TEXT table, POETEXTCDEs and POETXLINES are linked to one another. The POETXLINES are the table rows that contain the two types of text in the RPOETXT1_TEXT table: Order String Text and Additional Instructions text.

The table also contains the POEM Language Code (POELANGCDE) and POEM Country Code (POECOCDE), which identify the language and country for the text, respectively. Currently, POEM contains only one POELANGCDE (**01**—English) and one POECOCDE (**01**—USA).

The POETXTNUM column sequentially numbers multiple table rows of the same Order String Text. Because of spacing restrictions, some Order String Texts require multiple table rows. The multiple rows have the same POETEXTCDE, but their existence creates a requirement that each row be sequentially identified for its proper sequence in output.

In Figure 4, the **Sort** for POETXTNUM field is specified as **Ascending**. The Order String Text for Clinical Formulation ID (GCN_SEQNO) **001678** (Potassium Iodide) is contained in four separate table rows in the RPOETXT1_TEXT table. Thus, the table rows sort in ascending order from 1-4 in the output.

Figure 4: From Order String ID to Order String Text



Continue to Output.

Part 5: Output

Running the Select Query for Clinical Formulation ID (GCN_SEQNO) **001678**, with the specified information discussed in Parts 2-4, produces the output as shown in Figure 5 below.

Output

gcn	gcn_seqno	poeselid	poesind	poetexttyp	poetextcde	poetxtnum	poetxline
POTASSIUM IODIDE	1678	18195	18195	80	18195	1	Take 3 milliliters (195mg) diluted in a full glass (240ml) of water, f
POTASSIUM IODIDE	1678	18195	18195	80	18195	2	ruit juice, milk, or broth by oral route 24 hours prior to and once da
POTASSIUM IODIDE	1678	18195	18195	80	18195	3	ily for 10 days following administration of, or exposure to, radioacti
POTASSIUM IODIDE	1678	18195	18195	80	18195	4	ve isotopes of iodine

Prescriber Order Entry Module Editorial Policies

The policies and criteria that apply to the scope, processes, and sources of the Prescriber Order Entry Module are provided in the following sections:

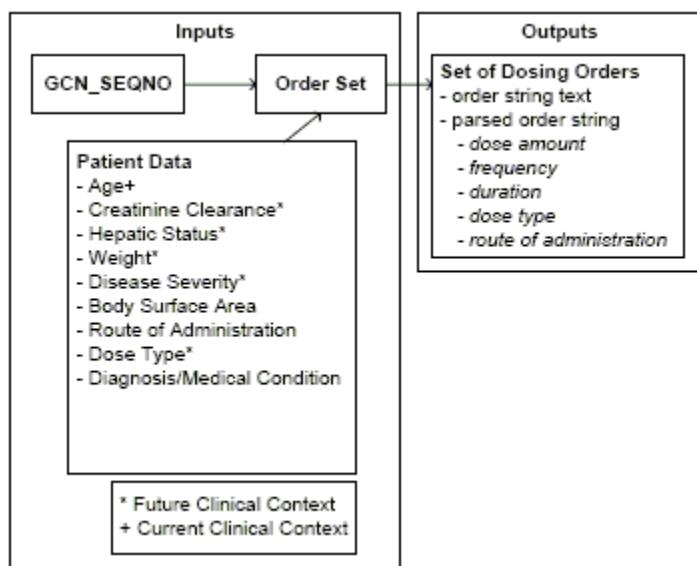
- Scope
- Editorial Process
- Maintenance

Scope

As part of the implementation of POEM, alternative dosage orders based on related medical conditions can be programmed to be presented to end users when knowledge of a patient's age and/or medical condition is limited. However, implementation of POEM should be designed to allow the prescriber to apply personal knowledge of patient clinical status and diagnosis when selecting the appropriate dosage order.

Figure 1 provides a high level representation of data required as input and information provided as output within POEM.

POEM Data Flow Representation



Limitations

Healthcare professionals are expected to use manufacturer's packaging information and dosage reference texts when prescribing medications for pediatric or geriatric patients. They should also consult these sources if dosing can be affected by tobacco or alcohol use, gender, or organ failure. FDB's Dosage Range Check Module™ (DRCM™) 3.1 and Neonatal and Infant Dosage Range Check Module™ (NEOM™) 1.1 are also available as dosing information sources (see [Dosing](#)).

POEM provides dosage information for prescription formulations of drug products. If a drug has prescription and over-the-counter dosage forms available in the same strength, POEM provides only the prescription dosing for that compound.

Additionally, partial tablet dosing (such as $\frac{1}{2}$ tablet or $\frac{1}{4}$ tablet) is not available when a tablet dosage form is available from the manufacturer in several strengths and dose amount can be represented by a single tablet of a lower strength. For example, if a drug is manufactured in 5 and 10MG tablets, 5MG ($\frac{1}{2}$ tablet) dosing of the 10MG tablet is not provided.

Editorial Process

The following section describes the processes and criteria the clinical editors use to add or review database elements.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedEffects Alerts from Health Canada
- MedWatch Safety Alerts

Internal Triggers for Clinical Review

The internal trigger that prompts the clinical editors to add or review data is a new Clinical Formulation ID (GCN_SEQNO).

Duration Range Guidelines

When standard references report length of therapy as a range, the duration of therapy described in POEM varies depending on the type of drug.

POEM Duration Range Example 1

For an antibiotic...	POEM provides the following Order String Texts...
Take 250mg every 8 hours for 7-14 days	Take 1 capsule (250mg) every 8 hours for 7 days. Take 1 capsule (250mg) every 8 hours for 14 days. Take 1 capsule (250mg) every 8 hours.

The string with no designated duration is provided so that the prescriber may decide on a duration less than, greater than, or between the usual duration range.

POEM Duration Range Example 2

For drugs such as pain medications...	POEM provides the following Order String Text...
Take 1 tablet every 4 hours as needed for pain for 7-10 days	Take 1 tablet (325mg) every 4 hours as needed for pain for 7-10 days

Since pain medications are usually given on an as needed basis, the duration range is not separated. The prescriber can decide on a quantity.

Frequency and Interval Guidelines

Order String Texts within POEM reflect dosage frequencies and intervals as reported in the literature for the majority of agents.

POEM Order String Text Example 1

For this dose...	POEM provides the following Order String Texts...
Take 250mg every 6 hours.	Take 1 capsule (250mg) every 6 hours.
Take 250mg 4 times daily.	Take 1 capsule (250mg) 4 times daily.

However, for some agents, more consistent dosing may be required to achieve desired drug levels and therapeutic effects. If the frequency for such an agent is reported as a non-specific interval, then both the non-specific interval and the specific interval are provided. If the frequency for such an agent is reported as a specific interval, then only the specific interval is provided.

POEM Order String Text Example 2

For an antibiotic...	POEM provides the following Order String Texts...
Take 1 capsule 4 times daily.	Take 1 capsule (250mg) 4 times daily. Take 1 capsule (250mg) every 6 hours.
Take 1 capsule every 6 hours.	Take 1 capsule (250mg) every 6 hours.

Inclusion and Exclusion Criteria

Drug dosage orders offered in POEM are for adults (18 years <= 64 years) with normal organ function. Dosing is added only for labeled indications and within labeled amounts. Uses and doses outside of this criteria will not be added.

Exclusions

Clinical Formulations that belong to the following therapeutic categories are excluded from POEM due to the great degree of variability in dosing dependent upon clinical situation and patient factors:

- Large and small volume parenterals, including dextrose in water, sodium chloride, amino acids for TPNs, lipids, sterile water for injection, and other diluents.
- Dietary supplements, including those for enteral feeding.
- Anesthetic gases.
- Drugs such as Digoxin Immune FAB and MESNA, which are dosed based upon the dose/serum level of another drug.
- Medical supplies, including IV pumps, bandages, diabetic test kits, and contraceptive supplies are excluded because they do not have dosage ranges.

- Natural or homeopathic products are excluded because of the challenges associated with products not approved by the FDA, such as the lack of FDA-approved labeling.
- Kits and other individual products packaged together in a combination package, such as Helidac and Prevpac, are excluded because of the complexity related to multiple dosage forms and units. Individual products, which make up the kit or combination package are included if appropriate.
- Obsolete products in a newly-included category are excluded. Products that are included and then become obsolete will continue to carry doses.
- Dosage forms not traditionally used in the adult population. For example, pediatric acetaminophen drops.
- Although over-the-counter medications are also normally excluded, they can be considered for inclusion upon customer request.

Maintenance

The Dosing Editors review a variety of sources to identify and update dosing data, including manufacturer product information, regulatory agency notifications and clinical references. Such a review may be initiated by events such as creation of a new Clinical Formulation ID, FDA approval for a new chemical entity, receipt of a MedWatch/Health Canada Med Effects alert, change in manufacturer labeling, and/or customer inquiries.

Reference Data Evaluation

FDB clinical editors compare, review, and compile the clinical information contained within these and other clinical data sources to identify the dosing content for a given age, clinical route, indication and dose type.

Sources

This section lists sources that may be used by FDB Editors to compile the dosing information considered for inclusion within dosing modules.

- Manufacturer Product Labeling (country-specific based on product approval/availability)
- AAP Pediatric Care Online
- AAP Redbook
- American Hospital Formulary Service Drug Information (AHFS)
- APhA Drug Information Handbook
- APhA Geriatric Dosage Handbook
- APhA Pediatric and Neonatal Dosage Handbook
- British National Formulary
- British National Formulary for Children
- Drug Prescribing In Renal Failure
- Harriet Lane Handbook
- Martindale: The Complete Drug Reference
- Natural Medicines Comprehensive Database
- Neonatology-Gomella

- Pediatric Dosing Expert Panel (PDEP), convened by FDB
- Primary Medical Literature (when appropriate)
- Specialty References/Textbooks
- Specialty Guidelines, Consensus
- The Renal Drug Handbook

POEM Applications

This section provides information about the practical application of data contained in this module. All of the dosage information in the POEM database is formatted as either Order String Text or parsed data. The applications in this section explain how to retrieve both Default Dosage Orders and Dosage Orders in either the Order String Text format or the parsed data format. In addition, a formula for calculating prescription quantities is covered.

A Clinical Formulation ID ([GCN_SEQNO](#)) is required as input for using POEM.

Using the [POEM GCN_SEQNO POEM Source Table](#) (RPOEGSQ2_GCNSEQNO_MSTR), information systems can gain access to specific dosage information. An Order String Text is presented or parsed data is retrieved based on the specified Clinical Formulation ID (GCN_SEQNO) and the patient data, including age and indication being treated. The [POEM Order String Table](#) (RPOEOSR1_ORDER_STRING) contains the dosage data in a parsed format which can be used to perform calculations or display alternative text.

In order entry systems integrated with a patient record, dosage order sets specific to patient diagnosis, age, and other clinical parameters can be presented to the healthcare provider.

[**Retrieving Default Dosage Order String Text**](#)

[**Retrieving Dosage Order String Text**](#)

[**Creating Custom Dosage Orders**](#)

[**Calculating Prescription Quantity**](#)

[**Retrieving Dosage Orders for Related Disease States**](#)

Retrieving Default Dosage Order String Text

The **POEM GCN_SEQNO Standard Order Table** (RPOEGCS1_STANDARD_ORDER) offers the prescriber a Default Dosage Order, independent of indication. Once the end-user application displays the drug's Default Dosage Order for the prescriber, the prescriber may then choose to accept or reject the default. Depending on the implementation, the end-user application can then display a list of Dosage Orders, which are indication specific, should the prescriber reject the default.

Default Dosage Orders are also available in a parsed data format. Refer to [Creating Custom Dosage Orders](#) for more information.

A Clinical Formulation ID (**GCN_SEQNO**) is required as input for retrieving a Default Dosage Order. The patient age (in days) is also recommended for input.

For purposes of demonstrating this application, the following scenario is used: The following application provides steps to retrieve the Default Dosage Order String Text for a 13,000-day old (35-year old) patient with normal organ function. Input for the retrieval is Clinical Formulation ID (GCN_SEQNO) **029968 (atorvastatin calcium)**.

To retrieve Default Dosage Order String Text, complete the following steps:

1. Query the RPOEGCS1_STANDARD_ORDER table and retrieve the POEM Order Set Identifier (**POEOSETID**) and the Clinical Context Identifier (**POECLINID**) associated with the specified Clinical Formulation ID (GCN_SEQNO). For example:

GCN_SEQNO	POECLINID	POEOSETID
029968	000001	000634

i Only one POEOSETID is associated with any given Clinical Formulation ID (GCN_SEQNO) in the RPOEGCS1_STANDARD_ORDER table. The table is the source for linkage to the one dosage order determined by FDB clinicians to be the most common dosage order for a given Clinical Formulation ID (GCN_SEQNO), independent of indication.

If a POEOSETID is not retrieved, display this message to the end-user: **Dosage information is not available.**

2. For each retrieved POEOSETID linked to a POECLINID with a value of **000001** (Age), query the **POEM Context Table** (RPOECL1_CLIN_CONTEXT) and retrieve the POEM Minimum Range (**POEMINRANG**) and POEM Maximum Range (**POEMAXRANG**) values and compare the calculated patient age in days to the ranges. For example:

POEOSETID	POECLINID	POEMINRANG	POEMAXRANG
000634	000001	000005475	000023724

If the patient age is less than the POEMINRANG or greater than the POEMAXRANG, remove the POEOSETID from the queue of retrieved POEOSETIDs. If the patient age is unknown or unavailable,

include range information when displaying dosage text to the end user. In this scenario, the patient is 13,000 days old, which falls within the minimum and maximum age range.

3. Query the **POEM Order Set Table** (RPOEOS1_ORDER_SET) and retrieve the POEM Order String Identifier (**POEOSTRID**) associated to the retrieved POESETID. For example:

POESETID	POEOSTRID
000634	000634

4. Query the **POEM Order String to Text Table** (RPOEOSX1_TEXT_LINK) and retrieve the POEM Text Code (**POETEXTCDE**) associated to the retrieved POEOSTRID. Specify 80 for the POEM Text Type Code (**POETEXTTYP**), which specifies the retrieval is for Order String Text. For example:

POEOSTRID	POETEXTTYP	POETEXTCDE
000634	80	0000000634

5. Query the **POEM Text Table** (RPOETXT1_TEXT) and retrieve the POEM Text Line (**POETXLINE**), which is the Order String Text, associated to the retrieved POETEXTCDE. For example:

POETEXTCDE	POETXLINE
000634	take 1 tablet (20mg) by oral route once daily

6. Display the retrieved Order String Text, allowing end user to select or reject the default dosage order. For example:

Take 1 tablet (20mg) by oral route once daily.

7. The end user selects or rejects the Default Dosage Order.

i If the end user rejects the Default Dosage Order, offer the option for the user to view orders specific to the drug's indications. Refer to [Retrieving Dosage Order String Text](#) for more information.

Retrieving Dosage Order String Text

With a Clinical Formulation ID (GCN_SEQNO) and drug indication, Dosage Orders specific to each Order Set Identifier can be retrieved and presented to the prescriber.

A Clinical Formulation ID (GCN_SEQNO) is required as input for retrieving Dosage Orders. Indication and patient age (in days) are also recommended for input.

Dosage Orders are associated with indication. A single Clinical Formulation ID (GCN_SEQNO) can have multiple orders based on the different indications associated with it. For example, the following table shows a sampling of the data for Clinical Formulation ID (GCN_SEQNO) 008995 taken from the [POEM GCN_SEQNO POEM Source Table](#) (RPOEGSQ2_GCNSEQNO_MSTR):

GCN_SEQNO	FDBDX	DXID
008995	01.088810	00000244
008995	01.099550	00000297
008995	06.382000	00001378

The DxID and FDBDX values (indications) and descriptions in the following table are found for the sampling of data for Clinical Formulation ID (GCN_SEQNO) 008995.

DXID	FDBDX	Description
00000244	01.088810	Lyme Disease
00000297	01.099550	Genitourinary Chlamydia Trachomatis
00001378	06.382000	Acute Otitis Media, H. Influenzae

As shown, it is possible for a wide variety of indications to be associated with a single Clinical Formulation ID (GCN_SEQNO), each of which can substantially alter the details of a Dosage Order.

When retrieving Dosage Orders, all of the orders for all of the indications associated with a Clinical Formulation ID (GCN_SEQNO) can be retrieved, which, in some cases, can be quite large. However, a more common use is to retrieve orders for a Clinical Formulation ID (GCN_SEQNO) based on any indications associated with the patient for which the order is being retrieved.

Dosage Orders are also available in a parsed data format. Refer to [Creating Custom Dosage Orders](#) for more information.

Refer to [Retrieving Default Dosage Order String Text](#) for information about Default Dosage Orders which are dosage orders independent of indication.

The following example uses U.S. data.

For purposes of demonstrating this application, the following scenario is used: The following application provides steps to retrieve Dosage Order String Text for a 13,000-day old (35-year old) patient with normal organ

function. Input for the retrieval is Clinical Formulation ID (GCN_SEQNO) **008995 (*amoxicillin trihydrate*)**. In addition, the patient has been diagnosed with **Genitourinary Chlamydia Trachomatis**, which has a DxID of **00000297** and an FDBDX of **01.099550**.

- i When creating Dosage Orders, use either the DxID or the FDBDX column for specifying indication. FDB recommends using the DxID column.

To retrieve Dosage Order String Text, complete the following steps:

1. Query the **POEM GCN_SEQNO POEM Source Table** (RPOEGSQ2_GCNSEQNO_MSTR) and retrieve all POEM Order Set Identifiers (**POEOSETID**) and Clinical Context Identifiers (**POECLINID**) associated to the Clinical Formulation ID (GCN_SEQNO), along with either a specified DxID or FDBDX value. For example:

GCN_SEQNO	POEOSETID	POECLINID	DXID
008995	000373	000001	00000297
008995	000375	000001	00000297
008995	008192	000001	00000297
008995	008194	000001	00000297
008995	009300	000001	00000297
008995	009301	000001	00000297

2. For each retrieved POEOSETID associated to a POECLINID with a value of **000001** (Age), query the **POEM Context Table** (RPOECL1_CLIN_CONTEXT) and retrieve the POEM Minimum Range (**POEMINRANG**) and POEM Maximum Range (**POEMAXRANG**) values and compare the calculated patient age in days to the ranges. For example:

POEOSETID	POECLINID	POEMINRANG	POEMAXRANG
000373	000001	000005475	000023724
000375	000001	000005475	000023724
008192	000001	000005475	000023724
008194	000001	000005475	000023724
009300	000001	000005475	000023724
009301	000001	000005475	000023724

If the patient age is less than the POEMINRANG or greater than the POEMAXRANG, remove the POEOSETID from the queue of previously retrieved POEOSETIDs. If the patient age is unknown or unavailable, include range information when displaying dosage text to the end user. In this scenario, the patient is 13,000 days old, which falls within the minimum and maximum age range.

3. Query the **POEM Order Set Table** (RPOEOS1_ORDER_SET) and retrieve the POEM Order String

Identifiers (**POEOSTRID**) associated to the retrieved POEOSETIDs. For example:

POEOSETID	POEOSTRID
000373	0000000373
000375	0000000375
008192	0000008192
008194	0000008194
009300	0000009300
009301	0000009301

4. Query the **POEM Order String to Text Table** (RPOEOSX1_TEXT_LINK) and retrieve the POEM Text Codes (**POETEXTCDE**) associated to the retrieved POEOSTRIDs. Specify **80** for the POEM Text Type Code (**POETEXTTYP**), which specifies the retrieval is for Order String Text. For example:

POEOSTRID	POETEXTTYP	POETEXTCDE
0000000373	80	0000000373
0000000375	80	0000000375
0000008192	80	0000008192
0000008194	80	0000008194
0000009300	80	0000009300
0000009301	80	0000009301

5. Query the **POEM Text Table** (RPOETXT1_TEXT) and retrieve the POEM Text Lines (**POETXLINE**) associated to the retrieved POETEXTCDEs. For example:

POETEXTCDE	POETXTNUM	POETXLINE
0000000373	001	take 2 capsules (500mg) by oral route 3 times per day for 10 days
0000000375	001	take 2 capsules (500mg) by oral route every 8 hours for 10 days
0000008192	001	take 2 capsules (500mg) by oral route 3 times per day
0000008194	001	take 2 capsules (500mg) by oral route every 8 hours
0000009300	001	take 2 capsules (500mg) by oral route 3 times per day for 7 days

0000009301	001	take 2 capsules (500mg) by oral route every 8 hours for 7 days
------------	-----	--

-  If a retrieved POETXLINE consists of multiple table rows, sort the results in ascending order using the POETXTNUM column.

6. Display the retrieved Order String Text, allowing the end user to select the desired dosage:

ORDER STRING TEXT
Take 2 capsules (500mg) by oral route 3 times per day for 10 days.
Take 2 capsules (500mg) by oral route every 8 hours for 10 days.
Take 2 capsules (500mg) by oral route 3 times per day.
Take 2 capsules (500mg) by oral route every 8 hours.
Take 2 capsules (500mg) by oral route 3 times per day for 7 days.
Take 2 capsules (500mg) by oral route every 8 hours for 7 days.

Creating Custom Dosage Orders

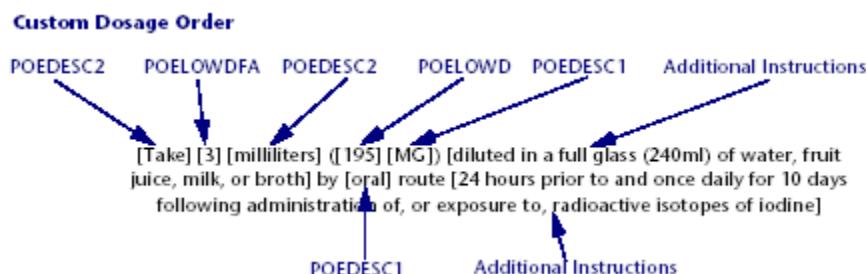
Users can create custom dosage orders using parsed data for any of their special needs. Parsed data can be presented using the [POEM Order String Table](#) (RPOEOSR1_ORDER_STRING) and the [POEM Code Definition Table](#) (RPOECD1_DEFINITION).

All of the dosage information in the POEM database is formatted as both Order String Text and parsed data. In order to illustrate the parsed data concept and how the database tables relate to one another, the application presented in this section focuses on how to retrieve the parsed data to match the Order String Text shown below.

Order String Text [POETEXTCDE: 0000018195, POETEXTTYP: 80]

Take 3 milliliters (195mg) diluted in a full glass (240ml) of water, fruit juice, milk, or broth by oral route 24 hours prior to and once daily for 10 days following administration of, or exposure to, radioactive isotopes of iodine

Parsed Data



The words **by** and **route** in the parsed data are suggested additions to the order for displaying POEROUTE that the user supplies through the application which is being used to create the dosage orders. Refer to [Suggestions for Displaying Parsed Data](#) for more suggestions for displaying the different types of parsed data.

For purposes of demonstrating this application, the following scenario is used: The following application provides steps to retrieve parsed data to match the Order String Text pictured on the previous page. The patient for the scenario is a 13,000-day old (35-year old) patient with normal organ function. Input for the retrieval is Clinical Formulation ID (GCN_SEQNO) **001678 (potassium iodide)**. In addition, **Thyroid Gland Radiation Protection** is an associated indication, which has a DxID of **593** and an FDBDX of **03.246903**.

- i When creating Dosage Orders, use either the DxID or the FDBDX column for specifying indication. FDB recommends using the DxID column.

1. Query the [POEM GCN_SEQNO POEM Source Table](#) (RPOEGSQ2_GCNSEQNO_MSTR) and retrieve all POEM Order Set Identifiers ([POEOSETID](#)) and Clinical Context Identifiers ([POECLINID](#)) associated to the Clinical Formulation ID (GCN_SEQNO), along with either a specified DxID or FDBDX value. For example:

GCN_SEQNO	POEOSETID	POECLINID	DXID
001678	018195	000001	00000593

i Substitute the **POEM GCN_SEQNO Standard Order Table** (RPOEGCS1_STANDARD_ORDER) in place of the RPOEGSQ2_GCNSEQNO_MSTR table to retrieve parsed data for Default Dosage Orders.

- For each retrieved POEOSETID associated to a POECLINID with a value of **000001** (Age), query the **POEM Context Table** (RPOECL1_CLIN_CONTEXT) and retrieve the POEM Minimum Range (**POEMINRANG**) and POEM Maximum Range (**POEMAXRANG**) values and compare the calculated patient age in days to the ranges. For example:

If the patient age is less than the **POEMINRANG** or greater than the **POEMAXRANG**, remove the POEOSETID from the queue of retrieved POEOSETIDs. If the patient age is unknown or unavailable, include range information when displaying dosage text to the end user. In this scenario, the patient is 13,000 days old, which falls within the minimum and maximum age range.

- Query the **POEM Order Set Table** (RPOEOS1_ORDER_SET) and retrieve the POEM Order String Identifiers (**POEOSTRID**) associated to the retrieved POEOSETIDs. For example:

POEOSETID	POEOSTRID
018195	0000018195

If there are multiple returns, sort the POEOSETID and POEOSTRID columns in ascending order.

- Query the **POEM Order String Table** (RPOEOSR1_ORDER_STRING) and retrieve the same POEOSTRIDs that were retrieved in the previous step. Each POEOSTRID identifies a table row of parsed data from which you can retrieve desired values. The following example shows results for a retrieval for POESTRID 000018195:

POEOSTRID	POEROUTE	POEROUTE_D	POELOWD	POELOWDU	POELOWDF_A	POELOWDF_U
0000018195	2064	2	00000000000195	0080	0000003	3006

The POEM Low Dose (**POELOWD**) and POEM Low Dose Form Amount (**POELOWDFA**) columns contain the retrievable values for the custom drug order, **195** and **3**, as shown. However, all of the Unit Code columns in the RPOEOSR1_ORDER_STRING table contain unit codes that identify from which table rows in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the unit description is retrieved.

i Most of the Unit Code columns have names that end with a **U**. **POEROUTE** and **POEROUTE_D**, although they don't end in a U, also contain unit codes that identify which descriptions are retrieved from the RPOECD1_DEFINITION table.

Unit Code columns contain POEM Unit Codes and these codes correspond to a table row in the RPOECD1_DEFINITION table. Each row in the RPOECD1_DEFINITION table begins with the POEM Unit Code (**POEUNITCDE**) column, which is the primary key into the table. The POEUNITCDE columns contain a matching Unit Code for the Unit Code columns in the Order String table. For example, the POELOWDU column contains Unit Code **0080**. A table row in the RPOECD1_DEFINITION table begins with POEUNITCDE **0080**, which is the row from which the description for the low dose unit is retrieved.

5. Query the RPOECD1_DEFINITION table and retrieve the descriptions for all of the desired Unit Code columns, including POEROUTE and POEROUTE_D. Create a relationship between the Unit Code columns in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table for each description being retrieved. The following example shows the results for a retrieval for descriptions for the POEROUTE, POEROUTE_D, POELOWDU, and POELOWDFU columns. Sub-steps 5A-5C explain how these results are retrieved column by column.

POEOSRID	POEDESC1	POEDESC2	POELOWD	POEDESC1	POELOWDF A	POEDESC2
0000018195	Oral	take	00000000001 95	MG	000003	milliliters

The RPOEOSR1_ORDER_STRING and RPOECD1_DEFINITION tables have a unique and complex relationship in the POEM database. In order to illustrate how the results pictured in Step 4 were achieved, the table row of parsed data for POEOSRID 0000018195 in the RPOEOSR1_ORDER_STRING table shown in Step 4 is repeated below, along with all of the associated RPOECD1_DEFINITION table rows from which descriptions are being retrieved. Note that within each row in the Definition table, the POEM Unit Code Type (**POEUNITTYP**) identifies the type of information contained in that row.

RPOEOSR1_ORDER_STRING Table

POEOSRID	POEROUTE	POEROUTE_D	POELOWD	POELOWDU	POELOWDF A	POELOWDF U
0000018195	2064	2	00000000001 95	0080	000003	3006

RPOECD1_DEFINITION Table

POEUNITCDE	POEUNITTYP	POEDESC1	POEDESC2	POEDESC3
2064	3	oral	take	chew
0080	2	MG		
3006	1	milliliter	milliliters	

- a. Create a relationship between the POEROUTE column in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table and then query the RPOECD1_DEFINITION table and retrieve the descriptions for the POEROUTE and POEROUTE_D columns.

As shown, the POEROUTE column contains the Unit Code **2064**, which identifies the table row in the Definition table the route for the dosage order is retrieved via POEUNITCDE 2064. The POEUNITTYP in that row is **3**, which indicates that the row contains **Route of Administration** information. The POEDESC1 column always contains the route in Route of Administration table rows. Always retrieve the POEDESC1 column for route. The POEROUTE_D column is the route description and is directly associated with the POEROUTE column. The route description is always retrieved from the same table row as the route. The POEROUTE_D column identifies which route description should be retrieved, either the POEDESC2 or POEDESC3 column, based on the numeral it contains. The POEROUTE_D column always contains a numeral **2** or **3**. If a 2, retrieve POEDESC2. If a 3, retrieve POEDESC3. Since POEROUTE_D contains a 2, retrieve POEDESC2. Retrieving POEDESC1 results in **Oral** for the route and retrieving POEDESC2 results in **take** for the route description.

- b. Create a relationship between the POELOWDU column in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table and then query the RPOECD1_DEFINITION table and retrieve the description for the POELOWDU column. The POELOWDU column contains the Unit Code **0080**, which identifies the table row in the Definition table from which the description for the low dose unit of measure is retrieved via POEUNITCDE 0080. The POEUNITTYP in that row is **2**, which indicates the row contains **Unit of Measure** information. The POEDESC1 column is the only description column populated in Unit of Measure table rows. Always retrieve the POEDESC1 column for units of measure. Retrieving POEDESC1 results in **MG** for the low dose unit of measure.

 The POEDESC1 column may contain a text description for dosage form unit, unit of measure, or route, depending on the POEUNITTYP. If the POEDESC1 column contains Dosage Form abbreviations (POEUNITTYP = 1) or Unit of Measure abbreviations (POEUNITTYP = 2), the PEODESC1 column might be considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) contain. To retrieve the corresponding TJC-compliant unit descriptions for the given unit in the PEODESC1 column, query the Units Description Table. Create a relationship between the POEDESC1 column and the DOSING_MODULE_UNIT_ABBREV column in the Units Description Table.

- c. Create a relationship between the POELOWDFU column in the RPOEOSR1_ORDER_STRING table and the POEUNITCDE column in the RPOECD1_DEFINITION table and then query the RPOECD1_DEFINITION table and retrieve the description for the POELOWDFU column. The POELOWDFU column contains the Unit Code **3006** which identifies the table row from which the low dose form unit description is retrieved in the Definition table via POEUNITCDE 3006. The POEUNITTYP in that table row is **1**, which indicates the row contains **Dosage Form** information. The POEDESC1 and POEDESC2 columns are populated in the Dosage Form rows with the same dosage form in each column. However, POEDESC1 always contains the singular form and POEDESC2 always contains the plural form. If the dosage form amount is a 1, always retrieve

POEDESC1. If the dosage form amount is 2 or more, retrieve POEDESC2. The POELOWDFA column contains a 3, so retrieving POEDESC2 results in the plural **milliliters** for the low dosage form unit.

Once again, the results after retrieving the descriptions in steps 5a-c are shown in the following table:

POESTRID	0000018195
POEDESC1	oral
POEDESC2	take
POELOWD	00000000000195
POEDESC1	MG
POELOWDFA	0000003
POEDESC2	milliliters

6. If you want to retrieve Additional Instructions text associated with the parsed data, query the POEM Order String to Text Table (RPOEOSX1_TEXT_LINK) and retrieve all POEM Text Codes (**POETEXTCDE**) associated to the retrieved POESTRIDs. Specify **90** for the POEM Text Type Code (**POETEXTTYP**), which indicates the retrieval is for Additional Instructions text. For example:

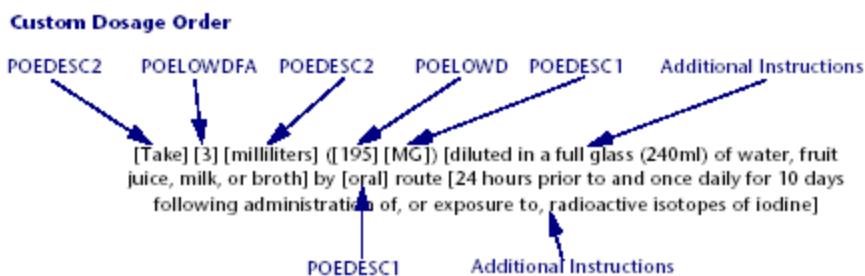
POESTRID	POETEXTTYP	POETXTSTR1	POETEXTCDE
0000018195	90	1	1000018195
0000018195	90	2	1000018195

The **POETXTSTR1** column suggests where in the custom dosage order the Additional Instructions text should appear.

7. Query the POEM Text Table (RPOETXT1_TEXT) and retrieve the POEM Text Lines (**POETXLINE**) associated to the retrieved POETEXTCDEs. Sort the POETEXTCDE and POETXTNUM columns in ascending order. For example:

POETEXTCDE	POETXTNUM	POETXLINE
1000018195	1	diluted in a full glass (240ml) of water, fruit juice, milk, or broth
2000018195	1	24 hours prior to and once daily for 10 days following administration
2000018195	2	of, or exposure to, radioactive isotopes of iodine

The parsed data retrieved in the preceding application is shown below:



Suggestions for Displaying Parsed Data

The following sections contain suggestions for displaying the different types of parsed data.

Displaying Route

Column: POEROUTE

The following tables contain a sample of route data:

RPOEOSR1_ORDER_STRING TABLE

POEROUTE

2064

RPOECD1_DEFINITION TABLE

POEUNITCDE

POEDESC1

2064

ORAL

Display Suggestion

“**by**” + POEDESC1 (retrieved from the RPOECD1_DEFINITION table) + “**route**”

For example: by oral route

Displaying Dose

Low Dose Columns: POELOWD and POELOWDU

High Dose Columns: POEHIGHD and POEHIGHDU

The following tables contain a sample of dose data:

RPOEOSR1_ORDER_STRING TABLE

POELOWD

POELOWDU

POEHIGHD

POEHIGHDU

0000000000200

0080

0000000000400

0080

RPOECD1_DEFINITION TABLE

POEUNITCDE	POEDESC1
0080	MG

Display Suggestion

POELOWD + POEDESC1 (retrieved from the RPOECD1_DEFINITION table) “to” + POEHIGHD (RPOEOSR1_ORDER_STRING table) + POEDESC1 (retrieved from the RPOECD1_DEFINITION table)

For example: 200 MG to 400 MG

- (i) Display to and High Dose values only if POEHIGHD is not 0.

If you wish to display TJC-compliant unit descriptions for dosage form information (POEUNITTYP = 1) or unit of measure information (POEUNITTYP = 2), query the [Units Description Table](#) (RUNITSD0_UNITS_DESC) using the values from the POEDESC1 column.

Displaying Low Frequency/Interval

Columns: POELOWF, POELOWI, and POELOWIU

The following tables contain a sample of low frequency/interval data:

RPOEOSR1_ORDER_STRING TABLE		
POELOWF	POELOWI	POELOWIU
004	001	3003

RPOECD1_DEFINITION TABLE	
POEUNITCDE	POEDESC1
3003	day

Display Suggestion

If POELOWF (RPOEOSR1_ORDER_STRING table) is not 0: POELOWF + POELOWI (RPOEOSR1_ORDER_STRING table) + POEDESC1 (retrieved from the RPOECD1_DEFINITION table).

For example: 4 times per day

- (i) For POELOWI, POESLOWI, and POEHIGHI codes, if the value is 1, display the words **times per** instead of the value 1; for interval values greater than 1, display the value.

Displaying Second Low Frequency/Interval

Columns: POESLOWF, POESLOWI, and POESLOWIU

The following tables contain a sample of second low frequency/interval data:

RPOEOSR1_ORDER_STRING TABLE

POESLOWF	POESLOWI	POESLOWIU
001	006	3004

RPOECD1_DEFINITION TABLE

POEUNITCDE	POEDESC1
3004	hours

Display Suggestion

If POESLOWF (RPOEOSR1_ORDER_STRING table) is not 0: POESLOWF + POESLOWI (RPOEOSR1_ORDER_STRING table) + POEDESC2 (retrieved from the RPOECD1_DEFINITION table)

For example: every 6 hours

- (i) For POELOWF, POESLOWF, and POEHIGHF codes, if the value is 1, display the word **every** instead of the value 1; for frequency values greater than 1, display the value.

Displaying High Frequency/Interval

Columns: POEHIGHF, POEHIGHI, POEHIGHIU

The following tables contain a sample of high frequency/interval data:

RPOEOSR1_ORDER_STRING TABLE

POESHIGHF	POEHIGHI	POEHIGHIU
002	001	3003

REPOECD1_DEFINITION TABLE

POEUNITCDE	POEDESC1
3003	day

Display Suggestion

If POEHIGHF (RPOEOSR1_ORDER_STRING table) is not 0: POEHIGHF + POEHIGHI (RPOEOSR1_ORDER_STRING table) + POEDESC1 (retrieved from the RPOECD1_DEFINITION table)

For example: 2 times per day

- (i) For POELOWI, POESLOWI, and POEHIGHI codes, if the value is 1, display the words **times per** instead of the value 1; for interval values greater than 1, display the value.

Displaying Duration

Columns: POELOWDR, POELOWDRU, POEHIGHDR, and POEHIGHDRU

The following tables contain a sample of duration data:

RPOEOSRT1_ORDER_STRING TABLE			
POELOWDR	POELOWDRUS	POEHIGHDR	POEHIGHDRU
014	3003	021	3003

RPOECD1_DEFINITION TABLE	
POEUNITCDE	POEDESC2
3003	days

Display Suggestion

If POELOWDR (RPOEOSR1_ORDER_STRING table) is not 0: “**for**” + POELOWDR + POELOWDRU (retrieve description from RPOECD1_DEFINITION table) + “**to**” + POEHIGHDR (RPOEOSR1_ORDER_STRING table) + POEDESC2 (retrieved from the RPOECD1_DEFINITION table)

For example: for 14 days to 21 days

- i Display **to** and High Duration values only if POEHIGHDR is not 0.

Calculating Prescription Quantity

A prescription quantity is required when prescribing a drug in an ambulatory setting. A prescription quantity is calculated using the following formula:

of dosage form units per dose × # of doses per interval × # of intervals to use drug

The interval is usually days. The intervals in the equations must match in order for the equation to calculate the correct prescription quantity. For example, in the following equation the same interval (day) appears in the variables **3 times per day** and **10 days**.

2 tablets × 3 times per day × 10 days

For maintenance drugs (drugs taken for an indefinite period of time), the prescriber must provide as input the number of intervals to use the drug.

The system can calculate the prescription quantity for dosage orders that do not require additional dosage calculation (such as weight or body surface area) and do not include a dose range (for example, 1-2 tablets every 4-6 hours).

Prescription quantities for dosage orders can be calculated when all of the following conditions are met. All columns are located in the POEM Order String Table (RPOEOSR1_ORDER_STRING) unless otherwise noted.

- The POEM Calculation Required ([POECALCREQ](#)) value in the [POEM Order Set Table](#) (RPOEOS1_ORDER_SET) is **0**.
- The POEM Low Dose Form Amount ([POELOWDFA](#)) value is not **0**.
- The POEM Dispensable Quantity Code ([POEDISPQTY](#)) value in the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) associated with the POEM Low Dose Form Units Code ([POELOWDFU](#)) is **1**.
- The POEM High Dose Form Amount ([POEHIGHDFA](#)) value is **0**.
- The POEM High Frequency ([POEHIGHF](#)) value is **0**.
- The POEM Low Duration ([POELOWDR](#)) value is not **0** or the end-user provides the number of intervals as input.
- The POEM Low Duration Units Code ([POELOWDRU](#)) value is the same as the POEM Low Interval Units ([POELOWIU](#)) value, or the end-user provides the number of intervals as input.
- The POEM High Duration ([POEHIGHDR](#)) value is **0**, or the end-user provides the number of intervals as input.

 The total prescription quantity is the sum of the total number of dosage form units calculated for each Order String Identifier linked to the Order Set Identifier.

 When the POELOWDFU is linked within the RPOECD1_DEFINITION table to an mL Conversion value

that is not 0, multiply the total prescription quantity by the mL Conversion value to express the total prescription quantity in terms of milliliters.

- i** When the dosage form unit in POEM is in terms of mL and the Drug Form Code (DF) in the [IDDF Canada Drug Product Table](#) (RICAIDC1_DRUG_PRODUCT) is equal to 1 (each), the system will need to look at the volume per each in the [Clinical Formulation Ingredient Strength Component Table](#) (RGCNSTR0_INGREDIENT_STRENGTH) and divide the calculated volume (total dose) by the volume per each to get the number of eaches to dispense. In cases where the ingredient strength is expressed as a percent, the percent value must be converted to a strength per volume. For example, 1% is expressed as 1g (strength)/100mL (volume). In other cases where there is no volume per each, the calculation cannot be performed. For more information, please see the [Clinical Formulation Ingredient Strength Component Table](#).

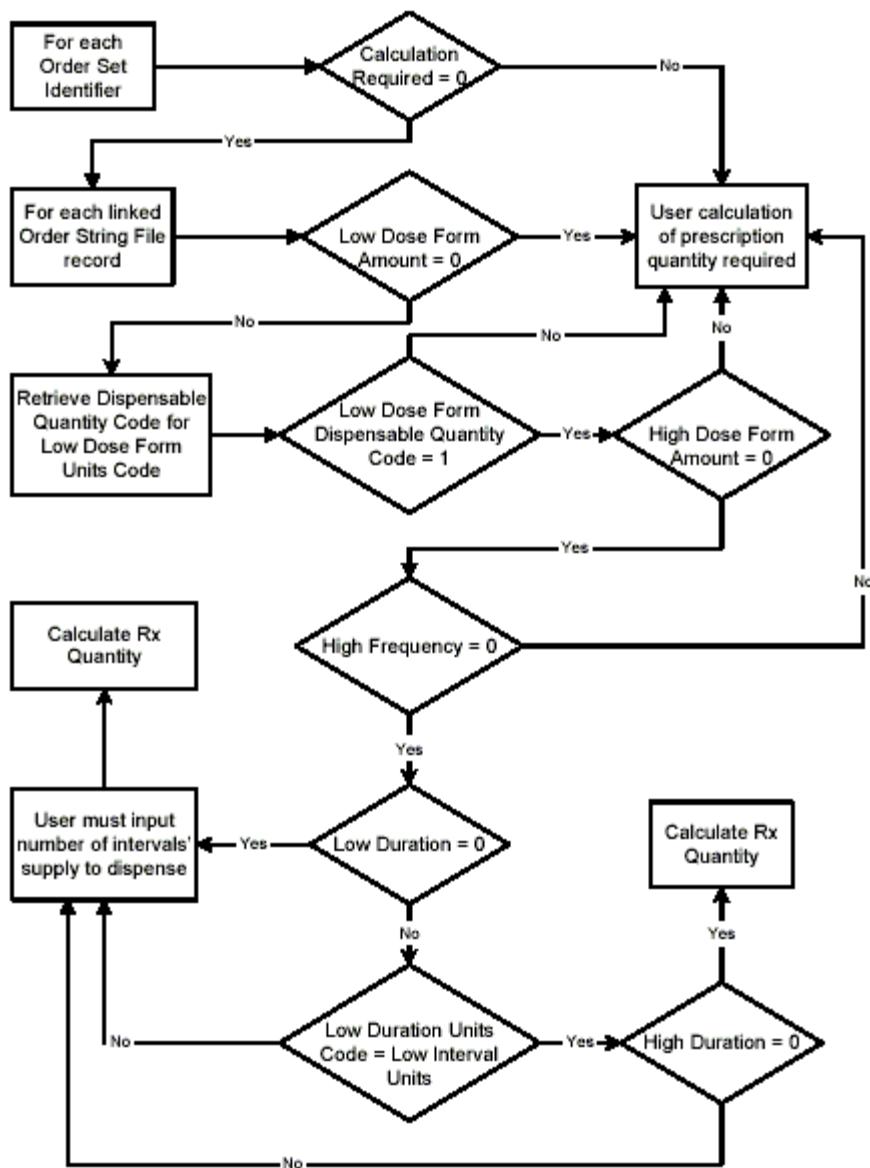
Using information found in the RPOEOSR1_ORDER_STRING and the RPOECD1_DEFINITION tables, the following formula is used to calculate the total number of dosage form units for an order string:

$$\text{Prescription Quantity} = \frac{\text{POELOWDFA} \times \text{POELOWF} \times \text{POELOWIU_POEPPERDAYC} \times \text{POELOWDR}}{\text{POELOWI}}$$

Formula Abbreviation Table

Column Name	Column Description
POELOWDFA	Low Dose Form Amount
POELOWF	Low Frequency
POELOWIU_POEPPERDAYC	Low Interval Units Code_Per Day Conversion (located in the RPOECD1_DEFINITION table)
POELOWI	Low Interval
POELOWDR	Low Duration or Days Supply

POEM Calculation of Prescription Quantity



Example 1—Prescription Quantity Calculation

The Order String Text “Take 1 tablet (250mg) by oral route 4 times per day for 10 days” has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	1
POELOWF	Low Frequency	4

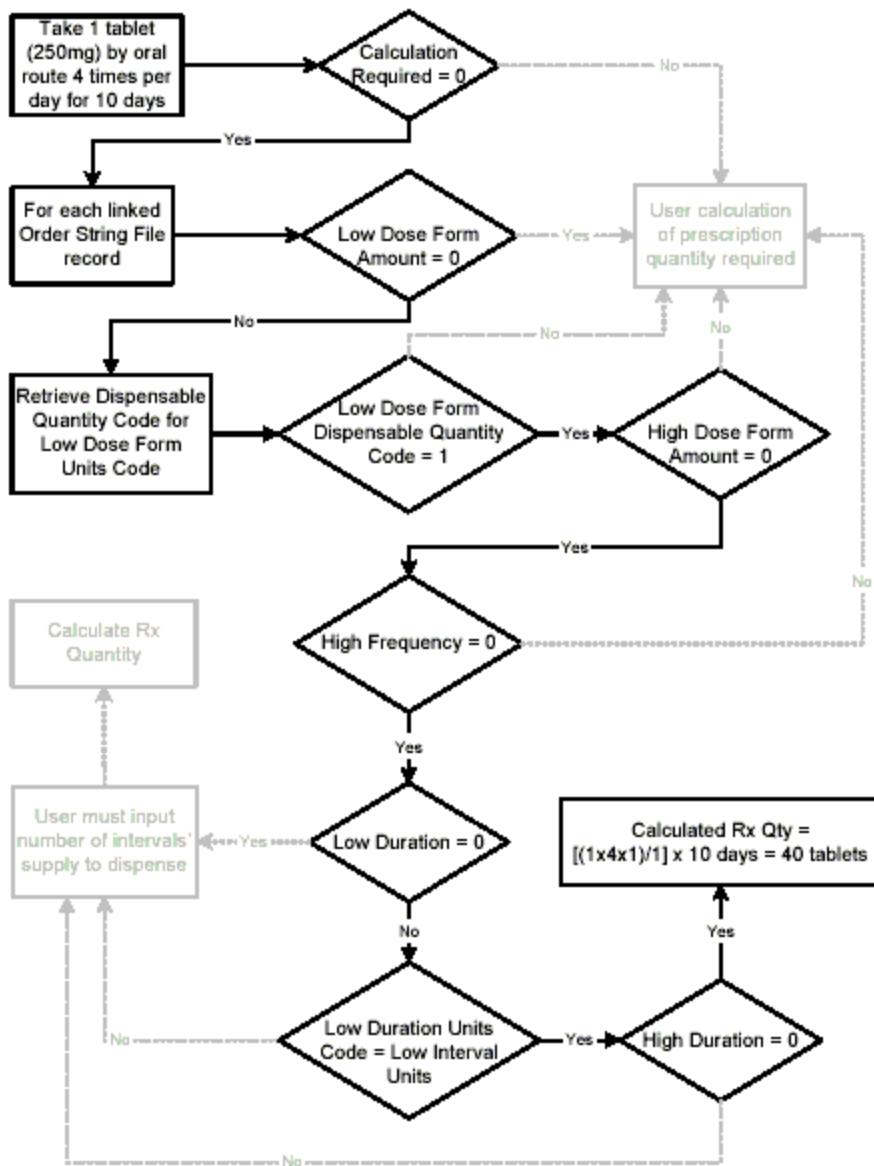
POELOWIU_POEPERDAYC	Low Interval Units Code _Per Day Conversion In this example, the POELOWIU column in the RPOEOSR1_ORDER_STRING table contains Unit Code 3003 . To obtain the Per Day Conversion value, locate POEUNITCDE 3003 in the RPOECD1_DEFINITION table, identifying the table row from which the value is retrieved. In that table row, the POEPERDAYC column contains the value 1 .	1
POELOWI	Low Interval	1
POELOWDR	Low Duration or Days Supply	10

Prescription Quantity = $\frac{\text{POELOWDFA} \times \text{POELOWF} \times \text{POELOWIU_POEPERDAYC}}{\text{POELOWI}} \times \text{POELOWDR}$

$$\text{Prescription Quantity} = \frac{1 \times 4 \times 1}{1} \times 10 = 40$$

Refer to the following diagram which illustrates Example 1.

POEM Calculation of Prescription Quantity, Example 1



Example 2—Prescription Quantity Calculation

The Order String Text “Take 1 tablet (250mg) by oral route every 6 hours for 10 days” has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	1
POELOWF	Low Frequency	1

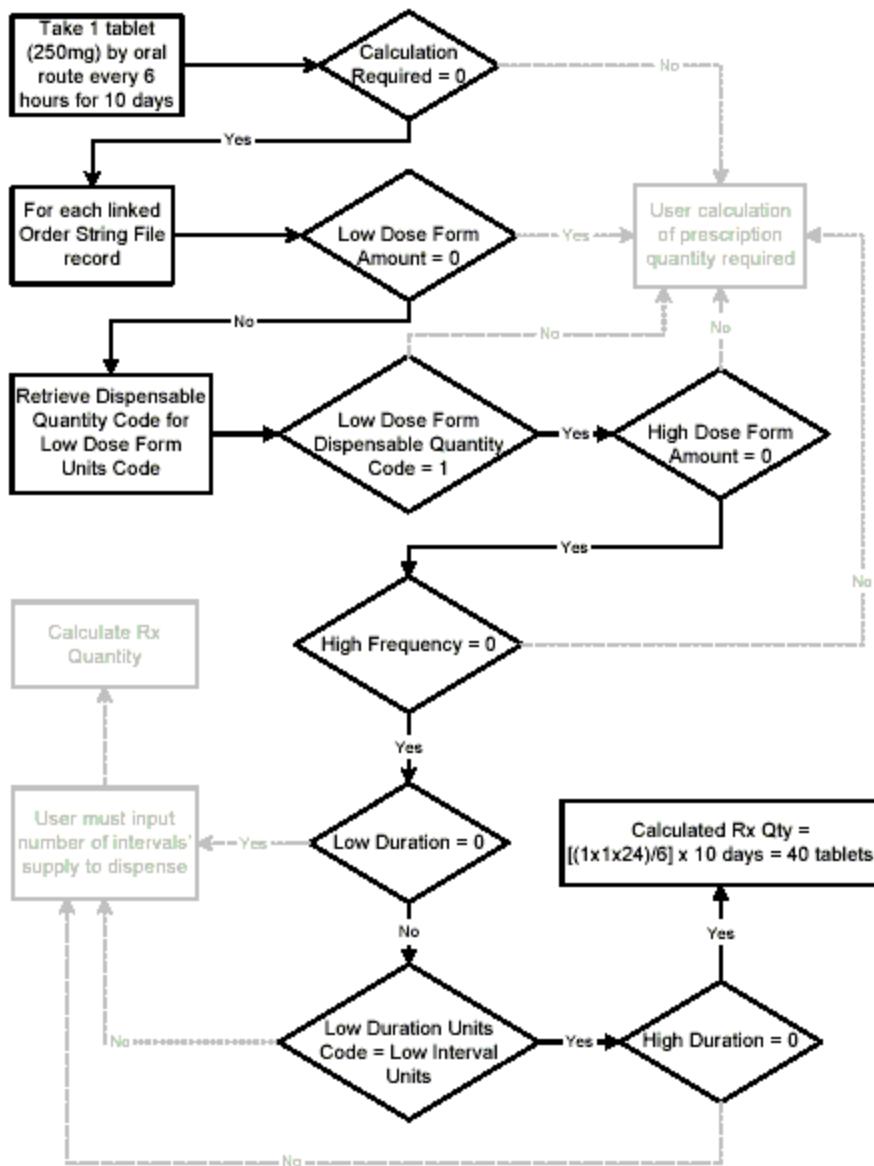
POELOWIU_POEPPERDAYC	Low Interval Units Code _Per Day Conversion In this example, the POELOWIU column in the RPOEOSR1_ORDER_STRING table contains Unit Code 3004 . To obtain the Per Day Conversion value, locate POEUNITCDE 3004 in the RPOECD1_DEFINITION table, identifying the table row from which the value is retrieved. In that table row, the POEPPERDAYC column contains the value 24 .	24
POELOWI	Low Interval	6
POELOWDR	Low Duration or Days Supply	10

$$\text{Prescription Quantity} = \frac{\text{POELOWDFA} \times \text{POELOWF} \times \text{POELOWIU_POEPPERDAYC}}{\text{POELOWI}} \times \text{POELOWDR}$$

$$\text{Prescription Quantity} = \frac{1 \times 1 \times 24}{6} \times 10 = 40$$

Refer to the following diagram which illustrates Example 2.

POEM Calculation of Prescription Quantity, Example 2



Example 3—Prescription Quantity Calculation

The Order String Text “Take 10 milliliters (250mg) by oral route every 8 hours” with an end-user defined “days supply” of 30 days has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	10
POELOWF	Low Frequency	1

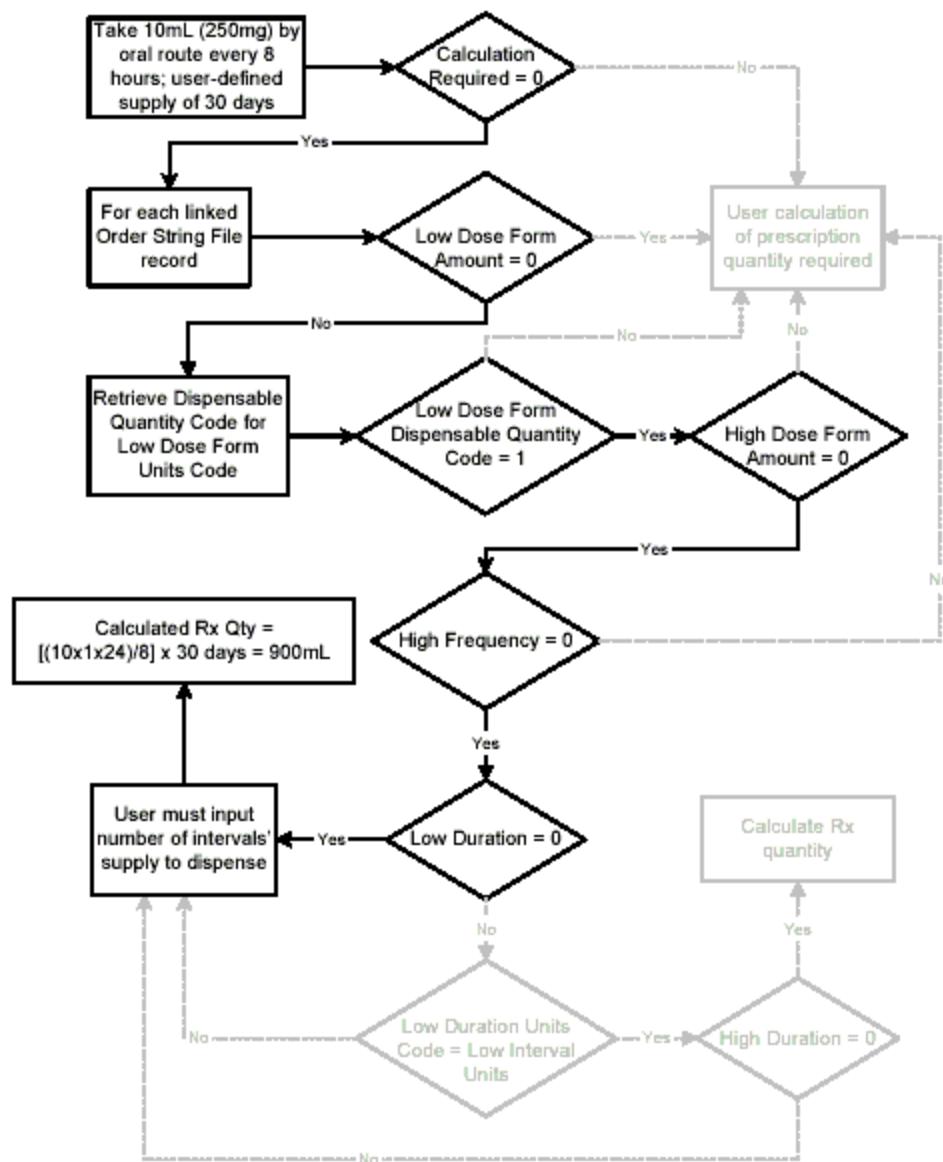
POELOWIU_POEPPERDAYC	Low Interval Units Code _Per Day Conversion In this example, the POELOWIU column in the RPOEOSR1_ORDER_STRING table contains Unit Code 3004 . To obtain the Per Day Conversion value, locate POEUNITCDE 3004 in the RPOECD1_DEFINITION table, identifying the table row from which the value is retrieved. In that table row, the POEPPERDAYC column contains the value 24 .	24
POELOWI	Low Interval	8
POELOWDR	Low Duration or Days Supply	30

$$\text{Prescription Quantity} = \frac{\text{POELOWDFA} \times \text{POELOWF} \times \text{POELOWIU_POEPPERDAYC}}{\text{POELOWI}} \times \text{POELOWDR}$$

$$\text{Prescription Quantity} = \frac{10 \times 1 \times 24}{8} \times 30 = 900$$

Refer to the following diagram which illustrates Example 3.

POEM Calculation of Prescription Quantity, Example 3



Example 4—Prescription Quantity Calculation

The Order String Text “Instill 1 drop into right eye by ophthalmic route every 2-3 hours during the day and less frequently at night” with an end-user defined “days supply” of 30 days has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

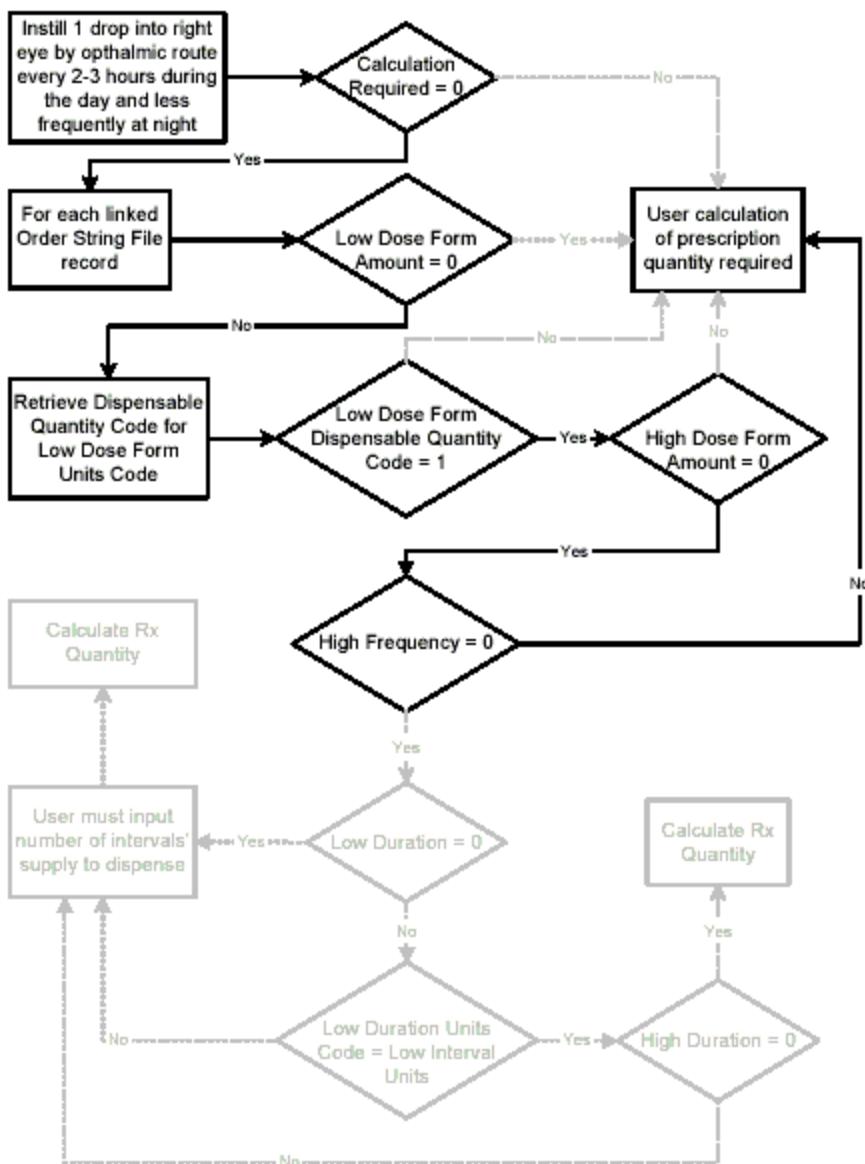
Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	1
POELOWF	Low Frequency	1

POELOWIU_POEPPERDAYC	Low Interval Units Code _Per Day Conversion	24
POELOWI	Low Interval	2
POELOWDR	Low Duration or Days Supply	30
POEHIGHF	High Frequency	1

Quantity cannot be calculated because the **High Frequency** value is not **0**. In this situation, prompt the end-user to input a prescription quantity.

Refer to the following diagram which illustrates Example 4.

POEM Prescription Quantity Calculation, Example 4



Example 5—Prescription Quantity Calculation

The Order String Text “Instill 1 drop into affected eye(s) by ophthalmic route every 2 hours during the day and less frequently at night” with an end-user defined “days supply” of 30 days has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

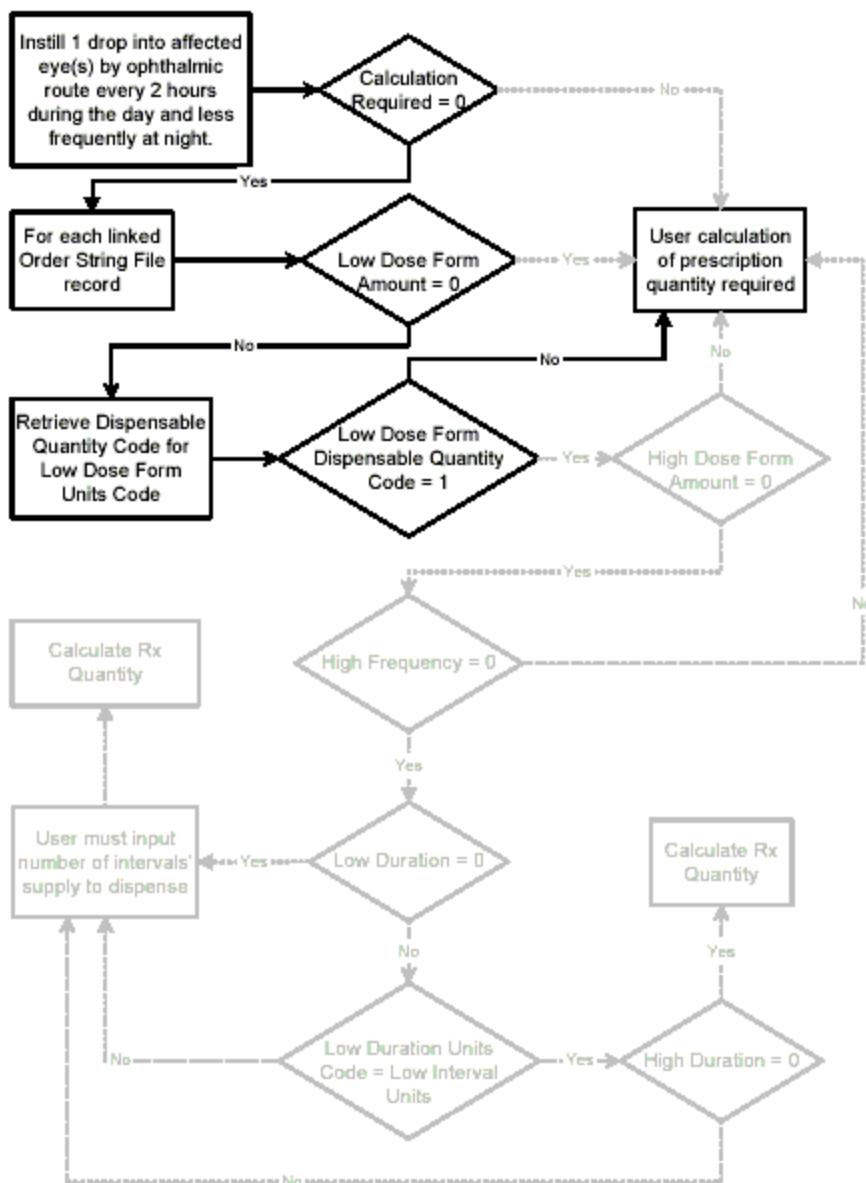
Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	1
POELOWF	Low Frequency	1

POELOWIU_POEPPERDAYC	Low Interval Units Code _Per Day Conversion	24
POELOWI	Low Interval	2
POELOWDR	Low Duration or Days Supply	30
POELOWDFU_POEDISPQTY	Low Dose Form Units Code_Dispensable Quantity In this example, the POELOWDFU column in the RPOEOSR1_ORDER_STRING table contains Unit Code 3017 . To obtain the Dispensable Quantity Code value, locate POEUNITCDE 3017 in the RPOECD1_DEFINITION table, identifying the table row from which the value is retrieved. In that table row, the POEDISPQTY column contains the value 0 .	0

Quantity cannot be calculated because the **Dispensable Quantity Code** value is **0**. In this situation, prompt the end-user to input package size and quantity into the appropriate prescription fields.

Packaging information can be presented to the end user via a pick list. Refer to the following diagram which illustrates Example 5.

POEM Calculation of Prescription Quantity, Example 5



Example 6—Prescription Quantity Calculation

The Order String Text “Take 1 tablet (500mg) or 2 tablets (1000mg) by oral route every 6 hours as needed” with an end-user defined “days supply” of 30 days has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

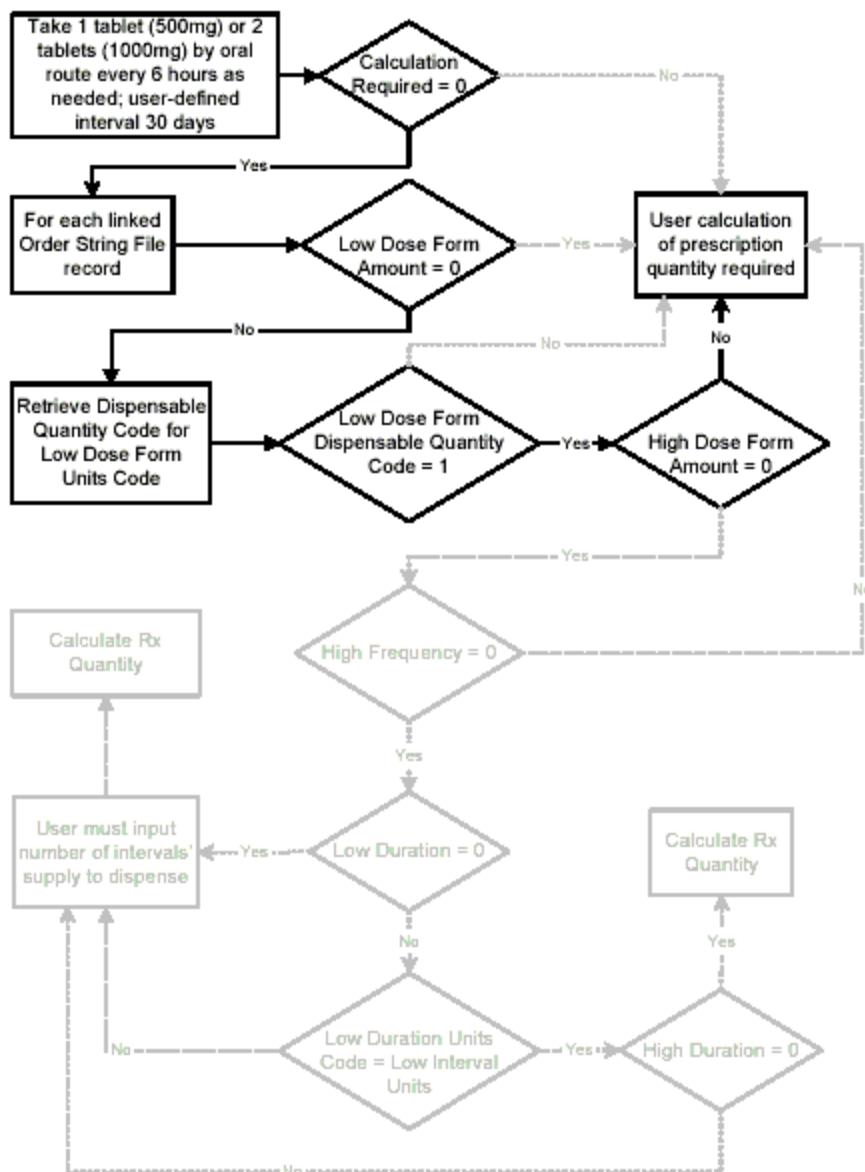
Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	1
POELOWF	Low Frequency	2

POELOWIU_POEPPERDAYC	Low Interval Units Code _Per Day Conversion	.1429
POELOWI	Low Interval	1
POELOWDR	Low Duration or Days Supply	4
POEHIGHDFA	High Dose Form Amount	2

Quantity cannot be calculated because the **High Dose Form Amount** value is not **0**. In this situation, prompt the end-user to input a prescription quantity.

Refer to the following diagram which illustrates Example 6.

POEM Calculation of Prescription Quantity, Example 6



Example 7—Prescription Quantity Calculation

The Order String Text “Take 4 teaspoonsful (20mL) by oral route every 12 hours” with an end-user defined “days supply” of 5 days has the following values. All values are located in the RPOEOSR1_ORDER_STRING table unless otherwise noted.

Column Name	Column Description	Value
POELOWDFA	Low Dose Form Amount	4
POELOWF	Low Frequency	1

POELOWIU_POEPPERDAYC	Low Interval Units Code _Per Day Conversion In this example, the POELOWIU column in the RPOEOSR1_ORDER_STRING table contains Unit Code 3004 . To obtain the Per Day Conversion value, locate POEUNITCDE 3004 in the RPOECD1_DEFINITION table, identifying the table row from which the value is retrieved. In that table row, the POEPPERDAYC column contains the value 24 .	24
POELOWI	Low Interval	12
POELOWDR	Low Duration or Days Supply	5
POELOWDFU_POEMLCNVRS	POEM Low Dose Form Units Code_POEM mL Conversion (RPOECD1_DEFINITION table)	1

$$\text{Prescription Quantity (tsps)} = \frac{\text{POELOWDFA} \times \text{POELOWF} \times \text{POELOWIU_POEPPERDAYC}}{\text{POELOWI}} \times \text{POELOWDR}$$

$$\text{Prescription Quantity (tsps)} = \frac{4 \times 1 \times 24}{12} \times 5 = 40$$

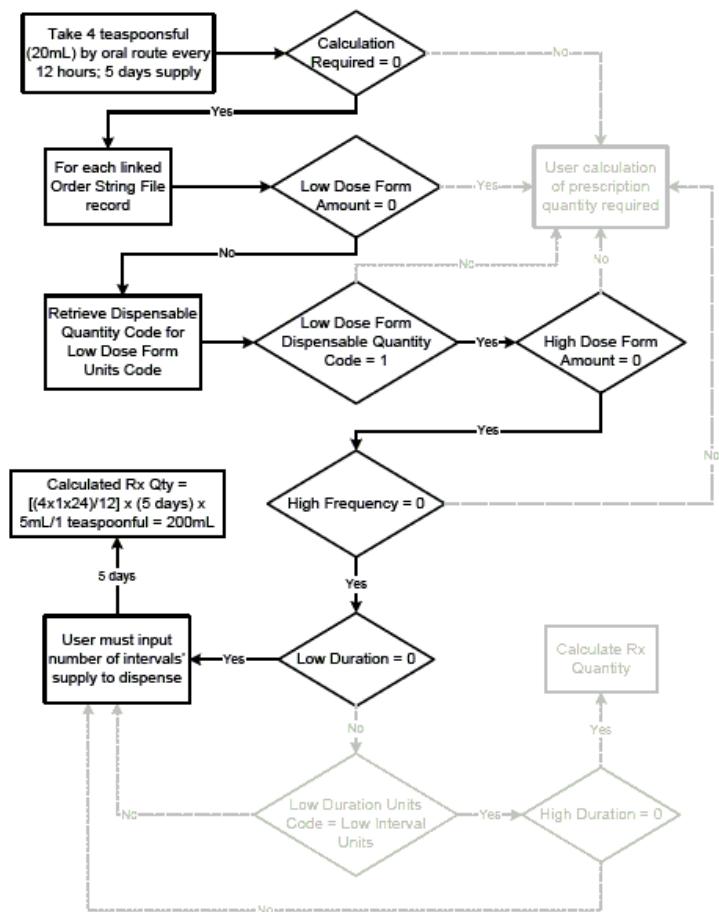
$$\text{Prescription Quantity (mL)} = \text{Prescription Quantity (tsps)} \times \text{POELOWDFU_POEMLCNVRS}$$

$$\text{Prescription Quantity (mL)} = 40 \text{ tsps} \times 5 = 200 \text{ mL}$$

In this example, the POELOWDFU column in the RPOEOSR1_ORDER_STRING table contains Unit Code 3008. To obtain the POEM mL Conversion value, locate POEUNITCDE 3008 in the RPOECD1_DEFINITION table, identifying the table row from which the value is retrieved. In that table row, the POEMLCNVRS column contains the value 5.

Refer to the following diagram which illustrates Example 7.

POEM Calculation of Prescription Quantity, Example 7



Retrieving Dosage Orders for Related Disease States

The following applications use the First Databank Medical Lexicon DxID and ICD Search Tables to retrieve dosage orders that are specific to a particular diagnosis or disease state. These applications are dependent upon the following:

- Familiarity with the First Databank Medical Lexicon Module and the Disease Identifier (DxID).
- Assignment of a DxID or ICD Code to a given disease state.

Refer to the [FDB Medical Lexicon™ \(FML™\) 2.0](#) for more information.

Retrieving Dosage Orders Using an ICD Code

POEM does not allow ICD Codes as input for retrieving Dosage Orders. The following applications explain how to locate a related DxID, which can be used in POEM to access Dosage Orders in combination with a specified Clinical Formulation ID (GCN_SEQNO).

The [FML ICD Search Table](#) (RFMLISR1_ICD_SEARCH) is used to locate related DxIDs. Related DxIDs have three ratings in the RFMLISR1_ICD_SEARCH table, each of which is indicated by a value in the FML_NAV_CODE column. The three values are:

FML_NAV_CODE	DESCRIPTION
01	Equal
02	Broader
03	Narrower

There are two possible query results when conducting a search for a related DxID using the applications below and querying the RFMLISR1_ICD_SEARCH table. The possible results are:

- A related DxID rated equal. Some broader and/or narrower related DxIDs may also be included in the results because the FML_NAV_CODE is not specified for either of the application queries.
- Broader and/or narrower related DxIDs, but none rated equal.

Two applications are provided in this section for the handling of the two types of results when querying the RFMLISR1_ICD_SEARCH table for related DxIDs:

[Using an ICD Code to Retrieve Dosage Orders With a DxID Rated Equal](#)

[Using an ICD Code to Retrieve Dosage Orders With DxIDs Rated Broader and/or Narrower](#)

Using an ICD Code to Retrieve Dosage Orders With a DxID Rated Equal

For purposes of demonstrating this application, the following scenario is used: Input for this application is Clinical Formulation ID (GCN_SEQNO) **008995 (amoxicillin trihydrate)**. In addition, the patient has been diagnosed with **Genitourinary Chlamydia Trachomatis**, which has an ICD-9-CM of **099.55**.

1. Given the ICD-9-CM, query the [FML ICD Search Table](#) (RFMLISR1_ICD_SEARCH) for FML Related DxIDs ([RELATED_RXID](#)) and FML Navigation Codes ([FML_NAV_CODE](#)), specifying the following:

- The ICD Code for the Search ICD Code (**SEARCH_ICD_CD**) column.
- **05** for the FML Clinical Module Code (**FML_CLIN_CODE**) column, which specifies the query is for POEM. For example:

SEARCH_ICD_CD	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
099.55	00000297	05	01
099.55	00002321	05	03

Results with FML_NAV_CODE **01** indicate the RELATED_RXID is equal.

2. Query the **POEM GCN_SEQNO POEM Source Table** (RPOEGSQ2_GCNSEQNO_MSTR) for POEM Order Set Identifiers (**POEOSETID**) associated with the specified Clinical Formulation ID (GCN_SEQNO) and the RELATED_RXIDs with FML_NAV_CODE **01**.
3. Depending on the query results, do one of the following:
 - If POEOSETIDs are retrieved, retrieve the Dosage Orders associated to the retrieved POEOSETIDs and present the Dosage Orders to the end user. Refer to [Retrieving Dosage Order String Text](#) and [Creating Custom Dosage Orders](#) for more information about retrieving Dosage Orders. In this example, POEOSETIDs are retrieved for RxID 00000297, as shown below:

GCN_SEQNO	POEOSETID	RXID
008995	000373	00000297
008995	000375	00000297
008995	008192	00000297
008995	008194	00000297
008995	009300	00000297
008995	009301	00000297

- If no POEOSETIDs are retrieved using the RxID rated equal, continue to Step 4. For the example shown above, the combination of Clinical Formulation ID (GCN_SEQNO) 008995 and RxID 00000297 retrieves POEOSETIDs. However, the remaining steps explain what to do in a case where POEOSETIDs are **not retrieved** for a GCN_SEQNO/RxID combination where the RxID is rated equal.
4. If no POEOSETIDs are retrieved using the RxID rated equal, query the RPOEGSQ2_GCNSEQNO_MSTR table for POEOSETIDs associated to the specified Clinical Formulation ID (GCN_SEQNO) and any RELATED_RXIDs with FML_NAV_CODE **02** and/or **03**, which indicates a rating of broader and/or narrower.
 5. Depending on the query results, do one of the following:
 - If POEOSETIDs are retrieved using RxIDs rated broader and/or narrower, retrieve the Dosage Orders associated to the retrieved POEOSETIDs and present the Dosage Orders to the end user.

Preface all Dosage Orders retrieved using DxIDs rated broader and/or narrower with the following statement: “Dosage Orders for [Diagnosis ICD_CD] are not available. Dosage Orders for the associated term [Related DxID name], have been retrieved.”

- If no POEOSETIDs are returned for DxIDs rated broader and/or narrower, continue to Step 6.

6. Retrieve the Default Dosage Order for the Clinical Formulation ID (GCN_SEQNO), independent of indication, and present it to the end user. Preface the Default Dosage Order with the following statement: “Dosage Orders for [Diagnosis ICD_CD] are not available. The Default Dosage Order, independent of diagnosis, has been retrieved.” Refer to [Retrieving Default Dosage Order String Text](#) and [Creating Custom Dosage Orders](#) for more information.

Using an ICD Code to Retrieve Dosage Orders With DxIDs Rated Broader and/or Narrower

When querying the RFMLISR1_ICD_SEARCH table to retrieve RELATED_DXIDs for an ICD Code, it is possible to retrieve only RELATED_DXIDs that are rated broader and/or narrower, indicating there are no RELATED_DXIDs that are rated equal. This application explains how to use this type of query result in POEM.

For purposes of demonstrating this application, the following scenario is used: Input for this application is Clinical Formulation ID (GCN_SEQNO) **011668 (cimetidine)**. In addition, the patient has been diagnosed with a **Chronic Gastric Ulcer with Hemorrhage Without Obstruction**, which has an ICD-9-CM of **531.40**.

1. Given the ICD-9-CM, query the [FML ICD Search Table](#) (RFMLISR1_ICD_SEARCH) for FML Related DxIDs (**RELATED_DXID**) and FML Navigation Codes (**FML_NAV_CODE**), specifying the following:
 - The ICD-9-CM for the Search ICD Code (**SEARCH_ICD_CD**) column.
 - **05** for the FML Clinical Module Code (**FML_CLIN_CODE**) column, which specifies the query is for POEM. For example:

SEARCH_ICD_CD	RELATED_DXID	FML_CLIN_CODE	ML_NAV_CODE
531.40	00002013	05	03
531.40	00002015	05	03
531.40	00003545	05	03
531.40	00004638	05	03

Results with **FML_NAV_CODE 01** indicate the RELATED_DXID is equal. As shown, results for ICD-9-CM 531.40 contain no RELATED_DXIDs with **FML_NAV_CODE 01**. All of the results shown have an **FML_NAV_CODE** of **03**, which indicates the RELATED_DXIDs are rated narrower.

2. Query the [POEM GCN_SEQNO POEM Source Table](#) (RPOEGSQ2_GCNSEQNO_MSTR) for POEM Order Set Identifiers (**POEOSETID**) associated with the specified Clinical Formulation ID (GCN_SEQNO) and each of the RELATED_DxIDs with **FML_NAV_CODE 02** and/or **03**. For example:

GCN_SEQNO	POEOSETID	DXID
011668	001834	00002013

3. Do one of the following:

- If POEOSETIDs are retrieved using DxIDs rated broader and/or narrower, retrieve the Dosage Orders associated to the retrieved POEOSETIDs and present the Dosage Orders to the end user. Preface all Dosage Orders retrieved using DxIDs rated broader and/or narrower with the following statement: “Dosage Orders for [Diagnosis ICD_CD] are not available. Dosage Orders for the associated term [Related DxID name], have been retrieved.”
 - If no POEOSETIDs are retrieved for DxIDs rated broader and/or narrower, continue to Step 4. For the example shown above, the combination of Clinical Formulation ID (GCN_SEQNO) 011668 and DxID 00002013 results in a returned POEOSETID. However, Step 4 explains what to do in the case where POEOSETIDs are **not returned** for GCN_SEQNO/DxID combinations where the DxID is rated broader and/or narrower.
4. Retrieve the Default Dosage Order for the Clinical Formulation ID (GCN_SEQNO), independent of indication, and present it to the end user. Preface the Default Dosage Order with the following statement: “Dosage Orders for [Diagnosis ICD_CD] are not available. The Default Dosage Order, independent of diagnosis, has been retrieved.”
- Refer to [Retrieving Default Dosage Order String Text](#) and [Creating Custom Dosage Orders](#) for more information.

Retrieving Dosage Orders Using DxIDs Related To DxIDs

Given a Clinical Formulation ID (GCN_SEQNO) and a DxID, Dosage Orders can be retrieved using POEM. However, in some cases, a Clinical Formulation ID (GCN_SEQNO) and DxID combination may not have any Dosage Orders available. For instances where this occurs, the end user can be presented with Dosage Orders for the same Clinical Formulation ID (GCN_SEQNO), but associated with DxIDs that are rated as broader and/or narrower than the original DxID. Use the [FML Disease Identifier \(DxID\) Search Table](#) (RFMLDSR0_DXID_SEARCH) to access related DxIDs for a given DxID.

Scenario: Input for the retrieval is Clinical Formulation ID (GCN_SEQNO) **006646 (levothyroxine sodium)**. In addition, the patient has been diagnosed with **Congenital Hypothyroidism**, which has a DxID of **00000583**. In this scenario, the user has already queried the POEM GCN_SEQNO POEM Source Table (RPOEGSQ2_GCNSEQNO_MSTR) using the Clinical Formulation ID (GCN_SEQNO) 006646/DxID 00000583 combination, and no results were retrieved.

1. Given the DxID, query the RFMLDSR0_DXID_SEARCH table for FML Related DxIDs ([RELATED_RXID](#)) and FML Navigation Codes ([FML_NAV_CODE](#)), specifying the following:
 - The DxID for the FML Search DxID ([SEARCH_RXID](#)) column.
 - **05** for the FML Clinical Module Code ([FML_CLIN_CODE](#)) column, which specifies the query is for POEM. For example:

SEARCH_RXID	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
00000583	00000578	05	03
00000583	00000584	05	03

00000583	00000587	05	03
00000583	00000588	05	03

2. Query the RPOEGSQ2_GCNSEQNO_MSTR table for POEOSETIDs associated with the specified Clinical Formulation ID (GCN_SEQNO) and any RELATED_DxIDs with FML_NAV_CODE **02** and/or **03**. The combined results for queries for each of the RELATED_DxIDs retrieved in the previous step are shown below:

GCN_SEQNO	POEOSETID	DXID
006646	009083	00000584
006646	009084	00000584
006646	009085	00000584
006646	009086	00000584
006646	009084	00000587
006646	009086	00000587
006646	009087	00000587

3. Do one of the following:

- If POEOSETIDs are retrieved using DxIDs rated broader and/or narrower, retrieve the Dosage Orders associated to the retrieved POEOSETIDs and present the Dosage Orders to the end user. Preface all Dosage Orders retrieved using DxIDs rated broader and/or narrower with the following statement: “Dosage Orders for [**Diagnosis DxID name**] are not available. Dosage Orders for the associated term [**Related DxID name**], have been retrieved.” Refer to [Retrieving Default Dosage Order String Text](#) and [Creating Custom Dosage Orders](#) for more information about retrieving Dosage Orders.
- If no POEOSETIDs are retrieved, continue to Step 4.

4. Retrieve the Default Dosage Order for the Clinical Formulation ID (GCN_SEQNO), independent of indication, and present it to the end user. Preface the Default Dosage Order with the following statement: “Dosage Orders for [**Diagnosis DxID name**] are not available. The Default Dosage Order, independent of diagnosis, has been retrieved.” Refer to [Retrieving Default Dosage Order String Text](#) and [Creating Custom Dosage Orders](#) for more information about retrieving dosage orders.

POEM ERD and Technical Specifications

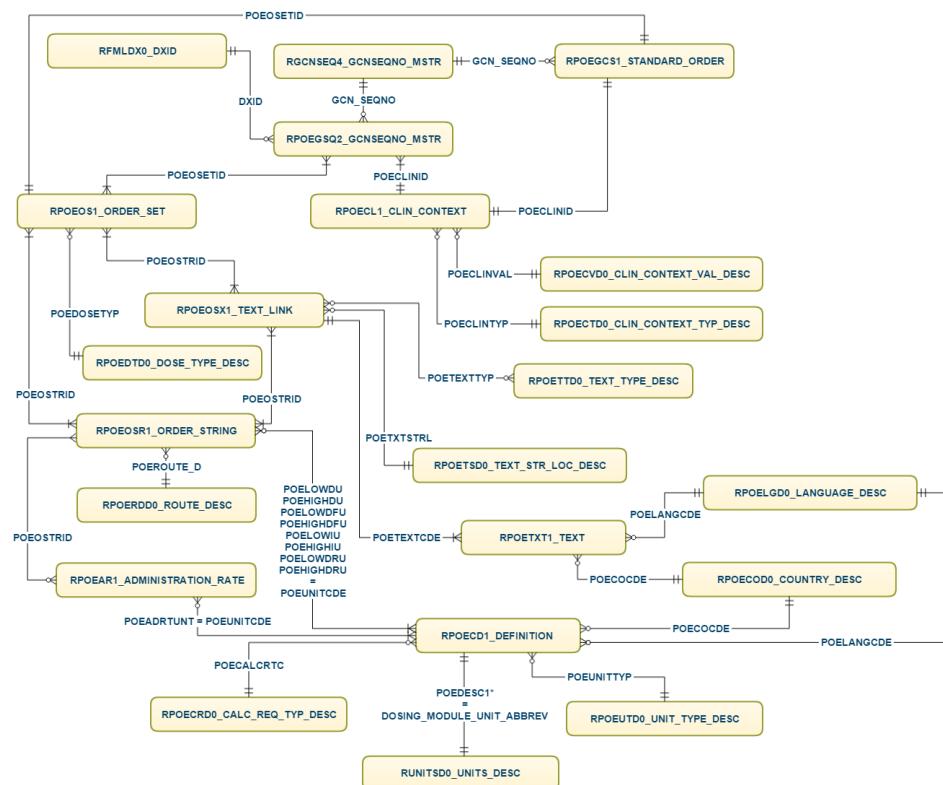
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- POEM Tables
- POEM ERD

POEM Tables

- POEM Administration Rate Table
- POEM Calculation Required Type Code Description Table
- POEM Clinical Context Type Description Table
- POEM Clinical Context Value Description Table
- POEM Code Definition Table
- POEM Context Table
- POEM Country Code Description Table
- POEM Dose Type Code Description Table
- POEM GCN_SEQNO POEM Source Table
- POEM GCN_SEQNO Standard Order Table
- POEM Language Code Description Table
- POEM Order Set Table
- POEM Order String Table
- POEM Order String to Text Table
- POEM Route Description Code Description Table
- POEM Text String Location Code Description Table
- POEM Text Table
- POEM Text Type Code Description Table
- POEM Unit Code Type Description Table

POEM ERD



POEM Administration Rate Table

Table Name	RPOEAR1_ADMINISTRATION_RATE
Revision Activity	add.08-11-2000
Purpose	Links an order string to administration rate information.

Key	Column Name	Column Description	Format	Length	Picture
P	POEOSTRID	POEM Order String Identifier	N	10	9(10)
P	POEADMSQ	POEM Administration Rate Sequence Code	N	2	9(2)
	POEADRT	POEM Administration Rate	N	9	9(5).9(3)
	POEADRTUNT	POEM Administration Rate Unit Code	N	4	9(4)

POEM Calculation Required Type Code Description Table

Table Name	RPOECRD0_CALC_REQ_TYPE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Calculation Required Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POECALCRTC	POEM Calculation Required Type Code	AN	1	X(1)
	POECALCRTC_DESC	POEM Calculation Required Type Code Description	AN	60	X(60)

POEM Clinical Context Type Description Table

Table Name	RPOECLINTD0_CLIN_CONTEXT_TYP_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Clinical Context Type to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POECLINTYP	POEM Clinical Context Type	N	2	9(2)
	POECLINTYP_DESC	POEM Clinical Context Type Description	AN	39	X(30)

POEM Clinical Context Value Description Table

Table Name	RPOECVD0_CLIN_CONTEXT_VAL_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Clinical Context Value to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POECLINVAL	POEM Clinical Context Value	AN	2	X(2)
	POECLINVAL_DESC	POEM Clinical Context Value Description	AN	30	X(30)

POEM Code Definition Table

Table Name	RPOECD1_DEFINITION
Revision Activity	add.08-11-2000
Purpose	Relates the Unit Code to its text description and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	POEUNITCDE	POEM Unit Code	N	4	9(4)
PF	POELANGCDE	POEM Language Code	N	2	9(2)
PF	POECOCDE	POEM Country Code	N	2	9(2)
F	POEUNITTYP	POEM Unit Code Type	N	1	9(1)
	POEDESC1	POEM Description 1	AN	30	X(30)
	POEDESC2	POEM Description 2	AN	20	X(20)
	POEDESC3	POEM Description 3	AN	20	X(20)
	POEPERDAYC	POEM Per Day Conversion	N	9	9(4).9(4)
	POEDISPQTY	POEM Dispensable Quantity Code	N	1	9(1)
	POEMLCNVRS	POEM mL Conversion	N	4	9(4)
F	POECALCRTC	POEM Calculation Required Type Code	AN	1	X(1)

POEM Context Table

Table Name	RPOECL1_CLIN_CONTEXT
Revision Activity	add.08-11-2000
Purpose	Provides attributes for a set of specific patient parameters (such as renal function) necessary for a given dose.

Key	Column Name	Column Description	Format	Length	Picture
P	POECLINID	POEM Clinical Context Identifier	N	6	9(6)
PF	POECLINTYP	POEM Clinical Context Type	N	2	9(2)
F	POECLINVAL	POEM Clinical Context Value	AN	2	X(2)
	POEMINRANG	POEM Minimum Range	N	9	9(6).9(2)
	POEMAXRANG	POEM Maximum Range	N	9	9(6).9(2)
	POERANGUNT	POEM Range Unit Code	N	4	9(4)

POEM Country Code Description Table

Table Name	RPOECOD0_COUNTRY_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Country Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POECOCDE	POEM Country Code	N	2	9(2)
	POECOCDE_DE SC	POEM Country Code Description	AN	30	X(30)

POEM Dose Type Code Description Table

Table Name	RPOEDTD0_DOSE_TYPE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Dose Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POEDOSETYP	POEM Dose Type Code	AN	2	X(2)
	POEDOSETYP_DESC	POEM Dose Type Code Description	AN	60	X(60)

POEM GCN_SEQNO POEM Source Table

Table Name	RPOEGSQ2_GCNSEQNO_MSTR
Revision Activity	rev.03-14-2002
Purpose	Links a clinical formulation to a specific dosage order set, based on indication.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	FDBDX	First Databank Disease Code	AN	9	X(9)
PF	POEOSETID	POEM Order Set Identifier	N	6	9(6)
PF	POECLINID	POEM Clinical Context Identifier	N	6	9(6)
F	DXID	FML Disease Identifier (Stable ID)	N	8	9(8)

POEM GCN_SEQNO Standard Order Table

Table Name	RPOEGCS1_STANDARD_ORDER
Revision Activity	add.08-01-2001
Purpose	Links a clinical formulation to a standard (default) dosage order set, independent of indication.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	POECLINID	POEM Clinical Context Identifier	N	6	9(6)
PF	POEOSETID	POEM Order Set Identifier	N	6	9(6)

POEM Language Code Description Table

Table Name	RPOELGD0_LANGUAGE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Language Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POELANGCDE	POEM Language Code	N	2	9(2)
	POELANGCDE_DESC	POEM Language Code Description	AN	30	X(30)

POEM Order Set Table

Table Name	RPOEOS1_ORDER_SET
Revision Activity	add.08-11-2000
Purpose	Links one specific dosage order set to one or more specific order strings and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
PF	POEOSETID	POEM Order Set Identifier	N	6	9(6)
P	POEOSTRSEQ	POEM Order String Sequence Code	N	2	9(2)
PF	POEOSTRID	POEM Order String Identifier	N	10	9(10)
F	POEDOSETYP	POEM Dose Type Code	AN	2	X(2)
	POECALCREQ	POEM Calculation Required	AN	1	X(1)

POEM Order String Table

Table Name	RPOEOSR1_ORDER_STRING
Revision Activity	add.08-11-2000
Purpose	Associates dosing concepts within order string text to specific columns.

Key	Column Name	Column Description	Format	Length	Picture
P	POEOSTRID	POEM Order String Identifier	N	10	9(10)
	POEROUTE	POEM Route Code	N	4	9(4)
F	POEROUTE_D	POEM Route Description Code	N	1	9(1)
	POELOWD	POEM Low Dose	N	13	9(8).9(4)
	POELOWDU	POEM Low Dose Units Code	N	4	9(4)
	POEHIGHD	POEM High Dose	N	13	9(8).9(4)
	POEHIGHDU	POEM High Dose Units Code	N	4	9(4)
	POELOWDFA	POEM Low Dose Form Amount	N	7	9(4).9(2)
	POELOWDFU	POEM Low Dose Form Units Code	N	4	9(4)
	POEHIGHDFA	POEM High Dose Form Amount	N	6	9(4).9(2)
	POEHIGHDFU	POEM High Dose Form Units Code	N	4	9(4)
	POELOWF	POEM Low Frequency	N	3	9(3)
	POELOWI	POEM Low Interval	N	3	9(3)
	POELOWIU	POEM Low Interval Units Code	N	4	9(4)
	POEHIGHF	POEM High Frequency	N	3	9(3)
	POEHIGHI	POEM High Interval	N	3	9(3)

	POEHIGHIU	POEM High Interval Units Code	N	4	9(4)
	POESLOWF	POEM Second Low Frequency	N	3	9(3)
	POESLOWI	POEM Second Low Interval	N	3	9(3)
	POESLOWIU	POEM Second Low Interval Units Code	N	4	9(4)
	POESHIGHF	This column is not currently being used	N	3	9(3)
	POESHIGHI	This column is not currently being used	N	3	9(3)
	POESHIGHIU	This column is not currently being used	N	4	9(4)
	POELOWDR	POEM Low Duration	N	3	9(3)
	POELOWDRU	POEM Low Duration Units Code	N	4	9(4)
	POEHIGHDR	POEM High Duration	N	3	9(3)
	POEHIGHDRU	POEM High Duration Units Code	N	4	9(4)

POEM Order String to Text Table

Table Name	RPOEOSX1_TEXT_LINK
Revision Activity	add.08-11-2000
Purpose	Links an order string to a dosage order set and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
PF	POEOSTRID	POEM Order String Identifier	N	10	9(10)
PF	POETEXTTYP	POEM Text Type Code	N	2	9(2)
P	POETXTSTRL	POEM Text String Location Code	N	1	9(1)
F	POETEXTCDE	POEM Text Code	N	10	9(10)

POEM Route Description Code Description Table

Table Name	RPOERDD0_ROUTE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Route Description Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POEROUTE_D	POEM Route Description Code	N	1	9(1)
	POEROUTE_D_D ESC	POEM Route Description Code Description	AN	60	X(60)

POEM Text String Location Code Description Table

Table Name	RPOETSD0_TEXT_STR_LOC_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Text String Location Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POETXTSTRL	POEM Text String Location Code	N	1	9(1)
	POETXTSTRL_D ESC	POEM Text String Location Code Description	AN	60	X(60)

POEM Text Table

Table Name	RPOETXT1_TEXT
Revision Activity	add.08-11-2000
Purpose	Associates text to an order string, and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	POETEXTCDE	POEM Text Code	N	10	9(10)
PF	POELANGCDE	POEM Language Code	N	2	9(2)
PF	POECOCDE	POEM Country Code	N	2	9(2)
P	POETXTNUM	POEM Text Line Number	N	3	9(3)
	POETXLINE	POEM Text Line	AN	70	X(70)

POEM Text Type Code Description Table

Table Name	RPOETTD0_TEXT_TYPE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Text Type Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POETEXTTYP	POEM Text Type Code	N	2	9(2)
	POETEXTTYP_D ESC	POEM Text Type Code Description	AN	30	X(30)

POEM Unit Code Type Description Table

Table Name	RPOEUTD0_UNIT_TYPE_DESC
Revision Activity	add.03-14-2002
Purpose	Relates the Unit Code Type to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	POEUNITTYP	POEM Unit Code Type	N	1	9(1)
	POEUNITTYP_D ESC	POEM Unit Code Type Description	AN	30	X(30)

Prioritized Label Warnings Module (LBLW) 1.0

- General Information
- Prioritized Label Warnings Module Editorial Policies
- Applications
- ERD and Technical Specifications

 In this module, U.S. data and external identifiers are used in the examples.

General Information

The General Information section contains high-level information about the module.

- Overview
- Concepts

Overview

The Prioritized Label Warnings Module (LBLW) provides clinical formulation (CFID)-specific, prioritized auxiliary label warning sets created and updated by First Databank (FDB) clinical pharmacists. The label selection and stratification schema is based on the relative importance of a label in the context of the product's ingredient list, dosage form, route of administration and as necessary - its strength. This process provides a clinical formulation (CFID)-specific linking of the set of essential labels (see USP Chapter 17 Guidance as noted below). The FDB LBLW labels are then mapped to four major commercial auxiliary label vendors' data for ease of label printing or display by FDB customers within their proprietary pharmacy systems.

Note that the LBLW sets as a whole will be gradually streamlined in response to this revised Editorial Policy - i.e., on average, fewer labels will be attached per CFID as are attached currently. The focus will be on *essential* auxiliary label information only. Moreover, revised inclusion/exclusion criteria will focus label attachment on products used primarily by patients or caregivers - as well as a variety of healthcare professionals. Bulk chemical products, for example, will now be excluded from LBLW.

In addition, note that certain packaged product-based information (such as NDC, DIN or NPN-specific storage information) cannot always be represented at the CFID level. Therefore in such situations product packaging data needs to be consulted.

 Drug knowledge is aggregated at the Clinical Formulation ID ([GCN_SEQNO](#)) and Routed Medication ID ([ROUTED_MED_ID](#)) levels in the FDB knowledge base. Under certain circumstances (e.g., storage information), aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Concepts

Label Selection and Prioritization

This LBLW Editorial Policy draws from the recent United States Pharmacopoeia (USP) Chapter 17 Prescription Container Label Guidance - which emphasizes utilization of *only the essential auxiliary labels* as a component of the overall prescription container label. Once the essential labels are selected by FDB clinical pharmacists via criteria-based assessment, the prioritization schema is applied and the auxiliary label set is associated with the CFID(s). These processes are executed via a review and evaluation of CFID-specific clinical data by FDB clinical pharmacists. A primary source for the clinical data is the professional labeling (aka package insert).

For example - the label priority order for a particular CFID may be as follows:

- Patient safety-related auxiliary labels - addressing issues such as pregnancy, lactation, and selected

adverse effects

- Site-of-administration labels
- How-to-use labels
- Storage labels

The priority order of auxiliary labels may be further customized so as to be appropriate for associated CFID(s).

For example, the order in which similar or identical labels appear may vary from product to product based on the relative clinical importance of the ingredients in the product, the route of administration, the dosage form - and as necessary, the strength. Consider two therapeutically-similar drug products - they may have a significantly different incidence and severity of drowsiness, leading to a differing priority order for the drowsiness label within the respective label sets. Labels are attached to products utilizing these data elements: Clinical Formulation ([GCN_SEQNO](#)), ingredient ([HIC_SEQN](#)), dosage form, route and strength.

Maximum Label Number

The auxiliary label limit per Clinical Formulation is ten. A ten label limit is reasonable because USP Chapter 17 Guidance recommends only essential auxiliary label information be applied to products. Moreover, there are practical limitations to how many labels will fit on a prescription bottle, other types of packaging - or other space-constrained education materials.

 FDB does not recommend setting a more restrictive label limit than 10. FDB recommends **printing/affixing all the labels** attached to a Clinical Formulation. Exceptions are labels 0230 and 0298 - the Medication Guide and Black Box Warning Indicator labels, respectively.
FDB does **not** recommend printing auxiliary label warnings *in lieu of* PEM monographs.

Prioritized Label Warnings Module Editorial Policies

The policies and criteria that apply to the inclusion and maintenance of the Prioritized Label Warnings Module are provided in the following sections:

- Editorial Process

Editorial Process

The following section describes the processes and criteria the clinical editors use to add or review database elements.

External Triggers for Clinical Review

The external triggers that prompt the clinical editors to add or review data are the following:

- MedWatch Safety Alerts
- New product labeling
- Product labeling changes
- New clinical information in the primary literature
- FDA Med Guide announcements

Internal Triggers for Clinical Review

The internal triggers that prompt the clinical editors to add or review data are the following:

- New Clinical Formulation ID ([GCN_SEQNO](#))

Applications

This section provides information about the practical application of data contained in this module.

Considerations for Using Prioritized Label Warnings

Retrieving Prioritized Label Warnings for a Drug

Considerations for Using Prioritized Label Warnings

Consider the following items before implementing this module.

Application of Labels to Active Products and a Limited Obsolete Product Set

This module includes warning labels for active products in the United States and Canada.

Vendor Label Codes

Label codes are available from multiple label manufacturers or vendors, including but not limited to:

- Architext
- Intercon
- Pharmex
- Printed Solutions

Programming Notes for RDBMS Format

The Clinical Formulation ID ([GCN_SEQNO](#)) links to the [GCN_SEQNO/Prioritized Label Warning Code Relation Table](#) (RLBLWGCO_GCNSEQNO_LINK).

The Clinical Formulation ID ([GCN_SEQNO](#)) + the Prioritized Label Warning Code ([LBL_WARN](#)) links to the descriptive information in the [Prioritized Label Warning Code Description Table](#) (RLBLWD0_DESC).

Table	Data Structure	Description
RLBLWGCO_GCNSEQNO_LINK	RLBLWGCo	GCN_SEQNO/Prioritized Label Warning Relation
RLBLWD0_DESC	RLBLWDx	Prioritized Label Warning Descriptions (Also available in Spanish and French)

Retrieving Prioritized Label Warnings for a Drug

This application illustrates how to retrieve and sort label warnings for a drug.

1. Select these columns from the **GCN_SEQNO/Prioritized Label Warning Code Relation Table** (RLBLWGC0_GCNSEQNO_LINK) where the Clinical Formulation ID (**GCN_SEQNO**) equals the **GCN_SEQNO** value of the drug product:
 - Prioritized Label Warning Code (**LBL_WARN**)
 - Prioritized Label Warning Relative Priority (**LBL_PRTY**)
2. Select these columns from the **Prioritized Label Warning Code Description Table** (RLBLWD0_DESC) where the Prioritized Label Warning Code (**LBL_WARN**) equals the **LBL_WARN** retrieved in the previous step:
 - Prioritized Label Warning Text Sequence Number (**LBL_TEXTSN**)
 - Prioritized Label Warning Code Description (**LBL_DESC**)
3. Sort the labels by sequence number and priority.
 - a. Use the Prioritized Label Warning Text Sequence Number (**LBL_TEXTSN**) column to sort the results by sequence number. This determines the order in which each line of each label will appear.
 - b. Use the Prioritized Label Warning Relative Priority (**LBL_PRTY**) column to sort the results by priority. This determines the order in which the labels will be printed.
4. Present the results to the end user for printing.

Prioritized Label Warnings ERD and Technical Specifications

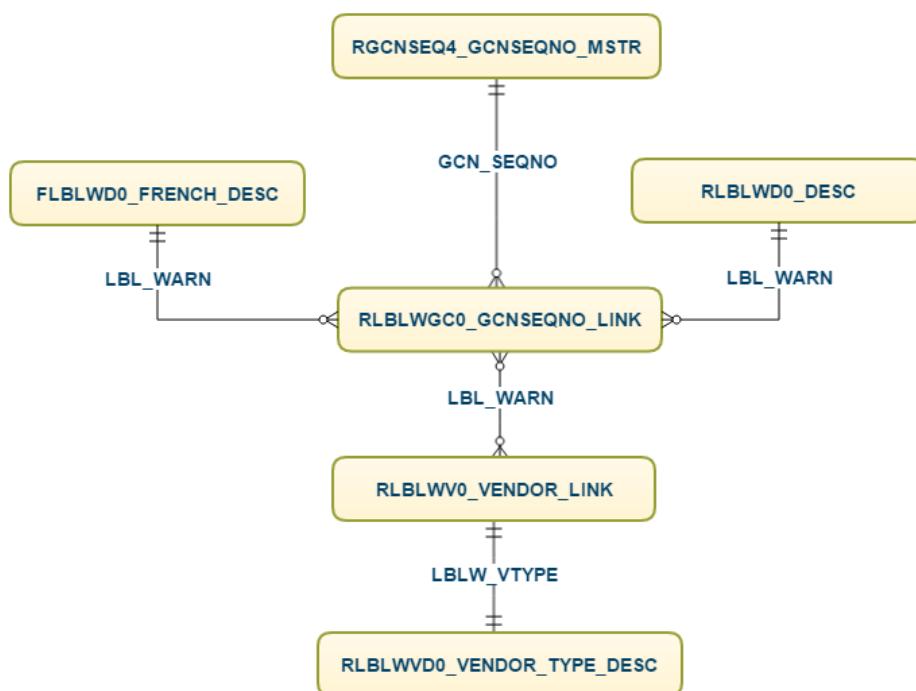
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- Prioritized Label Warnings Tables
- Prioritized Label Warnings ERD

Prioritized Label Warnings Tables

- French Prioritized Label Warning Code Description Table
- GCN_SEQNO/Prioritized Label Warning Code Relation Table
- Prioritized Label Warning Code Description Table
- Prioritized Label Warning Vendor Description Table
- Prioritized Label Warning Vendor Type Relation Table

Prioritized Label Warnings ERD



GCN_SEQNO Prioritized Label Warning Code Relation Table

Table Name	RLBLWGC0_GCNSEQNO_LINK				
Revision Activity	rev.02-01-1998				
Purpose	Links a clinical formulation to an associated label warning.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	LBL_WARN	Prioritized Label Warning Code	AN	4	X(4)
	LBL_PRTY	Prioritized Label Warning Relative Priority	N	2	9(2)

Prioritized Label Warning Code Description Table

Table Name	RLBLWD0_DESC
Revision Activity	add.09-01-1997
Purpose	Relates the Prioritized Label Warning Code to its text description and provides attributes of that relationship.

Key	Column Name	Column Description	Format	Length	Picture
P	LBL_WARN	Prioritized Label Warning Code	AN	4	X(4)
P	LBL_TEXTSN	Prioritized Label Warning Text Sequence Number	N	2	9(2)
	LBL_DESC	Prioritized Label Warning Code Description	AN	55	X(55)
	LBLGNDR	This column is not currently being used	AN	1	X(1)
	LBLAGE	This column is not currently being used	AN	1	X(1)
	LBLPREG	This column is not currently being used	AN	1	X(1)
	LBLINFO	This column is not currently being used	AN	1	X(1)

Prioritized Label Warning Vendor Description Table

Table Name	RLBLWVD0_VENDOR_TYPE_DESC
Revision Activity	add.08-11-2000
Purpose	Relates the Prioritized Label Warning Vendor Type to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	LBLW_VTYPE	Prioritized Label Warning Vendor Type	N	3	9(3)
	LBLW_VDESC	Prioritized Label Warning Vendor Description	AN	50	X(50)

Prioritized Label Warning Vendor Type Relation Table

Table Name	RLBLWV0_VENDOR_LINK				
Revision Activity	add.08-11-2000				
Purpose	Links a label warning to an external vendor.				

Key	Column Name	Column Description	Format	Length	Picture
P	LBL_WARN	Prioritized Label Warning Code	AN	4	X(4)
PF	LBLW_VTYPE	Prioritized Label Warning Vendor Type	N	3	9(3)
	LBLW_VCODE	Prioritized Label Warning Vendor Code	AN	10	X(10)

Therapeutic Classification Systems

- First Databank Enhanced Therapeutic Classification™ System (ETC™) 1.0
- Therapeutic Classification Data ERD and Technical Specifications

First Databank Enhanced Therapeutic Classification System (ETC) 1.0

- First Databank Enhanced Therapeutic Classification System Editorial Policies
- Applications
- ERD and Technical Specifications

First Databank Enhanced Therapeutic Classification System Editorial Policies

The policies and criteria that apply to the inclusion criteria, processes, and references used in creation of the ETC module are provided in the following sections:

- Overview
- Inclusion Criteria
- Data Elements
- Rule Sets
- Maintenance
- Resources

Overview

The First Databank Enhanced Therapeutic Classification System (ETC) is a hierarchical class system that groups medical products and formulations at both highly defined levels and within broader drug categories.

i Drug knowledge is aggregated at the Clinical Formulation ID (**GCN_SEQNO**), Medication ID (**MEDID**), Routed Medication ID (**ROUTED_MED_ID**), and the Routed Generic ID (**ROUTED_GEN_ID**) levels in the First Databank (FDB) knowledge base. Under certain circumstances, aggregated drug knowledge may not apply to all related packaged products; more specific information may be found within product labels.

Inclusion Criteria

This section provides information detailing the criteria that guide the inclusion of data contained within the module as well as information pertaining to limitations or exclusions when appropriate to the discussion.

All Clinical Formulations (**GCN_SEQNO**) associated with DINs or NPNs in Canada may have Enhanced Therapeutic Class (ETC) associations.

Data Elements

This section contains additional information about particularly important tables and codes contained within the module, as well as concepts about the data that the reader must understand in order to understand the module.

ETC Identifier

The ETC identifier is an eight-character numeric column that identifies a unique therapeutic classification. This number is a stable identifier permanently associated with the ETC description.

ETC_ID	ETC_NAME
00000225	Angiotensin II Receptor Blockers (ARBs)
00000224	ACE Inhibitors
00005991	Renin Inhibitor, Direct

000002718	Central Alpha-2 Receptor Agonists
00000248	Diuretics
00000250	Diuretic - Loop
00000252	Diuretic - Osmotic
00000253	Diuretic - Potassium Sparing
00000263	Antihyperlipidemics
00000267	Alternative Therapy - Natural HMG CoA Reductase Inhibitors
00000264	Antihyperlipidemic - Bile Acid Sequestrants
00000265	Antihyperlipidemic - Fibric Acid Derivatives

Associated Data Elements

Key	Column Name	Column Description	Format	Length	Picture
P	ETC_ID	ETC Identifier—A permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
	ETC_NAME	ETC Name—A unique mixed case descriptive name for a therapeutic classification	AN	70	X(70)
	ETC_ULTIMATE_CHILD_IND	ETC Ultimate Child Indicator—Indicates that the given ETC_ID has no lower-level classifications associated to it.	AN	1	X(1)

	ETC_DRUG_CONCEPT_LINK_IND	ETC Drug Concept Link Indicator—Indicates that at least one Clinical Formulation ID (GCN_SEQNO) is associated to the given ETC_ID.	AN	1	X(1)
	ETC_PARENT_ETC_ID	ETC Parent ETC Identifier—Identifies the ETC_ID that is one level higher than the given ETC_ID.	N	8	9(8)
	ETC_FORMULARY_LEVEL_IND	ETC Formulary Level Indicator—Identifies a suggested level for building formularies.	AN	1	X(1)
	ETC_PRESENTATION_SEQNO	ETC Presentation Sequence Number—Provides a sort order for sequencing ETC_IDs with the same parent.	N	5	9(5)
	ETC_ULTIMATE_PARENT_ETC_ID	ETC Ultimate Parent ETC Identifier—Identifies the therapeutic classification that is at the top of the hierarchy from the given ETC_ID.	N	8	9(8)
	ETC_HIERARCHY_LEVEL	ETC Hierarchy Level—Provides the position of the given therapeutic classification in the hierarchical structure.	N	2	9(2)

	ETC_SORT_NUMBER	ETC Sort Number—Provides a sort order for sequencing the ETC_ID when printing or displaying a list; changes with each product update and should not be used as a class identifier.	N	5	9(5)
	ETC_RETIRED_IND	ETC Retired Indicator—Indicates that the given ETC_ID has been retired.	AN	1	X(1)
	ETC_RETIRED_DATE	ETC Retired Date—Provides the date on which the ETC_ID was retired.	N	8	9(8)

Related Tables

[ETC to GCN_SEQNO Assignment Table](#)

[ETC to GCN_SEQNO Change History Table](#)

[ETC to HICL_SEQNO Assignment Table](#)

[ETC to HICL_SEQNO Assignment History Table](#)

[ETC to HIC_SEQN Assignment Table](#)

[ETC to HIC_SEQN Assignment History Table](#)

[ETC to MedID Assignment Table](#)

[ETC to MedID Change History Table](#)

[ETC to Med Name ID Assignment Table](#)

[ETC to Med Name ID Assignment History Table](#)

[ETC HIC3 to ETC Cross Reference Table](#)

Rule Sets

This section provides rules that the clinical team uses in regards to creating the module's data, both general rules and rules specific to data elements.

Enhanced Therapeutic Class (ETC)

Therapeutic classes, in general, are a mixture of structural (tricyclic antidepressants), mechanism of action

(beta-blockers), and functional (medical supplies) grouping terms. While initial class terms may be derived from specific functional descriptions, the terms and expressions that are adopted over time are terms which are the most popular and recognizable to clinicians. Some have long, mechanism-based names which have been abbreviated in pragmatic ways in common practice (for example, ACE inhibitors).

Multi-ingredient formulations are represented with a single class description (for example, ACE Inhibitor and Calcium Channel Blocker Combinations). Since the individual drugs in such combinations are often included alone in different branches of the hierarchy, it is necessary to determine which branch of the hierarchy will be selected for a given combination.

For example, the combination class description "ACE Inhibitor and Calcium Channel Blocker" is listed once under "Ace Inhibitors" in the hierarchy rather than "Calcium Channel Blockers." The order of display and the branch of the hierarchy chosen are determined by the editors based on a combination of factors that include innovator ingredient order, clinical relevance, and as with other class descriptions, clinician adopted terminology.

Formulary Level Indicator

The Formulary Class Level is an indicator applied to an ETC Class in the class tree at a level that clinicians may find more useful and appropriate than the most granular and often directly linked class for display in a Formulary Listing of drugs.

For example, non-selective NSAIDs Classes include the following list of drug-structure based classes:

- NSAIDs, COX Non-Specific Inhibitors - Anthranilic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Indole Acetic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Phenylacetic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Propionic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Pyrazolone Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Oxicam Derivatives

These classes are directly associated with drugs fitting these structural descriptions. However, listing these drugs under a single, broader class would better suit most instances in which these drugs are displayed with associated ETC classes.

The ETC class one level above these granular classes is the Formulary Level Class, and it is an alternative option for display in lieu of the more granular classes below it.

- NSAIDs, Cyclooxygenase Inhibitors-Non-Selective Inhibitors
- NSAIDs, COX Non-Specific Inhibitors - Anthranilic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Indole Acetic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Phenylacetic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Propionic Acid Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Pyrazolone Derivatives
- NSAIDs, COX Non-Specific Inhibitors - Oxicam Derivatives

The Formulary Level Indicator may be used in conjunction with the search table to "roll-up" or group drugs at the

Formulary Level Class.

Search Table Functionality

The search table is designed to facilitate grouping and display of drug formulations at the desired class level depending on customer need.

Creation and Maintenance of ETC Class Associations

Enhanced Therapeutic Classes (ETCs) are associated directly to Clinical Formulations and Ingredients. All other ETC associations: Medication Concept to ETC; Product to ETC; Ingredient List ([HCL_SEQNO](#)) to ETC are derived from the initial association to a Clinical Formulation. Ingredient to the ETC class associations may differ from ETC classes assigned to the Clinical Formulation level.

Special Class Associations

The ETC Class of 5904 "Medical Supply, FDB Superset" is applied as a secondary class, not the default class, to all medical supplies without active drug ingredients that participate in clinical screening modules. This association can be and is intended to be used to exclude these formulations from clinical screening, thereby saving processing time for customers.

Default Class Indicator

Each Formulation assigned an ETC has one and only one default ETC class designated by the Default Class Indicator. If two ETC classes are assigned to a formulation, the default indicator may be used to prevent double-counting of formulations associated with multiple ETC Classes.

Common Class Indicator

As described above, when two classes are assigned to a formulation, one of those two classes will be the default indicator. When applied, the Common Class indicator represents that the Default ETC Class is the better representation of the class for the formulation to which it is applied, than the "non-default" class. When a single class is the only class assigned to a formulation, that class association is automatically assigned both the Common and Default indicators.

Maintenance

This section contains information regarding the ongoing maintenance of the module's data.

Triggers for Clinical Review

- Assignment of ETCs to newly created Clinical Formulations requires review of existing ETC associations for similar formulations or classes. This "new product review" may trigger further review to determine if ETC class and formulation associations require enhancement.
- Customer or manufacturer clinical inquiries are reviewed daily and the database is updated weekly as appropriate.
- Health Canada recalls and safety alerts.

Resources

This section lists sources used by FDB to compile the information contained in the module.

FDB utilizes many reference sources including, but not limited to, the primary medical literature (for example, published journal articles), medical reference texts, published expert treatment guidelines, and manufacturer product package inserts. FDB uses current source editions or versions when coding and updating data, as well as when researching questions about data. However, a formal data review does not occur for every new release of source editions or versions. Additional sources include:

- Gilman AG, Hardman JG, Limbird LE. Goodman & Gilman's The Pharmacological Basis of Therapeutics.
- Treatment Guidelines
- [PubMed.gov](http://www.ncbi.nlm.nih.gov/pubmed). Available at: <http://www.ncbi.nlm.nih.gov/pubmed>.
- Product labeling:
 - Manufacturer websites
 - Health Canada. Available at <http://www.hc-sc.gc.ca/index-eng.php>
- ChemIDpluslite, an NLM sponsored ingredient structure and synonym look-up:
<http://chem2.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

ETC Applications

This section provides information about the practical application of data contained in the First Databank Enhanced Therapeutic Classification System (ETC). The following applications are included:

Building a Formulary

Reporting Ingredient-Based Classifications

Displaying or Selecting the Default ETC Class from Various Drug Concept Levels

Building a Formulary

The ETC is designed primarily for formulary building, maintenance, and reporting. Using the ETC hierarchy, you can define your desired therapeutic classifications, using formulary rules to choose the products in each classification that will be included in the formulary.

Building a formulary is simplified with the ETC_SEARCH_ETC_ID and the ETC_PRODUCT RELATED_ETC_ID. Use of these identifiers retrieves only classifications that have Clinical Formulation IDs (GCN_SEQNOs) linked to them.

There are two parts to building a formulary with the ETC:

- [Assembling the ETC Hierarchy](#)
- [Defining the Formulary Rules](#)

These processes are described below.

Assembling the ETC Hierarchy

Before defining the formulary rules, assemble the ETC hierarchy for review. The hierarchy can be loaded into a database and/or printed. The following application provides the steps for assembling the ETC hierarchy:

1. Retrieve all ETC Identifier ([ETC_ID](#)) and ETC Name ([ETC_NAME](#)) values from the [ETC Table](#) ([RETCTBL0_ETC_ID](#)) that have an ETC Ultimate Parent ETC Identifier ([ETC_ULTIMATE_PARENT_ETC_ID](#)) value of 0. These are the top-level classifications.
In the example below, the top-level classification is ETC_ID = 2549, Anti-Infective Agents.

ETC_ULTIMATE_PARENT_ETC_ID	ETC_ID	ETC_NAME
0000	2549	Anti-Infective Agents

2. Retrieve all ETC Identifier ([ETC_ID](#)) and ETC Name ([ETC_NAME](#)) values that have ETC Parent ETC Identifier ([ETC_PARENT_ETC_ID](#)) values that match the ETC_ID values retrieved in the previous step. These are the immediate children of the ultimate parent identifiers.
This example retrieves the immediate children of the Anti-Infective Agents (ETC_ID = 2549).

ETC_PARENT_ETC_ID	ETC_ID	ETC_NAME
2549	40	Antifungals
2549	44	Antivirals
2549	2504	Antiparasitics
2549	2526	Misc Anti-Infectives and Combinations
2549	2620	Antibacterial Agents
2549	2644	Antiprotozoal-Antibacterial Agents

2549	3808	Anti-Infective - Immunologic Adjuvants
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Retired ETC_ID values can be excluded by excluding all ETC_ID values with an ETC Retired Indicator ([ETC_RETIRE_ID](#)) value of 1.

3. Retrieve all ETC Identifier ([ETC_ID](#)) and ETC Name ([ETC_NAME](#)) values that have ETC Parent ETC Identifier ([ETC_PARENT_ETC_ID](#)) values that match the ETC_ID values retrieved in the previous step. These are the immediate children of the classes retrieved in the previous step.
This example retrieves the immediate children of the Antibacterial Agents (ETC_ID = 2620).

ETC_ID	ETC_NAME	ETC_PARENT_ETC_ID	ETC_ULTIMATE_CHILD_IND
16	Macrolide Antibiotics and Combinations	2620	0
20	Lincosamide Antibiotics	2620	1
27	Tetracycline Antibiotics and Combinations	2620	0
34	Aminoglycoside Antibiotic	2620	1
37	Antimycobacterial Agents	2620	0
69	Polymyxin Antibiotics and Derivatives	2620	0
71	Streptogramin Antibiotics	2620	1
74	Folate Antagonist Antibiotics	2620	0
1268	Quinolone Antibiotics	2620	0
2510	BetaLactam Antibiotics	2620	0
2515	Glycopeptide Antibiotics	2620	1
2517	Chloramphenicol Antibiotics and Derivatives	2620	0
2518	Antibacterial Adjuvants	2620	1
2519	Steroidal Antibiotics	2620	1
2636	Monobactam Antibiotics	2620	1
2646	Antibacterial Nitrofuran Derivatives and Combinations	2620	0
2700	Antibacterial Other	2620	1

2835	Oxazolidinone Antibiotics	2620	1
4545	Aminocyclitol Antibiotics	2620	1
5742	Cyclic Lipopeptide Antibiotics	2620	0
5841	Ketolide Antibiotics	2620	0
5844	Rifamycins and Related Derivative Antibiotics	2620	0
5890	Glycylcycline Antibiotics	2620	0
6055	Quaternary protoberberine alkaloid Antibiotics	2620	0

ETC_IDs with an ETC Ultimate Child Indicator ([ETC_ULTIMATE_CHILD_IND](#)) value of 1 have no lower-level classifications associated to them.

4. Continue to retrieve immediate children of each subclass until all ultimate children are retrieved.
5. Retrieve the ETC Presentation Sequence Number ([ETC_PRESENTATION_SEQNO](#)) and the ETC Hierarchy Level ([ETC_HIERARCHY_LEVEL](#)) for each ETC_ID. Use these fields to organize the hierarchy with different levels of indentation to represent the parent/child relationships and to sequence the classes at each hierarchical level.

The example below shows a sample of the ETC class hierarchy for Anti-Infective Agents (ETC_ID = 2549).

ETC_ID	ETC_NAME	ETC_PARENT_ETC_ID	ETC_PRESENTATION_SEQNO	ETC_HIERARCHY_LEVEL
2549	Anti-Infective Agents	0000	40	1
2620	Antibacterial Agents	2549	10	2
4545	Aminocyclitol Antibiotics	2620	5	3
34	Aminoglycoside Antibiotic	2620	10	3
74	Folate Antagonist Antibiotics	2620	30	3
2646	Antibacterial Nitrofuran Derivatives and Combinations	2620	40	3
37	Antimycobacterial Agents	2620	50	3
2510	BetaLactam Antibiotics	2620	60	3

1	Penicillin Antibiotics	2510	10	4
10	Cephalosporin Antibiotics	2510	20	4
11	Cephalosporin Antibiotics - 1st Generation	10	10	5
12	Cephalosporin Antibiotics - 2nd Generation	10	20	5
13	Cephalosporin Antibiotics - 3rd Generation	10	30	5
14	Cephalosporin Antibiotics - 4th Generation	10	40	5
6184	Cephalosporin Antibiotics - 5th Generation	10	60	5
15	Cephalosporin Antibiotics Combinations	10	100	5
2630	Cephalosporin Antibiotic & Beta-lactamase Inhibitor Combinations	15	10	6
2631	Cephalosporin Antibiotic Combinations Other	15	20	6
2511	Carbapenem Antibiotics (Thienamycins) and Combinations	2510	40	4
2520	Carbacephem Antibiotics	2510	50	4
2517	Chloramphenicol Antibiotics and Derivatives	2620	70	3
5742	Cyclic Lipopeptide Antibiotics	2620	75	3
2515	Glycopeptide Antibiotics	2620	80	3

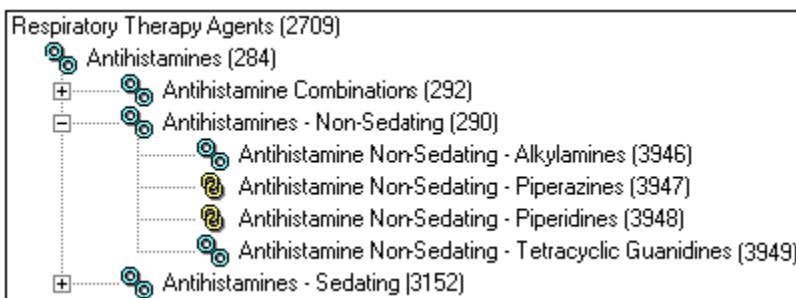
5890	Glycylcycline Antibiotics	2620	82	3
5841	Ketolide Antibiotics	2620	85	3
20	Lincosamide Antibiotics	2620	90	3
16	Macrolide Antibiotics and Combinations	2620	100	3
2636	Monobactam Antibiotics	2620	110	3
2835	Oxazolidinone Antibiotics	2620	120	3
69	Polymyxin Antibiotics and Derivatives	2620	130	3
6055	Quaternary protoberberine alkaloid Antibiotics	2620	135	3
1268	Quinolone Antibiotics	2620	140	3
5844	Rifamycins and Related Derivative Antibiotics	2620	145	3
2519	Steroidal Antibiotics	2620	150	3
71	Streptogramin Antibiotics	2620	160	3
27	Tetracycline Antibiotics and Combinations	2620	170	3
2700	Antibacterial Other	2620	180	3
2518	Antibacterial Adjuvants	2620	190	3
40	Antifungals	2549	20	2
44	Antivirals	2549	30	2
2504	Antiparasitics	2549	40	2
2644	Antiprotozoal-Antibacterial Agents	2549	50	2
3808	Anti-Infective - Immunologic Adjuvants	2549	60	2
2526	Misc Anti-Infectives and Combinations	2549	70	2

Defining the Formulary Rules

Rules can be defined using particular ETC_IDs and attributes in combination with selected attributes of the drug concepts associated to those ETC_IDs. There are many ways to define formulary rules. The following application provides steps for defining a sample formulary rule:

Example—All Prescription Non-Sedating Antihistamines, No Repackagers

1. Review the hierarchy to identify the ETC_ID representing Non-Sedating Antihistamines. Refer to Assembling the ETC Hierarchy, above, for more information. In this example, Non-Sedating Antihistamines is ETC_ID 290.



2. Use selected ETC_IDs as the ETC_SEARCH_ETC_IDS in the ETC Search Table to retrieve all lower-level classifications that have Clinical Formulation IDs (GCN_SEQNOs) attached. In this example, ETC_ID 290 (Non-Sedating Antihistamines) is used as the ETC_SEARCH_ETC_ID to retrieve ETC_PRODUCT RELATED ETC_ID (Antihistamine Non-Sedating - Piperazines) and 3948 (Antihistamine Non-Sedating - Piperidines).

Alternately, the ETC_DRUG_CONCEPT_LINK_IND may be used to determine which ETC_IDs have Clinical Formulation IDs (GCN_SEQNOs) linked.

3. Packaged product level information may be retrieved from the MED Product to Medication ID Cross-Reference Table (RMEDFPM0_FDB_PRD_MEDID) or the MED IDC to Medication ID Cross-Reference Table (RMEDIDC0_IDC_MEDID_LINK) where the MEDID equals the value(s) retrieved in the previous step.

Reporting Ingredient-Based Classifications

HIC_SEQN associations to ETC_IDs can be used to report on all products containing ingredients classified in a particular therapeutic classification, whether or not the product containing the ingredient belongs to that classification. In the following example, the application retrieves products containing ingredients classified as Analgesic or Antipyretic Non-Narcotic:

1. Using a given ETC_ID, query the [ETC to HIC_SEQN Assignment Table](#) and retrieve all HIC_SEQNs. For purposes of this example, a sampling of the HIC_SEQNs associated to ETC_ID 577 is retrieved (Analgesic or Antipyretic Non-Narcotic), as shown below:

ETC_ID	HIC_SEQN
577	1605

2. For each HIC_SEQN, query the [HICL_SEQNO/HIC Relation Table](#) and retrieve associated HICL_SEQNOs, as shown in the example below:

HIC_SEQN	HICL_SEQNO
1605	1866
1605	1871
1605	21273

3. For each HICL_SEQNO, query the Clinical Formulation ID Table, page 100 and retrieve associated Clinical Formulation IDs ([GCN_SEQNOs](#)), as shown in the example below:

HICL_SEQNO	GCN_SEQNO
1866	4473
1871	48520
21273	45404

4. Packaged product level information maybe retrieved from the [MED Product to Medication ID Cross-Reference Table](#) (RMEDFPM0_FDB_PRD_MEDID) or the [MED IDC to Medication ID Cross-Reference Table](#) (RMEDIDC0(IDC_MEDID_LINK)) where the MEDID equals the value(s) retrieved in the previous step.

Displaying or Selecting the Default ETC Class from Various Drug Concept Levels

A given medication may be linked to more than one ETC class. However, the end user may only desire one ETC class to describe a particular medication. In such cases, the default class indicator ([ETC_DEFAULT_USE_IND](#)) could be used as a filter to specify which ETC class would be most commonly used to describe the given medication.

- (i) The ETC_DEFAULT_USE_IND and ETC_COMMON_USE_IND have been synchronized to contain the same values. FDB recommends using the ETC_DEFAULT_USE_IND for consistency, and considers ETC_COMMON_USE_IND to be a legacy field.

The ETC_DEFAULT_USE_IND is assigned at the Clinical Formulation ID ([GCN_SEQNO](#)), Medication ID ([MEDID](#)), FDB International Drug Code ([IDC](#)), or FDB Product Identifier ([FDB_PRODUCT_ID](#)).

- (i) A GCN_SEQNO, IDC, FDB_PRODUCT_ID, or MEDID is associated with one (and only one) default ETC (derived from the associated GCN_SEQNO relationship). Some MEDIDs may be associated with more than one GCN_SEQNO; thus, the default ETC may differ between GCN_SEQNOs associated to the same MEDID. For example, carbamazepine (GCN_SEQNO) may be prescribed either as an anticonvulsant for the treatment of epilepsy (which represents one ETC class) or for the treatment of bipolar disorder (which represents another). FDB has assigned a representative ETC as the default ETC class to resolve that issue. Limiting the display of the ETC class to just the default class may limit recognition that other classifications may apply.

The ETC_DEFAULT_USE_IND may be transferred from the MEDID to less specific levels of the Med Name concepts; for example, Routed Dosage Form Med, Routed Med, or Med Name to facilitate the display of a single primary ETC if desired (and where possible).

Find the Default ETC from the MED_NAME

To determine the default ETC class for a Medication Name ([MED_NAME](#)), navigate to the Medication ID ([MEDID](#)).

1. Select the MED Medication Name ID ([MED_NAME_ID](#)) from the [MED Medication Name Table](#) (RMINMID1_MED_NAME) where the Medication Name ([MED_NAME](#)) equals the Medication Name of the drug.
2. Select the MED Routed Medication ID (Stable ID) ([ROUTED_MED_ID](#)) from the [MED Routed Medication Table](#) (RMIRMID1_ROUTED_MED) where the MED_NAME_ID equals the MED_NAME_ID from the previous step.
3. Select the MED Routed Dosage Form Medication ID (Stable ID) ([ROUTED_DOSAGE_FORM_MED_ID](#)) from the [MED Routed Dosage Form Medication Table](#) (RMIDFID1_ROUTED_DOSE_FORM_MED RMIDFID2_ROUTED_DOSE_FORM_MED) where the ROUTED_MED_ID equals the ROUTED_MED_ID from the previous step.
4. Select the MEDID from the [MED Medication Table](#) (RMIID1_MED) where the

ROUTED_DOSAGE_FORM_MED_ID equals the ROUTED_DOSAGE_FORM_MED_ID from the previous step with a MED Medication Status Code ([MED_STATUS_CD](#)) of 0 (Active) or 1 (Inactive).

5. Select the ETC_ID value from the [ETC to MedID Assignment Table](#) (RETCMED0_ETC_MEDID) for the MEDIDs from the previous step where the ETC Default Use Indicator ([ETC_DEFAULT_USE_IND](#)) equals 1.

An ETC class can be identified as the Default Use Class for a MEDNAME when the associated MEDIDs have only one ETC class with the ETC_DEFAULT_USE_IND set to 1. Not every MED_NAME will have a default ETC class, however.

- If the MEDIDs associated with the MEDNAME have more than one ETC class with an ETC_DEFAULT_USE_IND of 1, you will not be able to derive a single default ETC for a MEDNAME, but there may still be value in displaying results with default indicators which are transferred from the associated MEDIDs.

As a reminder, one drug may be prescribed for a variety of indications. As in the examples above, carbamazepine may be prescribed for epilepsy, bipolar disorder, or trigeminal neuralgia, and other drugs, such as bupropion, may be prescribed as an antidepressant or as a smoke deterrent. Though the default ETC class (such as Tricyclic Antidepressant) may imply a broader reason or indication that a patient is taking a medication, precautions should be taken that the actual reason or indication for which a drug is administered should be specified, and not just inferred from the ETC class.

This application is useful in a number of settings, including medication reconciliation. The following example demonstrates this application.

Example—Displaying or Selecting the Default ETC Class from Various Drug Concept Levels for Purposes of Medication Reconciliation

For purposes of demonstrating this application, the following scenario is used: A patient is being released from the hospital, and the discharge system will generate a report listing the medications administered to the patient at the hospital and the medications already regularly taken by the patient at home. The list will be organized by therapeutic class, so that the hospital physician can determine which medications should be additionally prescribed for the patient to take at home.

For this example, the medication taken by the patient at home is identified by the MED Medication Name ([MED_NAME](#)). The information was collected during preregistration when the patient recited the names of his current medications from memory. The medication taken by the patient at home (derived from the [MED Medication Name Table](#) [RMINMID1_MED_NAME]) is:

MED_NAME_ID	MED_NAME
10289	Epitol

The list of medications administered in the hospital is pulled from the CPOE system, and therefore are identified

by the MED Medication ID (**MEDID**). The medications administered to the patient in the hospital (derived from the **MED Medication Table** [RMIID1_MED]) are:

MEDID	MED_MEDID_DESC
170880	diphenhydramine 50 mg tablet
243574	diphenhydramine 25 mg tablet
472543	lactulose 10 gram/15 mL Oral Soln
472869	carbamazepine ER 200 mg capsule, extended release mphase12hr
472870	carbamazepine ER 300 mg capsule, extended release mphase12hr

Part 1: Find the Default ETC for Each Medication Taken by the Patient at Home

The medications on the home list are identified by MED_NAME. To determine the default ETC class for a MED_NAME, navigate to the MEDID.

1. Select the MED Medication Name ID (MED_NAME_ID) from the **MED Medication Name Table** (RMINMID1_MED_NAME) where the Medication Name equals the Medication Name of the medication.

MED_NAME	MED_NAME_ID
Epitol	10289

2. Select the MED Routed Medication ID (Stable ID) (ROUTED_MED_ID) from the **MED Routed Medication Table** (RMIRMID1_ROUTED_MED) where the MED_NAME_ID equals the MED_NAME_ID from the previous step.

MED_NAME	MED_NAME_ID	ROUTED_MED_ID
Epitol	10289	10962

3. Select the MED Routed Dosage Form Medication ID (Stable ID) (ROUTED_DOSAGE_FORM_MED_ID) from the **MED Routed Dosage Form Medication Table** (RMIDFID1_ROUTED_DOSE_FORM_MED RMIDFID2_ROUTED_DOSE_FORM_MED) where the ROUTED_MED_ID equals the ROUTED_MED_ID from the previous step.

MED_NAME	MED_NAME_ID	ROUTED_MED_ID	ROUTED_DOSAGE_FORM_MED_ID
Epitol	10289	10962	1241

4. Select the MEDID from the **MED Medication Table** (RMIID1_MED) where the ROUTED_DOSAGE_FORM_MED_ID equals the ROUTED_DOSAGE_FORM_MED_ID from the previous step with a MED Medication Status Code (**MED_STATUS_CD**) of 0 (Active) or 1 (Inactive).

MED_NAME	MED_NAME_ID	ROUTED_MED_ID	ROUTED_DOSAGE_FORM_MED_ID	MEDID	MED_MEDID_DESC	MED_STATUS_CD
Epitol	10289	10962	12412	265451	Epitol 200 mg tablet	0

5. Select the ETC_ID value from the [ETC to MedID Assignment Table](#) (RETCMED0_ETC_MEDID) for the MEDIDs from the previous step where the ETC Default Use Indicator ([ETC_DEFAULT_USE_IND](#)) equals 1.

MED_NAME	MED_NAME_ID	MEDID	ETC_ID	ETC_COMMON_USE_IND	ETC_NAME
Epitol	10289	265451	2687	1	Anticonvulsant - Iminostilbene Derivatives

6. The default ETC class for Epitol is Anticonvulsant - Iminostilbene Derivatives.

Part 2: Find the Default ETC Class for Each Medication Administered to the Patient at the Hospital

1. Select the ETC Identifier ([ETC_ID](#)) value from the [ETC to MedID Assignment Table](#) (RETCMED0_ETC_MEDID) for each given MED Medication ID ([MEDID](#)) where the ETC Default Use Indicator ([ETC_DEFAULT_USE_IND](#)) equals 1.

MEDID	MED_MEDID_DESC	ETC_ID	ETC_DEFAULT_USE_IND	ETC_NAME
170880	diphenhydramine 50 mg tablet	3152	1	Antihistamines - 1st Generation
243574	diphenhydramine 25 mg tablet	3152	1	Antihistamines - 1st Generation
472543	lactulose 10 gram/15 mL Oral Soln	409	1	Laxative - Saline and Osmotic
472869	carbamazepine ER 200 mg capsule, extended release mphase12hr	2687	1	Anticonvulsant - Iminostilbene Derivatives
472870	carbamazepine ER 300 mg capsule, extended release mphase12hr	2687	1	Anticonvulsant - Iminostilbene Derivatives

These are the default classifications for each MEDID administered to the patient at the hospital.

Part 3: Compare ETC Classes for Medication Reconciliation

1. Record the list of medications and default classifications for each MEDID administered to the patient in the

hospital:

MEDID	MED_MEDID_DESC	ETC_ID	ETC_NAME
170880	diphenhydramine 50 mg tablet	3152	Antihistamines - 1st Generation
243574	diphenhydramine 25 mg tablet	3152	Antihistamines - 1st Generation
472543	lactulose 10 gram/15 mL Oral Soln	409	Laxative - Saline and Osmotic
472869	carbamazepine ER 200 mg capsule, extended release mphase12hr	2687	Anticonvulsant - Iminostilbene Derivatives
472870	carbamazepine ER 300 mg capsule, extended release mphase12hr	2687	Anticonvulsant - Iminostilbene Derivatives

2. Record the medications and default classifications taken at home:

MED_NAME_ID	MED_NAME	ETC_ID	ETC_NAME
10289	Epitol	2687	Anticonvulsant - Iminostilbene Derivatives

3. In comparing the two lists, we see that the patient was prescribed an Anticonvulsant in the hospital, and is also regularly taking one at home. Prescribing this medication at discharge is desirable in providing continued care along with counseling to ensure that the patient doesn't take both prescriptions simultaneously.

As a reminder, one drug may be prescribed for a variety of indications. As in the examples above, carbamazepine may be prescribed for epilepsy, bipolar disorder, or trigeminal neuralgia, and other drugs, such as bupropion, may be prescribed as an antidepressant or as a smoke deterrent. Though the default ETC class (such as Tricyclic Antidepressant) may imply a broader reason or indication that a patient is taking a medication, precautions should be taken that the actual reason or indication for which a drug is administered should be specified, and not just inferred from the ETC class.

ETC ERD and Technical Specifications

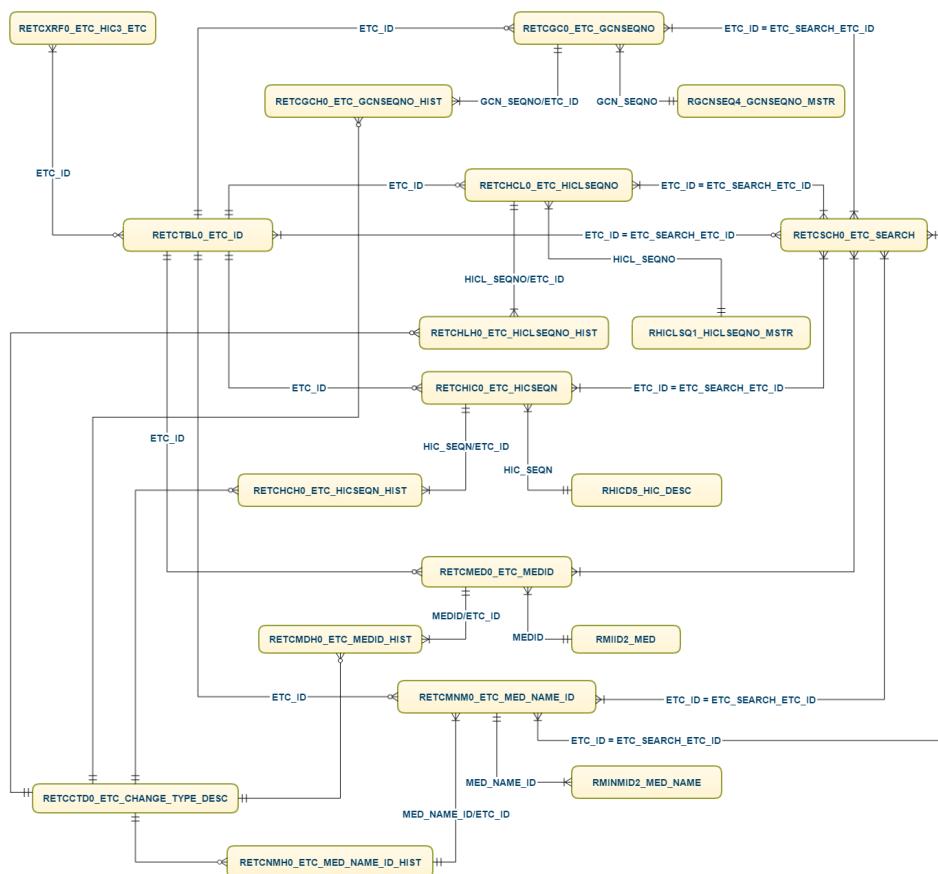
This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- ETC Tables
- ETC ERD

ETC Tables

- ETC Change Type Code Description Table
- ETC HIC3 to ETC Cross Reference Table
- ETC Search Table
- ETC Table
- ETC to GCN_SEQNO Assignment Table
- ETC to GCN_SEQNO Change History Table
- ETC to HIC_SEQN Assignment History Table
- ETC to HIC_SEQN Assignment Table
- ETC to HICL_SEQNO Assignment History Table
- ETC to HICL_SEQNO Assignment Table
- ETC to MedID Assignment Table
- ETC to MedID Change History Table
- ETC to Med Name ID Assignment History Table
- ETC to Med Name ID Assignment Table

ETC ERD



ETC Change Type Code Description Table

Table Name	RETCCTD0_ETC_CHANGE_TYPE_DESC				
Revision Activity	add.12-03-2015				
Purpose	Relates the ETC_CHANGE_TYPE_CODE to its text description.				
Key	Column Name	Column Description	Format	Length	Picture
PF	ETC_CHANGE_TYPE_CODE	ETC Change Type Code—identifies the type of history record.	AN	1	X(1)
	ETC_CHANGE_TYPE_CODE_DESC	ETC Change Type Code Description—the text description for an ETC_CHANGE_TYPE_CODE.	AN	90	X(90)

ETC HIC3 to ETC Cross Reference Table

Table Name	RETCXRF0_ETC_HIC3_ETC				
Revision Activity	add.12-03-2015				
Purpose	Provides a link to all ETCs that are equal to or narrower than a given Hierarchical Ingredient Code 3 Specific Therapeutic Classification (HIC3).				
Key	Column Name	Column Description	Format	Length	Picture
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
PF	HIC3_SEQN	Hierarchical Specific Therapeutic Class code Sequence	N	6	9(6)

ETC Search Table

Table Name		RETCSCH0_ETC_SEARCH			
Revision Activity		add.12-03-2015			
Purpose		Provides the association between a ETC_ID and related child ETC_IDs with associations to Clinical Formulation IDs (GCN_SEQNOs).			
Key	Column Name	Column Description	Format	Length	Picture
PF	ETC_SEARCH_ETC_ID	ETC Search ETC Identifier—the ETC_ID used to search for related ETC_IDs.	N	8	9(8)
PF	ETC_PRODUCTRELATED_ETC_ID	ETC Product Related ETC Identifier—ETC_ID that is the child of an ETC_SEARCH_ETC_ID and is associated to Clinical Formulation IDs (GCN_SEQNOs).	N	8	9(8)

ETC Table

Table Name	RETCTBL0_ETC_ID
Revision Activity	add.12-03-2015
Purpose	Provides attributes for the therapeutic classification and associates it to its parent therapeutic classification.

Key	Column Name	Column Description	Format	Length	Picture
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
	ETC_NAME	ETC Name—a unique mixed case descriptive name for a therapeutic classification.	AN	70	X(70)
	ETC_ULTIMATE_CHILD_IND	ETC Ultimate Child Indicator—indicates that the given ETC_IC has no lower-level classifications associated to it.	AN	1	X(1)
	ETC_DRUG_CONCEPT_LINK_IND	ETC Drug Concept Link Indicator—indicates that at least one Clinical Formulation ID (GCN_SEQNO) is associated to the given ETC_ID.	AN	1	X(1)
F	ETC_PARENT_ETC_ID	ETC Parent ETC Identifier—identifier the ETC_ID that is one level higher than the given ETC_ID.	N	8	9(8)

	ETC_FORMULAR_Y_LEVEL_IND	ETC Formulary Level Indicator—identifies a suggested level for building formularies.	AN	1	X(1)
	ETC_PRESENTATION_SEQNO	ETC Presentation Sequence Number—provides a sort order for sequencing ETC_IDs with the same parent.	N	5	9(5)
F	ETC_ULTIMATE_PARENT_ETC_ID	ETC Ultimate Parent ETC Identifier—identifies the therapeutic classification that is at the top of the hierarchy from the given ETC_ID.	N	8	9(8)
	ETC_HIERARCHY_LEVEL	ETC Hierarchy Level—provides the position of the given therapeutic classification in the hierarchical structure.	N	2	9(2)
	ETC_SORT_NUMBER	ETC Sort Number—provides a sort order for sequencing the ETC_ID when printing or displaying a list; changes with each product update and should not be used as a class identifier.	N	5	9(5)
	ETC_RETIRED_IND	ETC Retired Indicator—indicates that the given ETC_ID has been retired.	AN	1	X(1)
	ETC_RETIRED_DATE	ETC Retired Date—provides the date on which the ETC_ID was retired.	N	8	9(8)

ETC to GCN_SEQNO Assignment Table

Table Name	RETCGC0_ETC_GCNSEQNO				
Revision Activity	add.12-03-2015				
Purpose	Links the clinical formulation to a therapeutic classification and provides the attributes of that association.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
	ETC_COMMON_USE_IND	ETC Common Use Indicator—identifies the most common classification for a given drug concept.	AN	1	X(1)
	ETC_DEFAULT_USE_IND	ETC Default Use Indicator—identifies a suggested reporting classification for a given drug concept.	AN	1	X(1)

ETC to GCN_SEQNO Change History Table

Table Name	RETCGCH0_ETC_GCNSEQNO_HIST				
Revision Activity	add.12-03-2015				
Purpose	Tracks the relationship history for a clinical formulation to therapeutic classification association and provides the attributes of that association.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID	N	6	9(6)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
P	ETC_REVISION_SEQNO	ETC Revision Sequence Number—tracks the relationship history between a therapeutic classification and drug concept.	N	5	9(5)
	ETC_COMMON_USE_IND	ETC Common Use Indicator—identifies the most common classification for a given drug concept.	AN	1	X(1)
	ETC_DEFAULT_USE_IND	ETC Default Use Indicator—identifies a suggested reporting classification for a given drug concept.	AN	1	X(1)
	ETC_CHANGE_TYPE_CODE	ETC Change Type Code—identifies the type of history record.	AN	1	X(1)

	ETC_EFFECTIVE_DATE	ETC Effective Date—the date that the relationship between a classification and drug concept is turned on or off, or the date that an attribute of that association was modified.	N	8	9(8)
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ETC to HIC_SEQN Assignment History Table

Table Name	RETCHCH0_ETC_HICSEQN_HIST				
Revision Activity	add.12-03-2015				
Purpose	Tracks the relationship history for an ingredient to therapeutic classification association.				

Key	Column Name	Column Description	Format	Length	Picture
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number. (Stable ID)	N	6	9(6)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
P	ETC_REVISION_SEQNO	ETC Revision Sequence Number—tracks the relationship history between a therapeutic classification and drug concept.	N	5	9(5)
	ETC_CHANGE_TYPE_CODE	ETC Change Type Code—identifies the type of history record.	AN	1	X(1)
	ETC_EFFECTIVE_DATE	ETC Effective Date—the date that the relationship between a classification and drug concept is turned on or off, or the date that an attribute of that association was modified.	N	8	9(8)

ETC to HIC_SEQN Assignment Table

Table Name	RETCHIC0_ETC_HICSEQN				
Revision Activity	add.12-03-2015				
Purpose	Links an ingredient to a therapeutic classification.				
Key	Column Name	Column Description	Format	Length	Picture
PF	HIC_SEQN	Hierarchical Ingredient Code Sequence Number (Stable ID)	N	6	9(6)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)

ETC to HICL_SEQNO Assignment History Table

Table Name	RETCHLH0_ETC_HICLSEQNO_HIST				
Revision Activity	add.12-03-2015				
Purpose	Tracks the relationship history for an ingredient set to therapeutic classification association.				

Key	Column Name	Column Description	Format	Length	Picture
PF	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
P	ETC_REVISION_SEQNO	ETC Revision Seuence Number—tracks the relationship history between a therapeutic classification and drug concept.	N	5	9(5)
	ETC_CHANGE_TYPE_CODE	ETC Change Type Code—identifies the type of history record.	AN	1	X(1)
	ETC_EFFECTIVE_DATE	ETC Effective Date—the date that the relationship between a classification and drug concept is turned on or off, or the date that an attribute of that association was modified.	N	8	9(8)

ETC to HICL_SEQNO Assignment Table

Table Name	RETCHCL0_ETC_HICLSEQNO				
Revision Activity	add.12-03-2015				
Purpose	Links the ingredient set to a therapeutic classification.				
Key	Column Name	Column Description	Format	Length	Picture
PF	HICL_SEQNO	Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number) (Stable ID)	N	6	9(6)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)

ETC to MedID Assignment Table

Table Name		RETCMED0_ETC_MEDID			
Revision Activity		add.12-03-2015			
Purpose		Links a name-based drug identifier to a therapeutic classification and provides the attributes of that association,			
Key	Column Name	Column Description	Format	Length	Picture
PF	MEDID	MED Medication ID (Stable ID)	N	8	9(8)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
	ETC_COMMON_USE_IND	ETC Common Use Indicator—identifies the most common classification for a given drug concept.	AN	1	X(1)
	ETC_DEFAULT_USE_IND	ETC Default Use Indicator—identifies a suggested reporting classification for a given drug concept.	AN	1	X(1)

ETC to MedID Change History Table

Table Name	RETCMDH0_ETC_MEDID_HIST				
Revision Activity	add.12-03-2015				
Purpose	Tracks the relationship history for a name-based drug identifier to therapeutic classification association and provides the attributes of that association.				

Key	Column Name	Column Description	Format	Length	Picture
PF	MEDID	MED Medication ID (Stable ID)	N	8	9(8)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
P	ETC_REVISION_SEQNO	ETC Revision Sequence Number—tracks the relationship history between a therapeutic classification and drug concept.	N	5	9(5)
	ETC_COMMON_USE_IND	ETC Common Use Indicator—identifies the most common classification for a given drug concept.	AN	1	X(1)
	ETC_DEFAULT_USE_IND	ETC Default Use Indicator—identifies the type of history record.	AN	1	X(1)
	ETC_CHANGE_TYPE_CODE	ETC Change Type code—identifies the type of history record.	AN	1	X(1)

	ETC_EFFECTIVE_DATE	ETC Effective Date—the date that the relationship between a classification and drug concept is turned on or off, or the date that an attribute of that association was modified.	N	8	9(8)
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ETC to Med Name ID Assignment History Table

Table Name	RETCNMH0_ETC_MED_NAME_ID_HIST				
Revision Activity	add.12-03-2015				
Purpose	Tracks the relationship history for a medication name to therapeutic classification association.				

Key	Column Name	Column Description	Format	Length	Picture
PF	MED_NAME_ID	MED Medication Name ID (Stable ID)	N	8	9(8)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)
P	ETC_REVISION_SEQNO	ETC Revision Sequence Number—tracks the relationship history between a therapeutic classification and drug concept.	N	5	9(5)
	ETC_CHANGE_TYPE_CODE	ETC Change Type Code—identifies the type of history record.	AN	1	X(1)
	ETC_EFFECTIVE_DATE	ETC Effective Date—the date that the relationship between a classification and drug concept is turned on or off, or the date that an attribute of that association was modified.	N	8	9(8)

ETC to Med Name ID Assignment Table

Table Name	RETCMNM0_ETC_MED_NAME_ID				
Revision Activity	add.12-03-2015				
Purpose	Links a medication name to a therapeutic classification.				
Key	Column Name	Column Description	Format	Length	Picture
PF	MED_NAME_ID	MED Medication Name ID (Stable ID)	N	8	9(8)
PF	ETC_ID	ETC Identifier—a permanent numeric identifier that represents a unique therapeutic classification. (Stable ID)	N	8	9(8)

Therapeutic Classification Data ERD and Technical Specifications

- Overview
- Therapeutic Classification Data Tables
- Therapeutic Classification Data ERD

Overview

The tables described under Therapeutic Classification Data provide access to the following types of therapeutic class information:

- AHFS
- World Health Organization (ATC)
- First Databank (FDB) generic, standard, and ingredient therapeutic classes

All therapeutic class information is accessed via the Clinical Formulation ID (GCN_SEQNO). Access is summarized in the following table.

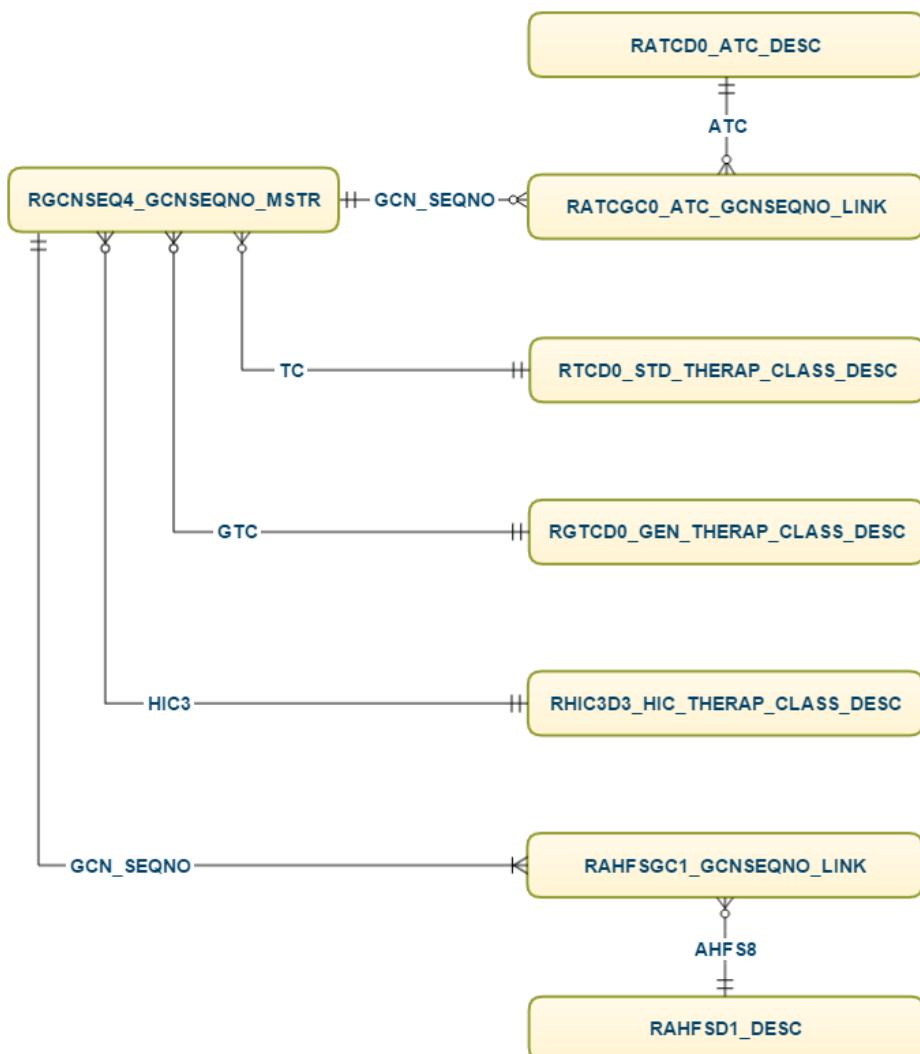
Therapeutic Class Type	Column Name	Table Name
AHFS	AHFS Code	GCN_SEQNO/AHFS Code Relation Table
World Health Organization ATC	ATC Code	GCN_SEQNO/ATC Relation Table
FDB therapeutic classes	GTC	Clinical Formulation ID Table
	HIC3/HIC3SEQNO	Clinical Formulation ID Table
	TC	Clinical Formulation ID Table

Therapeutic Classification Data Tables

This section provides the Entity-Relationship Diagram (ERD) and technical specifications for each of the tables contained in this module.

- AHFS Description Table
- ATC Description Table
- GCN_SEQNO/AHFS Code Relation Table
- GCN_SEQNO/ATC Relation Table
- Generic Therapeutic Class Description Table
- Hierarchical Ingredient Code Specific Therapeutic Class Table
- Standard Therapeutic Class Description Table

Therapeutic Classification Data ERD



AHFS Description Table

Table Name	RAHFSD1_DESC
Revision Activity	rev.03-31-2005
Purpose	Relates the AHFS Therapeutic Class to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	AHFS8	Therapeutic Class, AHFS	N	8	9(8)
	AHFS_DESC	American Hospital Formulary Service - Code Description	AN	40	X(40)

ATC Description Table

Table Name	RATCD0_ATC_DESC
Revision Activity	add.05-01-1999
Purpose	Relates an ATC to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	ATC	Anatomic, Therapeutic, Chemical Classification Code	AN	7	X(7)
	ATC_DESC	Anatomic, Therapeutic, Chemical Classification Code Description	AN	50	X(50)

GCN_SEQNO AHFS Code Relation Table

Table Name	RAHFSGC1_GCNSEQNO_LINK				
Revision Activity	rev.03-31-2005				
Purpose	Links a clinical formulation to its therapeutic classification.				

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	AHFS8	Therapeutic Class, AHFS	N	8	9(8)
	AHFS_REL	American Hospital Formulary Service - Code Relative Order	N	2	9(2)

GCN_SEQNO ATC Relation Table

Table Name	RATCGC0_ATC_GCNSEQNO_LINK
Revision Activity	add.05-01-1999
Purpose	Links a clinical formulation to its anatomic therapeutic classification.

Key	Column Name	Column Description	Format	Length	Picture
PF	GCN_SEQNO	Clinical Formulation ID (Stable ID)	N	6	9(6)
PF	ATC	Anatomic, Therapeutic, Chemical Classification Code	AN	7	X(7)
	ATC_VER	Anatomic, Therapeutic, Chemical Classification Code Version	N	6	9(6)

Generic Therapeutic Class Description Table

Table Name	RGTCD0_GEN_THERAP_CLASS_DESC
Revision Activity	original
Purpose	Relates the Generic Therapeutic Class Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	GTC	Therapeutic Class Code, Generic	N	2	9(2)
	GTC_DESC	Generic Therapeutic Class Description	AN	50	X(50)

Hierarchical Ingredient Code Specific Therapeutic Class Table

Table Name	RHIC3D3_HIC_THERAP_CLASS_DESC
Revision Activity	rev.10-03-2002
Purpose	Provides attributes of a specific therapeutic class.

Key	Column Name	Column Description	Format	Length	Picture
P	HIC3_SEQN	Hierarchical Specific Therapeutic Class Code Sequence Number (Stable ID)	N	6	9(6)
	HIC3	Hierarchical Specific Therapeutic Class Code	AN	3	X(3)
	HIC3_DESC	Hierarchical Specific Therapeutic Class Code Description	AN	50	X(50)
	HIC3_GRPN	Hierarchical Specific Therapeutic Class Code Group ID	N	6	9(6)
	HIC3_ROOT	Hierarchical Specific Therapeutic Class Parent HIC2 Sequence Number	N	6	9(6)

Standard Therapeutic Class Description Table

Table Name	RTCD0_STD_THERAP_CLASS_DESC
Revision Activity	original
Purpose	Relates the Standard Therapeutic Class Code to its text description.

Key	Column Name	Column Description	Format	Length	Picture
P	TC	Therapeutic Class Code, Standard	N	2	9(2)
	TC_DESC	Standard Therapeutic Class Description	AN	50	X(50)

Data Dictionary

The *Data Dictionary* provides an alphabetical listing of the column names in MedKnowledge with a definition for each. These column names are not categorized by module; however, a hyperlink is provided in the Technical Specification Tables from the column name to the *Data Dictionary*.

Most column definitions include either a sample list or a complete list of valid values—the data that populates a column. Many of the column definitions include examples which may use data from more than one table in order to show context; only selected rows and columns are used in these examples.

The format of date columns may vary and is noted in each definition, for example CCYYMMDD. The following table provides a key for date format abbreviations:

Abbreviation	Definition
C	Century
Y	Year
M	Month or Minute
D	Day
H	Hour

A

B

C

D

E

F

G

H

I

L

M

N

P

R

S

T

U

V

A

AD

AD_T

ADI_EFFTC

ADI_EFFTXT

ADI_EFFTXT_T

ADI_MONOSN

AHFS8

AHFS_DESC

AHFS_DESC_T

AHFS_GENM

AHFS_MONO

AHFS_MONOT

AHFS_PAN

AHFS_PNA

AHFS_REL

AHFS_SECT

AHFS_SECTL

AHFS_SECTT

AHFS_SPECM

AHFS_TEXT

AHFS_TEXTS

ALT_STRENGTH

ALT_STRENGTH_TYP_CODE

ALT_STRENGTH_UOM_ID

AMACDE

ASHPCDE3

ATC

ATC_DESC

ATC_VER

ATTRIBUTE_DESC

ATTRIBUTE_ID

ATTRIBUTE_TYPE_DESC

ATTRIBUTE_TYPE_ID

ATTRIBUTE_TYPE_LENGTH

ATTRIBUTE_TYPE_PRECISION

ATTRIBUTE_VALUE

AVAILABLE_PRECAUTION_IND

AD

Additional Descriptor

a 20-character alphanumeric column that provides additional information used to distinguish a drug product, such as trademarked dosage forms, special packaging, and other unique characteristics. This information is provided on the product labeling. When no such distinguishing information exists, the column is blank.

Sample Valid Values Table

AD	Description
P/F	Preservative Free
S/F	Sugar Free
A/F	Alcohol Free
SDV	Single Dose Vial
MDV	Multi Dose Vial
REDI V	REDI VIAL
ADD-VAN	ADD-VANTAGE
STERI-V	STERI-VIA

Related Tables

[IDDF Canada Drug Product Table](#)

AD_T

Additional Descriptor (Translated)

a 30-character alphanumeric column that provides additional information used to distinguish a drug product, such as trademarked dosage forms, special packaging, and other unique characteristics. This information is provided on the product labeling. When no such distinguishing information exists, the column is blank.

Sample Valid Values Table

AD	Description
P/F	Preservative Free
S/F	Sugar Free
A/F	Alcohol Free
SDV	Single Dose Vial
MDV	Multi Dose Vial
REDI V	REDI VIAL
ADD-VAN	ADD-VANTAGE
STERI-V	STERI-VIA

Related Tables

[IDDF Canada Drug Product Table--French](#)

ADI_EFFTC

Drug-Drug Interaction Clinical Effect Code

a three-character alphanumeric column that indicates the clinical effects of the drug interaction.

Valid Values Table

ADI_EFFTC	ADI_EFFTXT
ADD	Additive side effects from both drugs
ARF	Adverse reaction of the former drug
ARL	Adverse reaction of the latter drug
AVD	Avoid concurrent use when possible
CEE	Conflicting evidence exists for these drugs
CIS	Contraindicated in some patients
DEF	Decreased effect of the former drug
DEL	Decreased effect of the latter drug
INF	Increased effect of the former drug
INL	Increase effect of the latter drug
MAR	Adverse reaction with both drugs
MXF	Mixed effects of the former drug
MLX	Mixed effects of the latter drug
LBC	Labeling conflicts between countries or products

Related Tables

[Drug-Drug Interaction Clinical Effects Description Table](#)

[Drug-Drug Interaction/Clinical Effects Relation Table](#)

[Drug-Drug Interaction Clinical Effects Description Table--French](#)

ADI_EFFTXT

Drug-Drug Interaction Clinical Effect Text

a 50-character alphanumeric column that provides the text description for the Drug-Drug Interaction Clinical Effect Code (**ADI_EFFTC**).

Valid Values Table

ADI_EFFTC	ADI_EFFTXT
ADD	Additive side effects from both drugs
ARF	Adverse reaction of the former drug
ARL	Adverse reaction of the latter drug
AVD	Avoid concurrent use when possible
CEE	Conflicting evidence exists for these drugs
CIS	Contraindicated in some patients
DEF	Decreased effect of the former drug
DEL	Decreased effect of the latter drug
INF	Increased effect of the former drug
INL	Increase effect of the latter drug
MAR	Adverse reaction with both drugs
MXF	Mixed effects of the former drug
MXL	Mixed effects of the latter drug
LBC	Labeling conflicts between countries or products

Related Tables

[Drug-Drug Interaction Clinical Effects Description Table](#)

ADI_EFFTXT_T

Drug-Drug Interaction Clinical Effect Text (Translated)

a 75-character alphanumeric column that provides the text description for the Drug-Drug Interaction Clinical Effect Code (**ADI_EFFTC**).

Related Tables

Drug-Drug Interaction Clinical Effects Description Table--French

ADI_MONOSN

Drug-Drug Interaction Monograph Text Sequence Number

a three-character numeric column that maintains the proper order of text in a complete professional monograph.

Example—ADI_MONOSN and associated columns

DDI_MONOX	ADI_MONOSN	IAMIDENTN	IAMTEXTN
00254	001	T	MONOGRAPH TITLE: Mitotane/Spiromolactone
00254	002	B	
00254	003	L	SEVERITY LEVEL: 2-Severe Interaction: Action is required to reduce the
00254	004	L	risk of severe adverse reaction.
00254	005	B	
00254	006	A	MECHANISM OF ACTION: Unknown.
00254	007	B	
00254	008	E	CLINICAL EFFECTS: Possible loss of therapeutic effects of mitotane.
00254	009	B	
00254	010	P	PREDISPOSING FACTORS: None determined.
00254	011	B	
00254	012	M	PATIENT MANAGEMENT: Observe the patient for a decrease or absence of
00254	013	M	therapeutic effect of mitotane during combined use of spironolactone. If the
00254	014	M	effects of mitotane are not observed or are diminished, discontinue
00254	015	M	spironolactone therapy.
00254	016	B	

00254	017	D	DISCUSSION: Documentation for this interaction consists of a single case
00254	018	D	history. Following addition of mitotane to the treatment schedule of a
00254	019	D	patient receiving spironolactone, the expected effects of mitotane did not
00254	020	D	occur. When spironolactone was stopped, the effects of mitotane were
00254	021	D	observed.
00254	022	B	
00254	023	R	REFERENCES:
00254	024	B	
00254	025	R	1.Wortsman J, Soler NG. Mitotane. Spironolactone antagonism in Cushing's
00254	026	R	syndrome. JAMA 1977 Dec 5;238(23):2527.

Example—ADI_MONOSN and associated columns

DDI_MONOX	ADI_MONOSN	IAMIDENTN	IAMTEXTN
00296	001	T	MONOGRAPH TITLE: Cyclosporine/Amiodarone
00296	002	B	
00296	003	L	SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient
00296	004	L	and take action as needed.
00296	005	B	
00296	006	A	MECHANISM OF ACTION: Amiodarone may inhibit the metabolism of cyclosporine.
00296	007	B	

00296	008	E	CLINICAL EFFECTS: Increased levels of cyclosporine, which may result in
00296	009	E	renal toxicity.
00296	010	B	
00296	011	P	PREDISPOSING FACTORS: None determined.
00296	012	B	
00296	013	M	PATIENT MANAGEMENT: Monitor cyclosporine levels and renal function in
00296	014	M	patients receiving concurrent therapy. During concurrent therapy with
00296	015	M	amiodarone, cyclosporine dosages may need to be decreased by over 50%.
00296	016	B	
00296	017	D	DISCUSSION: Documentation on this interaction is limited to case reports
00296	018	D	Involving ten transplant patients. In the first report, the dosage of
00296	019	D	cyclosporine required to maintain a therapeutic trough concentration of
00296	020	D	200-250ng/ml (measured by high-performance liquid chromatography) decreased
00296	021	D	from 5.4-5.8mg/Kg/day to 2.3mg/Kg/day following the addition of amiodarone.
00296	022	D	Cyclosporine clearance decreased from 0.22L/hr/Kg to 0.1L/hr/Kg 12 days
00296	023	D	after the addition of amiodarone. In the second report, there was a twofold

00296	024	D	increase in cyclosporine levels following the addition of amiodarone to
00296	025	D	stabilized cyclosporine therapy. A retrospective study of eight transplant
00296	026	D	patients who received concurrent therapy with cyclosporine and amiodarone
00296	027	D	reported that cyclosporine levels increased in all subjects despite a
00296	028	D	decrease in cyclosporine dosage (from 6.2mg/Kg/day to 3.5mg/Kg/day).
00296	029	B	
00296	030	R	REFERENCES:
00296	031	B	
00296	032	R	1.Nicolau DP, Uber WE, Crumbley AJ, 3rd, Strange C. Amiodarone-cyclosporine
00296	033	R	interaction in a heart transplant patient. J Heart Lung Transplant 1992
00296	034	R	May-Jun;11(3 Pt 1):564-8.
00296	035	R	2.Chitwood KK, Abdul-Haqq AJ, Heim-Duthoy KL. Cyclosporine-amiodarone
00296	036	R	interaction. Ann Pharmacother 1993 May;27(5):569-71.
00296	037	R	3.Mamprin F, Mullins P, Graham T, Kendall S, Biocene B, Large S, Wallwork J,
00296	038	R	Schofield P. Amiodarone-cyclosporine interaction in cardiac
00296	039	R	transplantation. Am Heart J 1992 Jun;123(6):1725-6.

Related Tables

Drug-Drug Interaction Monograph Text Table

AHFS8

Therapeutic Class Code, AHFS

an eight-character numeric column that identifies the pharmacologic therapeutic category of the drug product according to the American Hospital Formulary Service (AHFS) classification system.

A value has been assigned for each record included in the database, regardless of whether the drug product is in the AHFS.

For many drug products, particularly combination products, more than one AHFS code is possible. The selection of the included AHFS number is determined by consultation with the staff of the AHFS.

Conventionally, an AHFS classification number is printed with a colon between the second and third digits and a period between the fourth and fifth digits and sixth and seventh digits (for example, 08:18.08.04). In addition, a leading zero is printed and the fifth and sixth digits are generally omitted if they are zeroes (88:28).

By contrast, in FDB records, the colon and periods are not included but all digits are carried, for example, 8:04 becomes 080400.

The AHFS8 code is obtained via the Clinical Formulation ID ([GCN_SEQNO](#)).

Sample Valid Values Table

AHFS8	AHFS_DESC
4000000	ANTIHISTAMINE DRUGS
4040000	FIRST GENERATION ANTIHISTAMINES
4040400	ETHANOLAMINE DERIVATIVES
4040800	ETHYLENEDIAMINE DERIVATIVES
4041200	PHENOTHIAZINE DERIVATIVES
4041600	PIPERAZINE DERIVATIVES
4042000	PROPYLAMINE DERIVATIVES

Related Tables

[AHFS Description Table](#)

[AHFS Description Table--French](#)

[GCN_SEQNO/AHFS Code Relation Table](#)

AHFS_DESC

Therapeutic Class Code Description, AHFS

a 40-character alphanumeric column that provides the text description for a Therapeutic Class Code, AHFS (AHFS8).

Sample Valid Values Table

AHFS8	AHFS_DESC
4000000	ANTIHISTAMINE DRUGS
4040000	FIRST GENERATION ANTIHISTAMINES
4040400	ETHANOLAMINE DERIVATIVES
4040800	ETHYLENEDIAMINE DERIVATIVES
4041200	PHENOTHIAZINE DERIVATIVES
4041600	PIPERAZINE DERIVATIVES
4042000	PROPYLAMINE DERIVATIVES

Related Tables

[AHFS Description Table](#)

AHFS_DESC_T

Therapeutic Class Code Description, AHFS (Translated)

a 90-character alphanumeric column that provides the text description for a Therapeutic Class Code, AHFS (AHFS8).

Related Tables

[AHFS Description Table--French](#)

AHFS_GENM

AHFS Full-Text General Monograph Number

a six-character numeric column that identifies a general-statement monograph that is linked to one or more ingredient-specific monographs.

Sample Valid Values Table

AHFS_SPECM	AHFS_GENM
300020	382941
300021	382913
300027	382933
300029	382941

Related Tables

[AHFS DI Specific to General Monograph Table](#)

AHFS_MONO

AHFS Full-Text Monograph Number

a six-character numeric column that contains a number the American Society of Health-System Pharmacists (ASHP) assigned to identify a specific drug monograph.

Sample Valid Values Table

AHFS_MONO	AHFS_MONOT
300001	Aminolevulinic Acid Hydrochloride
300002	Moxifloxacin Hydrochloride
300003	Gatifloxacin (Systemic)
300004	Dexmedetomidine Hydrochloride
300008	Dofetilide

Related Tables

[Prioritized AHFS DI Monograph GCN_SEQNO Table](#)

[AHFS Full-Text Monograph Section Table](#)

[AHFS Full-Text Monograph Text Table](#)

[AHFS Full-Text Monograph Titles Table](#)

AHFS_MONOT

AHFS Full-Text Monograph Title

a 70-character alphanumeric column that contains text the American Society of Health-System Pharmacists (ASHP) assigned to uniquely describe a drug monograph.

Sample Valid Values Table

AHFS_MONO	AHFS_MONOT
300001	Aminolevulinic Acid Hydrochloride
300002	Moxifloxacin Hydrochloride
300003	Gatifloxacin (Systemic)
300004	Dexmedetomidine Hydrochloride
300008	Dofetilide

Related Tables

[AHFS Full-Text Monograph Titles Table](#)

AHFS_PAN

Priority Indicator—AHFS to GCNSEQNO

a one-character alphanumeric column that describes the relationship between one AHFS monograph and one or more Clinical Formulation IDs (**GCN_SEQNO**).

Clinical Formulation IDs (GCN_SEQNOs) are assigned in priority order to AHFS monographs, beginning with a value of 1. A lower priority indicator value indicates a higher priority Clinical Formulation ID (GCN_SEQNO). Each monograph can have only one Clinical Formulation ID (GCN_SEQNO) for each priority from 1 through 5, but can have multiple Clinical Formulation IDs (GCN_SEQNOs) with a priority of 6.

Example—AHFS_PAN and associated columns

GCN_SEQNO	AHFS_PNA	AHFS_PAN	AHFS_MONO
000045	1	6	381006
000045	2	6	382253
000045	3	6	382855
000265	1	1	386009
000266	1	2	387009
017240	1	6	387009
017241	1	1	387009
047421	1	3	387009

Related Tables

[Prioritized AHFS DI Monograph GCN_SEQNO Table](#)

AHFS_PNA

Priority Indicator—GCN_SEQNO to AHFS

a one-character numeric column that represents the relationship between one Clinical Formulation IDs (GCN_SEQNO) and one or more AHFS monographs.

Monographs are assigned in priority order to the Clinical Formulation ID (GCN_SEQNO), beginning with a value of 1. A lower priority indicator value indicates a higher priority monograph. Each Clinical Formulation ID (GCN_SEQNO) can have one monograph for each priority from 1 through 9.

Example—AHFS_PNA and associated columns

GCN_SEQNO	AHFS_PNA	AHFS_PAN	AHFS_MONO
000045	1	6	381006
000045	2	6	382253
000045	3	6	382855
000063	1	6	381006
000064	1	6	381006

Related Tables

Prioritized AHFS DI Monograph GCN_SEQNO Table

AHFS_REL

American Hospital Formulary Service - Code Relative Order

a two-character numeric column that identifies the order in which a Therapeutic Class Code, AHFS (**AHFS8**) is associated to a Clinical Formulation ID (**GCN_SEQNO**). This order is purely intended for display purposes and does not connote that one code is more important than another. The American Society of Health-System Pharmacists (ASHP) does not view one class code as having priority or value over another associated class. Up to seven AHFS8 codes may be associated to a single Clinical Formulation ID (GCN_SEQNO).

Example—AHFS_REL and associated columns

GCN_SEQNO	AHFS8	AHFS_REL
041743	40120000	01
000019	24040800	01
000019	24040492	02

Related Tables

[GCN_SEQNO/AHFS Code Relation Table](#)

AHFS_SECT

AHFS Full-Text Monograph Section ID

a four-character numeric column that identifies a section of an AHFS monograph.

Sample Valid Values Table

AHFS_SECT	AHFS_SECTT
0001	Chemistry and Stability
0007	Mutagenicity and Carcinogenicity
0009	Dosage and Administration
0012	Preparations
0019	Allergic Conditions
0023	References

Related Tables

[AHFS Full-Text Monograph Section Table](#)

[AHFS Full-Text Monograph Text Table](#)

AHFS_SECTL

AHFS Full-Text Monograph Section Level

a one-character numeric column that indicates the level of specificity of a monograph section relative to other monograph sections. This column can contain a value *0* (zero), for least specific, through *3*, for most specific.

For example, if a section with a value of *1* in the AHFS_SECTL column follows a section with a value of *0*, then the section with the value of *1* is a subsection of the section with a value of *0* (zero).

Related Tables

[AHFS Full-Text Monograph Section Table](#)

AHFS_SECTT

AHFS Full-Text Monograph Section Title

a 70-character alphanumeric column that describes a monograph section.

Sample Valid Values Table

AHFS_SECT	AHFS_SECTT
0001	Chemistry and Stability
0007	Mutagenicity and Carcinogenicity
0009	Dosage and Administration
0012	Preparations
0019	Allergic Conditions
0023	References

Related Tables

[AHFS Full-Text Monograph Section Table](#)

AHFS_SPECM

AHFS Full-Text Specific Monograph Number

a six-character numeric column that identifies an ingredient-specific monograph that is linked to one or more general statement monographs.

Example—AHFS_SPECM and associated column

AHFS_SPECM	AHFS_GENM
300020	382941
300021	382913
300027	382933
300029	382941

Related Tables

[AHFS DI Specific to General Monograph Table](#)

AHFS_TEXT

AHFS Full-Text Monograph Text

a 75-character alphanumeric column that contains American Society of Health-System Pharmacists (ASHP) drug information.

Example—AHFS_TEXT and associated column

AHFS_TEXTS	AHFS_TEXT
0001	Triprolidine is a propylamine-derivative antihistamine.
0002	Triprolidine hydrochloride occurs as a white, crystalline powder
0003	with no more than a slight but unpleasant odor. The drug has
0004	solubilities of approximately 476 mg/mL in water and 556 mg/mL in
0005	alcohol at 25 DGC. Triprolidine has pKas of 3.6 and 9.3.
0001	Preparations containing triprolidine hydrochloride should be
0002	stored in tight, light-resistant containers at 15-30 DGC in a dry
0003	place; freezing of oral solutions should be avoided.

Related Tables

AHFS Full-Text Monograph Text Table

AHFS_TEXTS

AHFS Full-Text Monograph Text Sequence Number

a four-character numeric column that indicates the sequence in which to display the text in the AHFS Full-Text Monograph Text (**AHFS_TEXT**) column.

Example—AHFS_TEXTS and associated column

AHFS_TEXTS	AHFS_TEXT
0001	Triprolidine is a propylamine-derivative antihistamine.
0002	Triprolidine hydrochloride occurs as a white, crystalline powder
0003	with no more than a slight but unpleasant odor. The drug has
0004	solubilities of approximately 476 mg/mL in water and 556 mg/mL in
0005	alcohol at 25 DGC. Triprolidine has pKas of 3.6 and 9.3.
0001	Preparations containing triprolidine hydrochloride should be
0002	stored in tight, light-resistant containers at 15-30 DGC in a dry
0003	place; freezing of oral solutions should be avoided.

Related Tables

AHFS Full-Text Monograph Text Table

ALT_STRENGTH

Clinical Formulation Ingredient Alternate Strength

a 20-character numeric column that contains an alternate strength associated with an ingredient in the clinical formulation.

An ingredient has an alternative strength when more than one strength type is available for the ingredient. For example, for Clinical Formulation ID (**GCN_SEQNO**) 058515, calcium carbonate (**HIC_SEQN** value 000773) has an elemental strength of *500 mg* and an alternate strength of *1342 mg* measured as the base element plus the salt.

This column contains a nonzero value only when the ingredient has an associated alternate strength. Use the value in this column together with the values in the following columns to construct a complete alternate strength expression:

- ALT_STRENGTH_UOM_ID
- VOLUME
- VOLUME_UOM_ID
- TIME_VALUE
- TIME_UOM_ID

Example—ALT_STRENGTH and associated columns

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UOM_ID	STRENGTH_TYP_CODE	ALT_STRENGTH	ALT_STRENGTH_UOM_ID	ALT_STRENGTH_TYP_CODE
058515	000773	500	1	2	1342	1	3
058001	001117	471	1	2	1177	1	3
015858	000772	169	1	2	667	1	3
001506	000833	200	1	2	600	1	3
001585	000840	105	1	2	525	1	0
029417	000840	105	1	2	525	1	3

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

ALT_STRENGTH_TYP_CODE

Ingredient Alternate Strength Type Code

a one-character numeric column that identifies what the value in the Ingredient Alternate Strength (**ALT_STRENGTH**) column measures.

An ALT_STRENGTH_TYPE_CODE value of **0** indicates that an alternate strength is not specified for the ingredient. If the ingredient is associated to an alternate strength, the description text is provided by the Strength Type Description (**STRENGTH_TYP_DESC**) column within the [Ingredient Strength Type Description Table \(RSTRTD0_STRENGTH_TYP_DESC\)](#).

Valid Values Table

ALT_STRENGTH_TYP_CODE	STRENGTH_TYP_DESC
0	Not Specified
1	Base
2	Elemental
3	Base plus Salt
4	Component

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

ALT_STRENGTH_UOM_ID

Clinical Formulation Ingredient Alternate Strength Unit of Measure Identifier

an eight-character numeric column that identifies the unit of measure of the alternative strength of an ingredient in a clinical formulation. Use the value in this column to retrieve the description of the unit of measure from the Ingredient Strength Unit of Measure Table ([RSTRUOM0_STRENGTH_UOM](#)).

Sample Valid Values Table

ALT_STRENGTH_UOM_ID	UOM_DESC
1	milligram
2	milliliter
3	gram
4	microgram
6	liter
7	Percent
8	millimole
9	milliequivalent
10	unit
21	milliosmole
22	millicurie
23	milligrams, phenytoin equivalents
24	hour
25	cell
26	LF unit
27	kilogram
28	french
29	minim
30	scoop
31	centimeter

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

AMACDE

AMA Codes

This column is not currently being used.

Related Tables

Patient Education Master Table

ASHPCDE3

Patient Education American Society of Health-System Pharmacists Monograph Code Version 3

This column is not currently being used.

Related Tables

[Patient Education Master Table](#)

ATC

Anatomic, Therapeutic, Chemical Classification Code

a seven-character alphanumeric column that identifies a therapeutic classification as developed by the World Health Organization for drug utilization studies.

Sample Valid Values Table

ATC	ATC_DESC
D10AD04	ISOTRETINOIN
D10AD05	MOTRETNINIDE
D10AD51	TREINOIN, COMBINATIONS
D10AD54	ISOTRETINOIN, COMBINATIONS
D10AE	PEROXIDES
D10AE01	BENZOYL PEROXIDE
D10AE51	BENZOYL PEROXIDE, COMBINATIONS
D10AF	ANTIINFECTIVES FOR TREATMENT OF ACNE
D10AF01	CLINDAMYCIN
D10AF02	ERYTHROMYCIN
D10AF03	CHLORAMPHENICOL
D10AF04	MECLOCYCLINE
D10AF52	ERYTHROMYCIN, COMBINATIONS
D10AX	OTHER ANTI-ACNE PREPARATIONS FOR TOPICAL USE
D10AX01	ALUMINIUM CHLORIDE
D10AX0	RESORCINOL
D10AX03	AZELAIC ACID
D10AX04	ALUMINIUM OXIDE
D10AX30	VARIOUS COMBINATIONS
D10B	ANTI-ACNE PREPARATIONS FOR SYSTEMIC USE

Related Tables

[GCN_SEQNO/ATC Relation Table](#)

ATC_DESC

Anatomic, Therapeutic, Chemical Classification Code Description

a 50-character alphanumeric column that provides the text description for an Anatomic, Therapeutic, Chemical Classification Code (**ATC**).

Sample Valid Values Table

ATC	ATC_DESC
D10AX01	ALUMINIUM CHLORIDE
D10AX04	ALUMINIUM OXIDE
D10B	ANTI-ACNE PREPARATIONS FOR SYSTEMIC USE
D10AF	ANTIINFECTIVES FOR TREATMENT OF ACNE
D10AX03	AZELAIC ACID
D10AE01	BENZOYL PEROXIDE
D10AE51	BENZOYL PEROXIDE, COMBINATIONS
D10AF03	CHLORAMPHENICOL
D10AF01	CLINDAMYCIN
D10AF02	ERYTHROMYCIN
D10AF52	ERYTHROMYCIN, COMBINATIONS
D10AD04	ISOTRETINOIN
D10AD54	ISOTRETINOIN, COMBINATIONS
D10AF04	MECLOCYCLINE
D10AD05	MOTRETINIDE
D10AX	OTHER ANTI-ACNE PREPARATIONS FOR TOPICAL USE
D10AE	PEROXIDES
D10AX02	RESORCINOL
D10AD51	TRETINOIN, COMBINATIONS
D10AX30	VARIOUS COMBINATIONS

Related Tables

[ATC Description Table](#)

ATC_VER

Anatomic, Therapeutic, Chemical Classification Code Version

a six-character numeric column that identifies the date of the edition of the ATC Code book, published by the World Health Organization, from which the ATC Codes (**ATC**) are extracted by FDB.

Example—ATC_VER and associated columns

GCN_SEQNO	ATC	ATC_VER
049718	L02AE04	012002
049692	B05XB	012002
049694	A11JC	012002
049696	A11JB	012002

Related Tables

[GCN_SEQNO/ATC Relation Table](#)

ATTRIBUTE_DESC

Attribute Description

A 100-character column that provides the text description of an Attribute value.

Valid Values Table

ATTRIBUTE_ID	ATTRIBUTE_DESC
48	Brand Name 30
49	Label Name 30
50	Additional Descriptor
51	Health Canada Company Code
52	License Number

Related Tables

[Attribute Description Table](#)

ATTRIBUTE_ID

Attribute Identifier

An eight-character numeric column that identifies an attribute associated with a FDB Product Identifier ([FDB_PRODUCT_ID](#)).

Valid Values Table

ATTRIBUTE_ID	ATTRIBUTE_DESC
48	Brand Name 30
49	Label Name 30
50	Additional Descriptor
51	Health Canada Company Code
52	License Number

Related Tables

[Attribute Description Table](#)

[Product Master Attribute Table](#)

ATTRIBUTE_TYPE_DESC

Attribute Type Description

a 100-character alphanumeric column that provides the text description of an Attribute Type ID ([ATTRIBUTE_TYPE_ID](#)).

Related Tables

[Attribute Type Table](#)

ATTRIBUTE_TYPE_ID

Attribute Description Type Identifier

an eight-character numeric column that identifies an attribute type.

Valid Values Table

ATTRIBUTE_TYPE_ID	ATTRIBUTE_TYPE_DESC
22	String
31	String
32	Number
33	Number

Related Tables

[Attribute Description Table](#)

[Attribute Type Table](#)

ATTRIBUTE_TYPE_LENGTH

Attribute Type Length

an eight-character numeric column that provides the length of an attribute type.

Related Tables

[Attribute Type Table](#)

ATTRIBUTE_TYPE_PRECISION

Attribute Type Precision

an eight-character numeric column that provides the precision of an attribute type.

Related Tables

[Attribute Type Table](#)

ATTRIBUTE_VALUE

Attribute Value

a 255-character alphanumeric column that identifies an attribute associated with a FDB Product Identifier ([FDB_PRODUCT_ID](#)).

Example—ATTRIBUTE_VALUE and associated columns

FDB_PRODUCT_ID	ATTRIBUTE_ID	ATTRIBUTE_ID	ATTRIBUTE_VALUE
503339	48	Brand Name 30	Biotin
503339	49	Label Name 30	Biotin 250 mcg tablet
503339	52	License Number	00437522

Related Tables

[Product Master Attribute Table](#)

AVAILABLE_PRECAUTION_IND

Available Precaution Indicator

a one-character alphanumeric column that indicates whether a similarly coded PEDI or GERI precaution exists for the same age range and clinical formulation.

Valid Values Table

AVAILABLE_PRECAUTION_IND	Description
0	A corresponding PEDI or GERI precaution does not exist for a clinical formulation and age range
1	A corresponding PEDI or GERI precaution exists for a clinical formulation and age range

Related Tables

[DRCM Age Exclusion Table](#)

B

BN

BN_T

BROADER_DXID

BN

Brand Name

a 30-character alphanumeric column that contains the name that appears on the package label provided by the manufacturer. This column is populated for all products.

The following example shows brand names for sample products:

Example—BN and associated column

DIN	BN
00216666	NOVASEN
00016349	ELAVIL
00092703	HYDROCHLOROTHIAZIDE

Related Tables

[IDDF Canada Drug Product Table](#)

BN_T

Brand Name (Translated)

a 50-character alphanumeric column that contains the name that appears on the package label provided by the manufacturer. This column is populated for all products.

The following example shows brand names for sample products:

Example—BN and associated column

DIN	BN
00216666	NOVASEN
00016349	ELAVIL
00092703	HYDROCHLOROTHIAZIDE

Related Tables

[IDDF Canada Drug Product Table--French](#)

BROADER_DXID

FML Broader DxID

an eight-character numeric column that contains the FML Disease Identifier (**DXID**) that has been determined to be a broader or more general condition than a specified DxID. However, BROADER_DXIDs are not necessarily “parents” in a hierarchical relationship.

Example—BROADER_DXID and associated columns

DXID	DXID_DESC_100	BROADER_DXID	Description
00000598	Diabetic Coma	00003033	Coma
00000598	Diabetic Coma	00000604	Diabetes Mellitus

Related Tables

[FML Disease Identifier \(DxID\) Navigation Table](#)

C

CAS9_TBL

CASE_IND

CLIN_CD

CLIN_CD_DESC

CLIN_DRUG_GROUP

CLIN_DRUG_GRP

CMMC

CMMC_RN

CMMCF

CMPAT1

CMPAT2

CMRPH1

CMRPH2

COADMIN_DOSING_TEXT

COPYRIGHT_TEXT

CURR_MEDID

CURR_MEDID_DESC

CURR_MEDID_NAME_SOURCE_CD

CURR_MEDID_NEW_STATUS_CD

CURR_MEDID_OLD_STATUS_CD

CAS9_TBL

Chemical Abstracts Service Registry Number

a nine-character numeric column that is assigned to compounds. It is a unique number, but conveys no compositional or other kinds of information.

This column is intended to identify the CAS number of an ingredient. It should not be used to group candidates for substitution. For these purposes please refer to the discussion of the Clinical Formulation ID ([GCN_SEQNO](#)). Furthermore, FDB encourages customers to use the Hierarchical Ingredient Code Sequence Number ([HIC_SEQN](#)) for ingredient identification, because many drug ingredients are not assigned a CAS9_TBL number. You can navigate to the HIC_SEQN using the Ingredient List Identifier ([HICL_SEQNO](#)) in the HICL_SEQNO/HIC Relation Table ([RHICL1_HIC_HICLSEQNO_LINK](#)).

Example—CAS9_TBL and associated columns

CAS9_TBL	HIC_SEQN	HIC_DESC
00050102	001734	oxyphenonium bromide
00050340	001732	propantheline bromide
00053463	001731	methantheline bromide
00060446	001741	penthienate bromide
00060468	001751	aminopentamide
00062975	001736	diphenamid methylsulfate
00071818	001739	isopropamide iodide
00076904	001746	mepenzolate bromide
00080502	001748	anisotropine methylbromide
00090222	001745	valethamate bromide
00115639	001738	hexocyclium methylsulfate
00125519	001742	pipenzolate bromide
00520207	001740	mepiperphenidol bromide
00532490	001735	dibutoline sulfate
00545802	001743	poldine methylsulfate
00596510	001737	glycopyrrolate
03485629	001747	clidinium bromide
04310354	001744	tridihexethyl chloride
00050102	001734	oxyphenonium bromide

Related Tables

HIC/Chemical Abstracts Service Registry Number Relation Table

CASE_IND

Case Indicator

a one-character numeric column that indicates whether a product (**GTIN**) is packaged as a case, each case contains multiple packs.

The CASE_IND column is used with the Unit Indicator (**UNIT_IND**) and Pack Indicator (**PACK_IND**) columns.

Valid Values Table

CASE_IND	Description
0	Not packaged as a case
1	Is packaged as a case

Related Tables

IDDF Canada Packaged Product Master Table

CLIN_CD

Clinical Code

a two-character alphanumeric column that identifies the disease identifier-based clinical module that is being referenced.

Valid Values Table

CLIN_CD	CLIN_CD_DESC
01	Indications Module
02	Side Effects Module
03	Contraindications Module
04	Dosage Range Check Module
05	Prescriber Order Entry Module
06	Neonatal and Infant Dosage Range Check Module

Related Tables

[Clinical Module Code Description Table](#)

[SNOMED CT to DXID Search Table](#)

[SNOMED CT to DXID Search Exclusion Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT to DXID Search History Table](#)

CLIN_CD_DESC

Clinical Code Description

a 50-character alphanumeric column that provides the text description for a Clinical Code ([CLIN_CD](#)).

Valid Values Table

CLIN_CD	CLIN_CD_DESC
01	Indications Module
02	Side Effects Module
03	Contraindications Module
04	Dosage Range Check Module
05	Prescriber Order Entry Module
06	Neonatal and Infant Dosage Range Check Module

Related Tables

[Clinical Module Code Description Table](#)

CLIN_DRUG_GROUP

Clinical Module Drug Group

a five-character numeric column for the value that represents a drug group from a disease identifier-based clinical module. The module from which this value is associated is identified by the FML Clinical Module Code ([FML_CLIN_CODE](#)).

Example—CLIN_DRUG_GROUP and associated columns

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXID	FML_CLIN_CODE	CLIN_DRUG_GROUP
642	01	1432	01	1228

Related Tables

[FML ICD Search Exclusion Table](#)

CLIN_DRUG_GRP

Clinical Module Drug Group

a five-character numeric column for the value that represents a drug group from a disease identifier-based clinical module. The module from which this value is associated is identified by the Clinical Module Code ([CLIN_CD](#)).

Related Tables

[SNOMED CT to DXID Search Exclusion Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

CMMC

Counseling Messages Message Code

a four-character numeric column that identifies and supports a set of informational messages about the patient's medication.

The codes are used in conjunction with a master table of messages to generate a set of prioritized messages for the customer and a separate set for the patient.

Sample Valid Values Table

CMMC	Professional Message Description (CMRPH1 AND CMRPH2)	Patient Message Description (CMPAT1 and CMPAT2)
0001	Damages kidney/liver in excessive doses	Do not take more medicine than is recommended
0002	5 doses/day max for children unless directed by doctor	No more than 5 doses a day for kids under 12 yr
0003	Store at room temperature away from sunlight	Store at room temperature away from sunlight
0004	Avoid medicines containing same ingredient(s)	Avoid other medicines containing the same drug
0005	Once primed, may keep at room temperature for up to 14 days	Once primed, may keep at room temperature for 14d
0006	Seek immediate help if overdose is suspected	Seek immediate help if overdose is suspected
0007	May interfere with blood glucose test in diabetics	May interfere with blood sugar test in diabetics
0008	Store unopened in refrigerator; Protect from freezing	Store unopened in refrig-erator; Do not freeze
0009	Take on an empty stomach	Take on an empty stomach
0010	Must be compliant with therapy	Important to try not to skip doses
0011	Rash associated with alcohol use	Reduce or avoid drinking alcohol
0012	Teratogenic in pregnancy	Do not take if pregnant contact your doctor
0013	Do not take iron supplements while on this medicine	Do not take iron vitamins
0014	Do not double the next dose if a dose is missed	Do not double the next dose if a dose is missed
0015	Use birth control while on this medicine	Use birth control while on this medicine

0016	Do not use if allergic to this medication	Tell your pharmacist & Dr if you have allergies
0017	Use exactly as directed by doctor	Do not use more or less often than doctor said
0018	Call doctor if no improvement in condition	Call doctor if you are not getting better
0019	Does not stop transmission of virus to mate	Can still spread virus to others
0020	Must complete full course of therapy	Must use for full length of treatment

Related Tables

[Counseling Message Module Message Text Table](#)

[GCN_SEQNO/Counseling Message Module Counseling Message Relation Table](#)

CMMC_RN

Counseling Messages Module Code's Relative Importance Number

a one-character numeric column that identifies the priority (1,2,3, and so on) of a specific message for display purposes. The highest priority message will be displayed first.

Example—CMMC_RN and associated columns for TERAZOSIN

GCN_SEQNO	CMMC	Professional Message Description (CMRPH1 AND CMRPH2)	Patient Message Description (CMPAT1 and CMPAT2)	CMMC_RN
000301	0694	Take first dose at bedtime	Take first dose at bedtime	1
000301	0310	May take with food if GI upset occurs	May take with food if stomach upset occurs	2
000301	0433	Best to take at the same time each day to maintain blood levels	Best to take at the same time each day	3
000301	0045	May cause drowsiness; Caution operating machinery or driving	May make you sleepy; Use caution driving	4
000301	0098	May cause orthostatic hypotension Shake legs out before standing	Caution; Be careful not to stand up too quickly	5
000301	0010	Must be compliant with therapy	Important to try not to skip doses	6
000301	0130	Avoid CNS stimulants unless directed	Avoid drugs that increase your heart rate	7
000301	0135	Alcohol enhances hypotensive effect	Alcohol can effect blood pressure; Limit its use	8

Example—CMMC_RN and associated columns for VERAPAMIL

GCN_SEQNO	CMMC	Professional Message Description (CMRPH1 AND CMRPH2)	Patient Message Description (CMPAT1 and CMPAT2)	CMMC_RN

000567	0016	Do not use if allergic to this medication	Tell your pharmacist & Dr if you have allergies	1
000567	0010	Must be compliant with therapy	Important to try not to skip doses	2
000567	0980	Use ASAP if dose is missed; skip dose if almost time for next dose	Skip missed dose if almost time for next dose	3
000567	0098	May cause orthostatic hypotension Shake legs out before standing	Caution: Be careful not to stand up too quickly	4
000567	0156	May cause gingival hyperplasia; Maintain good dental hygiene	May cause gum enlargement See dentist regularly	5
000567	0070	Check regularly with your doctor	See your physician regularly	6
000567	1028	Store at room temperature away from heat and sunlight	Store at room temperature away from heat & sunlight	7
000567	0033	Check with doctor before discontinuing	Do not stop medicine without call doctor	8

Related Tables

[GCN_SEQNO/Counseling Message Module Counseling Message Relation Table](#)

[GCN_SEQNO/Counseling Message Module French Language Counseling Message Relation Table](#)

CMMCF

Counseling Message French-Language Message Code

a four-character numeric column that identifies a set of informational messages, in French, for a specified product. These codes are used in conjunction with a master table of messages to generate a set of prioritized messages for the dispenser and patient.

Example—CMMCF and associated columns

CMMCF	Professional Message Description (CMRPH1 AND CMRPH2)	Patient Message Description (CMPAT1 and CMPAT2)
1029	Ne pas mâcher ou casser comprimés Avaler les comprimés en entier	Ne pas mâcher/casser; avalez comprimés entiers
1342	Conserver au réfrigérateur Ne pas congeler	Gardez au réfrigérateur Ne congelez pas
1110	Utilisation déconseillée pendant la grossesse ou l'allaitement	Ne prenez pas pendant la grossesse ou allaitement
0017	Suivre scrupuleusement la posologie prescrite par le médecin	Ne pas prendre + ou - souvent que recommandé
0024	Eviter le contact avec les yeux	Evitez le contact avec les yeux
0016	Ne pas prendre ce médicament en cas d'allergie à celui ci	Signalez au Dr si vous avez des allergies
0084	Risque de réactions photosensibles Utiliser une crème solaire	Risque de coups de soleil Utilisez crème solaire
0148	Peut troubler la vue	Peut troubler la vue
0178	Risque accrû de problèmes dentaires si utilisation prolongée	Voir dentiste souvent si thérapie chronique
1100	Prendre avec nourriture/lait pour réduire maux gastro-intestinaux	Prenez w/ nourriture/lait pour réduire maux ventre

Related Tables

[Counseling Message Module French Language Message Text Table](#)

[GCN_SEQNO/Counseling Message Module French Language Counseling Message Relation Table](#)

CMPAT1

Counseling Messages Patient Text Column 1

a 25-character alphanumeric column that contains the first 25 characters of the patient message.

Sample Valid Values Tables

CMMC	CMPAT1	CMPAT2
0004	Avoid other medicines	containing the same drug
0018	Call doctor if you are	not getting better
0019	Can still spread virus to	others
0014	Do not double the next	dose if a dose is missed
0012	Do not take if pregnant	contact your doctor
0013	Do not take iron vitamins	
0001	Do not take more medicine	than is recommended
0017	Do not use more or less	often than doctor said
0010	Important to try not to	skip doses
0007	May interfere with blood	sugar test in diabetics
0020	Must use for full length	of treatment
0002	No more than 5 doses a	day for kids under 12 yr
0005	Once primed, may keep at	room temperature for 14d
0011	Reduce or avoid drinking	alcohol
0006	Seek immediate help if	overdose is suspected
0003	Store at room temperature	away from sunlight
0008	Store unopened in refrig-	erator; Do not freeze
0009	Take on an empty stomach	
0016	Tell your pharmacist & Dr	if you have allergies
0015	Use birth control while	on this medicine
0004	Avoid other medicines	containing the same drug
0018	Call doctor if you are	not getting better

Related Tables

[Counseling Message Module Message Text Table](#)

Counseling Message Module French Language Message Text Table

CMPAT2

Counseling Messages Patient Text Column 2

a 25-character alphanumeric column that contains the remaining 25 characters of the patient message.

Sample Valid Values Table

CMMC	CMPAT1	CMPAT2
0004	Avoid other medicines	containing the same drug
0018	Call doctor if you are	not getting better
0019	Can still spread virus to	others
0014	Do not double the next	dose if a dose is missed
0012	Do not take if pregnant	contact your doctor
0013	Do not take iron vitamins	
0001	Do not take more medicine	than is recommended
0017	Do not use more or less	often than doctor said
0010	Important to try not to	skip doses
0007	May interfere with blood	sugar test in diabetics
0020	Must use for full length	of treatment
0002	No more than 5 doses a	day for kids under 12 yr
0005	Once primed, may keep at	room temperature for 14d
0011	Reduce or avoid drinking	alcohol
0006	Seek immediate help if	overdose is suspected
0003	Store at room temperature	away from sunlight
0008	Store unopened in refriger-	ator; Do not freeze
0009	Take on an empty stomach	
0016	Tell your pharmacist & Dr	if you have allergies
0015	Use birth control while	on this medicine
0004	Avoid other medicines	containing the same drug
0018	Call doctor if you are	not getting better

Related Tables

Counseling Message Module Message Text Table

Counseling Message Module French Language Message Text Table

CMRPH1

Counseling Messages Professional Text Column 1

a 34-character alphanumeric column that contains the first 34 characters of the professional message.

Sample Valid Values Table

CMMC	CMRPH1	CMRPH2
0002	5 doses/day max for children	unless directed by doctor
0004	Avoid medicines containing same	ingredient(s)
0018	Call doctor if no improvement in	condition
0001	Damages kidney/liver in excessive	doses
0014	Do not double the next dose if a	dose is missed
0013	Do not take iron supplements	while on this medicine
0016	Do not use if allergic to this	medication
0019	Does not stop transmission of	virus to mate
0007	May interfere with blood glucose	test in diabetics
0010	Must be compliant with therapy	
0020	Must complete full course of	therapy
0005	Once primed, may keep at room	temperature for up to 14 days
0011	Rash associated with alcohol use	
0006	Seek immediate help if overdose	is suspected
0003	Store at room temperature	away from sunlight
0008	Store unopened in refrigerator;	Protect from freezing
0009	Take on an empty stomach	
0012	Teratogenic in pregnancy	
0015	Use birth control while on this	medicine
0017	Use exactly as directed by doctor	

Related Tables

[Counseling Message Module Message Text Table](#)

[Counseling Message Module French Language Message Text Table](#)

CMRPH2

Counseling Messages Professional Text Column 2

a 34-character alphanumeric column that contains the remaining 34 characters of the professional message.

Sample Valid Values Table

CMMC	CMRPH1	CMRPH2
0009	Take on an empty stomach	
0010	Must be compliant with therapy	
0011	Rash associated with alcohol use	
0012	Teratogenic in pregnancy	
0017	Use exactly as directed by doctor	
0003	Store at room temperature	away from sunlight
0018	Call doctor if no improvement in	condition
0014	Do not double the next dose if a	dose is missed
0001	Damages kidney/liver in excessive	doses
0004	Avoid medicines containing same	ingredient(s)
0006	Seek immediate help if overdose	is suspected
0016	Do not use if allergic to this	medication
0015	Use birth control while on this	medicine
0008	Store unopened in refrigerator;	Protect from freezing
0005	Once primed, may keep at room	temperature for up to 14 days
0007	May interfere with blood glucose	test in diabetics
0020	Must complete full course of	therapy
0002	5 doses/day max for children	unless directed by doctor
0019	Does not stop transmission of	virus to mate
0013	Do not take iron supplements	while on this medicine

Related Tables

[Counseling Message Module Message Text Table](#)

[Counseling Message Module French Language Message Text Table](#)

COADMIN_DOSING_TEXT

Coadministration Dosing Text

a 255-character alphanumeric column that provides dosing guidelines if a particular clinical formulation, routed medication, or routed generic in a drug-drug interaction pair are coadministered.

Related Tables

[Drug-Drug Interaction Clinical Formulation Exception Table](#)

COPYRIGHT_TEXT

Copyright Text

a 80-character alphanumeric column provides text for an individual line of the copyright statement.

Example—COPYRIGHT_TEXT and associated columns

DATASET_CODE	SEQUENCE_NO	COPYRIGHT_TEXT
DIN	1	Source: Canadian Drug Product Database. Health Canada. http://www.hc-sc.gc.ca/
DIN	2	dhp-mps/prodpharma/databasdon/index-eng.php; Reproduced with permission from the
DIN	3	Minister of Health Canada, 2014.
NHP	1	Source: Canadian Licensed Natural Health Products Database. Health Canada. http://webprod5.hc-sc.gc.ca/lhpd-bdpsn/h/index-eng.jsp . Reproduced with permission
NHP	2	http://webprod5.hc-sc.gc.ca/lhpd-bdpsn/h/index-eng.jsp . Reproduced with permission
NHP	3	from the Minister of Health Canada, 2014.

Related Tables

Copyright Table

CURR_MEDID

Currently Associated Medication ID

an eight-character numeric column that identifies the replacement MED Medication ID (**MEDID**) value of a Previously Associated Medication ID (**PREV_MEDID**) within one of the following associations:

- an IDC/MEDID association identified within the MED IDC to Medication ID Cross-Reference Table ([RMEDIDC0_IDC_MEDID_LINK](#))
- an IDC/MEDID association identified within the MED IDC to Generic Medication ID Cross-Reference Table ([RMEDIGM0_IDC_GEN_MEDID](#))

The text description is provided by the Currently Associated Medication ID Description (**CURR_MEDID_DESC**) column.

CURR_MEDID and associated columns

IDC	PREV_MEDID	PREV_MEDID_DESC	CURR_MEDID	CURR_MEDID_DESC	PRODUCTION_DATE
03000029608	509911	Brevicon 1 mg-35 mcg Tab	509907	Brevicon 1/35 (21) 1 mg-35 mcg Tab	20080904
03000025683	509911	Brevicon 1 mg-35 mcg Tab	509909	Brevicon 1/35 (28) 1 mg-35 mcg Tab	20080904
03000029607	509910	Brevicon 0.5 mg-35 mcg Tab	556084	Brevicon 0.5/35 (28) 0.5 mg-35 mcg Tab	20080904
03000029606	509910	Brevicon 0.5 mg-35 mcg Tab	556085	Brevicon 0.5/35 (21) 0.5 mg-35 mcg Tab	20080904
03000055342	505376	Pantoprazole 40 mg IV Solution	550537	pantoprazole sodium 40 mg IV Solution	20071213
03000026076	510367	Clindamycin 900 mg/6 mL IV	502451	clindamycin phosphate 150 mg/mL Injection	20071213

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

CURR_MEDID_DESC

Currently Associated Medication ID Description

a 70-character alphanumeric column that provides the text description of the Currently Associated Medication ID ([CURR_MEDID](#)).

Example—CURR_MEDID_DESC and associated columns

CURR_MEDID	CURR_MEDID_DESC
509907	Brevicon 1/35 (21) 1 mg-35 mcg Tab
509909	Brevicon 1/35 (28) 1 mg-35 mcg Tab

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

CURR_MEDID_NAME_SOURCE_CD

Currently Associated Medication ID Name Source Code

a one-character alphanumeric column that provides the Medication Name Source Code (**MED_NAME_SOURCE_CD**) of a Currently Associated Medication ID (**CURR_MEDID**).

The description text is retrieved by joining the CURR_MEDID_NAME_SOURCE_CD to the MED_SOURCE_CD in the MED Medication Name Source Code Description Table (**RMINAMD1_NAME_SRC_DESC**).

Example—CURR_MEDID_NAME_SOURCE_CD and associated columns

CURR_MEDID	CURR_MEDID_NAME_SOURCE_CD	MED_NAME_SOURCE_CD_DESC
550537	2	Generically Named Packaged Product
502451	2	Generically Named Packaged Product
509907	1	Packaged Product Name

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

CURR_MEDID_NEW_STATUS_CD

Currently Associated Medication ID New Status Code

a one-character alphanumeric column that provides the current status of a MEDID currently associated to an IDC. With the Currently Associated Medication ID Old Status Code ([CURR_MEDID_OLD_STATUS_CD](#)), these values indicate how a newly associated MEDID's status has changed.

The description text is retrieved by joining CURR_MEDID_NEW_STATUS_CD to the MED Medication Status Code ([MED_STATUS_CD](#)) column in the MED Status Code Description Table ([RMISCD1_STATUS_DESC](#)).

Example—CURR_MEDID_NEW_STATUS_CD and associated columns

CURR_MEDID	CURR_MEDID_OLD_STATUS_CD	MED_STATUS_CD_DESC	CURR_MEDID_NEW_STATUS_CD	MED_STATUS_CD_DESC
509907			0	Active
509909			0	Active
550537			0	Active

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

CURR_MEDID_OLD_STATUS_CD

Currently Associated Medication ID Old Status Code

a one-character alphanumeric column that provides the previous status of a MEDID currently associated to an IDC. With the Currently Associated Medication ID New Status Code ([CURR_MEDID_NEW_STATUS_CD](#)), these values indicate how a newly associated MEDID's status has changed.

The description text is retrieved by joining the CURR_MEDID_OLD_STATUS_CD to the MED_STATUS_CD in the MED Status Code Description Table ([RMISCD1_STATUS_DESC](#)).

Example—CURR_MEDID_OLD_STATUS_CD and associated columns

CURR_MEDID	CURR_MEDID_OLD_STATUS_CD	MED_STATUS_CD_DESC	CURR_MEDID_NEW_STATUS_CD	MED_STATUS_CD_DESC
509907			0	Active
509909			0	Active
550537			0	Active

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

D*DACN**DAM_AGCSP**DAM_ALRGN_GRP**DAM_ALRGN_GRP_DESC**DAM_ALRGN_GRP_DESC_T**DAM_ALRGN_GRP REPL_EFF_DT**DAM_ALRGN_GRP_STATUS_CD**DAM_ALRGN_GRP_STATUS_CD_DESC**DAM_ALRGN_GRP_STATUS_CD_DESC_T**DAM_ALRGN_HIC_SEQN**DAM_ALRGN_XSENSE**DAM_ALRGN_XSENSE_DESC**DAM_ALRGN_XSENSE_DESC_T**DAM_ALRGN_XSENSE_REPLACE_EFF_DT**DAM_ALRGN_XSENSE_STAT_CD_DSC_T**DAM_ALRGN_XSENSE_STATUS_CD**DAM_ALRGN_XSENSE_STATUS_CD_DSC**DAM_CONCEPT_ID**DAM_CONCEPT_ID_DESC**DAM_CONCEPT_ID_DESC_T**DAM_CONCEPT_ID_TYP**DAM_CONCEPT_ID_TYP_DESC**DAM_CONCEPT_ID_TYP_DESC_T**DAM_CONCEPT_STATUS_CD**DAM_CONCEPT_STATUS_CD_DESC**DAM_ENVIRON_AGENT_IND**DAM_FOOD_IND**DAM_GRP_POTENTIALLY_INACTV_IND*

DAM_MED_IND
DAM_NON_ALRGN_IND
DAM_PICKLIST_IND
DAM_XSENSE_POTENTIAL_INCTV_IND
DATASET_CODE
DCC
DCC_DESC
DCC_DESC_T
DCNV_CNVF
DCNV_MTHI
DCNV_MTHI_DESC
DCNV_PUI
DDC_MONOSN
DDC_SEVSN
DDC_SEVTXT
DDI_ABSI
DDI_AGD
DDI_AGD_T
DDI_AGSN
DDI_CASEI
DDI_CODEX
DDI_DC_DAYS_SCREEN_AMOUNT
DDI_DES
DDI_DES_T
DDI_DISPLAY_ACTION_DESC
DDI_DISPLAY_ACTION_ID
DDI_EXCEPT_ADD_DT
DDI_IVASI
DDI_MFGI
DDI_MONOX

DDI_PGEDI
DDI_PHARMACODYNAMIC_IND
DDI_PHARMACOKINETIC_IND
DDI_REVI
DDI_SL
DDI_SLSN
DDI_SLTXT
DDI_SLTXT_T
DDI_TREE
DDI_TRIALI
DDXCN
DDXCN_DRUG_DESC
DDXCN_REF
DDXCN_SL
DDXCN_SL_DESC
DDXCN_SN
DF
DGNAME
DIN
DLIM_DOC_LEVEL_CODE
DLIM_DOC_LEVEL_CODE_DESC
DLIM_DRUG_GRP_ID
DLIM_DRUG_GRP_ID_DESC
DLIM_DRUG_ID
DLIM_DRUG_ID_TYP_CODE
DLIM_DRUG_ID_TYP_CODE_DESC
DLIM_INTER_TYP_CODE
DLIM_INTER_TYP_CODE_DESC
DLIM_MONOGRAPH_ID

DLIM_MONOGRAPH_TITLE
DLIM_STATUS_CODE
DLIM_STATUS_CODE_DESC
DLIM_TEXT
DLIM_TEXT_SEQNO
DLIM_TXT_TYP_CODE
DLIM_TXT_TYP_CODE_DESC
DNAME
DNAME_T
DOSE
DOSING_ADJ_TYPE_CD
DOSING_ADJ_TYPE_DESC
DOSING_AGE_SOURCE_DESC
DOSING_AGE_SOURCE_ID
DOSING_MODULE_UNIT_ABBREV
DOSTPI_DES
DPT_ALLOWANCE
DPT_CLASS_DESC
DPT_CLASS_DESC_T
DPT_CLASS_ID
DR2_CRCLTH
DR2_CRCLU
DR2_DOSTPI
DR2_HEPIMP
DR2_HIAGED
DR2_HIDOSD
DR2_HIDOSU
DR2_HIDOTX
DR2_HIFREQ
DR2_LOAGED

DR2_LODOSD
DR2_LODOSU
DR2_LODOTX
DR2_LOFREQ
DR2_MX1DOS
DR2_MX1DSU
DR2_MXDOSD
DR2_MXDOSU
DR2_MXDOTX
DR2_MXLIFD
DR2_MXLIFU
DR2_RENIMP
DR2_RT
DR2_SL
DR2_SL_DESC
DR2_SL_MESSAGE_TEXT
DR2_THAFHI
DR2_THAFLO
DR2_THAFU
DR2_UNITS
DRC_MONO_FORMAT_CD
DRC_MONO_FORMAT_CD_DESC
DRC_MONO_SECTION_CD
DRC_MONO_SECTION_CD_DESC
DXID
DXID_DESC56
DXID_DESC100
DXID_DISEASE_DURATION_CD
DXID_DISEASE_DURATION_CD_DESC

DXID_STATUS

DXID_STATUS_DESC

DXID_SYN_DESC56

DXID_SYN_DESC100

DXID_SYN_NMTYP

DXID_SYN_NMTYP_DESC

DXID_SYN_STATUS

DXID_SYN_STATUS_DESC

DXID_SYNID

DACN

Drug Allergy Code New

a two-character alphanumeric column that identifies warnings associated with the use of certain drugs which have caused allergic reactions.

Sample Valid Values Table

DACN	Description
J7	TETRACYCLIC ANTIDEPRESSANTS
J8	FOMIVIRSEN
J9	TNF FUSION PROTEINS
K1	ABACAVIR
K3	ANGIOTENSIN RECEPTOR ANTAGONIST
K4	DIPHTHERIA TOXIN PREPARATIONS
K5	VITAMIN D ANALOGUE
K6	FACTOR VIIA, RECOMB
K7	POLYETHYLENE GLYCOL AND DERIVATIVES
K9	CROMOLYN SODIUM
L1	GABAPENTIN
L2	BETAHISTINES
L3	VALPROIC ACID AND DERIVATIVES
L4	FEVERFEW
L5	ECHINACEA AND DERIVATIVES
L6	GARLIC
L7	GINGKO BILOBA
L8	CAPSICUM
L9	GINSENG
M1	GOTU KOLA
M2	VALERIAN
M3	TEA TREE OIL
M4	MILK THISTLE
M5	NETTLE

M6

PEPPERMINT OIL

Related Tables

Cross-Reference DACN to DAM_AGCSP Table

DAM_AGCSP

DAM Specific Allergen Group Code

a six-character numeric column that is assigned to either a group of chemically similar drugs known to have similar allergenic potential or to a single drug entity.

This column has been replaced. See the Data Dictionary definition for [DAM_ALRGN_GRP](#) for more information about the DAM_ALRGN_GRP, which replaced DAM_AGCSP in DAM 4.0. The two columns are equivalent, but the DAM_AGCSP column persists in one table for compatibility reasons.

Related Tables

[Cross-Reference DAM_AGCSP to HIC_SEQN Table](#)

DAM_ALRGN_GRP

DAM Specific Allergen Group Code

a six-character numeric column that is assigned to either a group of chemically similar drugs known to have similar allergenic potential or to a single drug entity. This number is a stable identifier.

For example, the DAM_ALRGN_GRP code for Penicillin, Amoxicillin, and Piperacillin is the same (000476), combining chemically similar drugs into one group. If a patient is allergic to penicillin, the potential exists for the patient to be allergic to all drugs with the same DAM_ALRGN_GRP code as penicillin. The DAM_ALRGN_GRP can also be used for a single drug ingredient documented to have allergenic potential.

For example, octreotide has allergenic potential, and is therefore assigned the DAM_ALRGN_GRP of 900331. However, because octreotide is a unique chemical moiety, octreotide is the only drug ingredient in the DAM_ALRGN_GRP 900331.

Sample Valid Values Table

DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC
000140	XANTHINES
000144	HYDRALAZINE
000145	RAUWOLFIA ALKALOIDS
000147	A.C.E INHIBITORS
000153	PAPAVERINE
000173	IRON COMPLEX
000175	IODINE; IODINE CONTAINING
000176	IODINE CONTAINING MULTIVITAMIN
000177	INSULINS
000178	SULFONYLUREAS
000203	FOLIC ACID; FA CONTAINING
000204	NIACIN PREPARATIONS
000210	PURINE INHIBITORS
000213	DEFEROXAMINE
000250	AMIDE TYPE ANESTHETICS
000256	BARBITURATES
000257	CHLORAL HYDRATE
000258	BENZODIAZEPINES

000259

PHENOTHIAZINES

-  Customers who use DAM 4.0 should use the DAM Ingredient/Allergen Group Link Table. They should not use the Cross-Reference [DAM_AGCSP](#) to [HIC_SEQN](#) Table.

Related Tables[DAM Allergen Group/Cross-Sensitivity Link Table](#)[DAM Ingredient/Allergen Group Link Table](#)[DAM Specific Allergen Group Code Description Table](#)[DAM Specific Allergen Group Code Description Table--French](#)***DAM 3.0 Specific Tables***[Cross-Reference DAM_AGCSP to HIC_SEQN Table](#)

DAM_ALRGN_GRP_DESC

DAM Specific Allergen Group Code Description

a 50-character alphanumeric column that provides the DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#)) text description.

This column is case sensitive.

Sample Valid Values Table

DAM_ALRGN_GRP	DAM_ALRGN_GRP_DESC
000500	4-AMINOQUINOLINES
900381	4-HYDROXYPHENYL PYRUVATE DIOXYGENASE INHIBITORS
900116	5-ALFA REDUCTASE INHIBITOR, AZASTERIODS
900038	5-HT1 ANTIMIGRAINE AGENTS
900021	8-AMINOQUINOLINES
900100	8-HYDROXYQUINOLINE
000147	A.C.E INHIBITORS
900154	ABACAVIR
900225	ABENONIUM
900136	ACAMPROSATE AND DERIVATIVES
900013	ACETAMINOPHEN
900426	ACETIC ACID
900046	ACYCLOVIR AND DERIVATIVES
900518	ADALIMUMAB
900224	ADENOSINE
900427	AGAR
900200	ALBUMIN PRODUCTS
000364	ALDOSTERONE ANTAGONISTS
900358	ALIPHATIC ALCOHOLS
900077	ALKYL SULFONATE

Related Tables

[DAM Specific Allergen Group Code Description Table](#)

DAM_ALRGN_GRP_DESC_T

DAM Specific Allergen Group Code Description (Translated)

a 75-character alphanumeric column that provides the DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#)) text description.

This column is case-sensitive.

Related Tables

[DAM Specific Allergen Group Code Description Table--French](#)

DAM_ALRGN_GRP REPL EFF DT

DAM Specific Allergen Group Code Replacement Effective Date

an eight-character numeric column that identifies the date when the DAM Specific Allergen Group Code (
DAM_ALRGN_GRP) replacement became effective. The date format is YYYYMMDD.

Related Tables

[DAM Specific Allergen Group Code History Table](#)

DAM_ALRGN_GRP_STATUS_CD

DAM Specific Allergen Group Status Code

a one-character numeric column that indicates whether the DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#)) is live, replaced, or retired. Text description for DAM_ALRGN_GRP_STATUS_CD is provided by DAM Allergen Group Status Code Description ([DAM_ALRGN_GRP_STATUS_CD_DESC](#)) column.

Valid Values Table

DAM_ALRGN_GRP_STATUS_CD	DAM_ALRGN_GRP_STATUS_CD_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[DAM Specific Allergen Group Code Status Code Description Table](#)

[DAM Specific Allergen Group Code Description Table](#)

[DAM Specific Allergen Group Code Description Table--French](#)

[DAM Specific Allergen Group Code Status Code Description Table--French](#)

DAM_ALRGN_GRP_STATUS_CD_DESC

DAM Allergen Group Status Code Description

a 50-character alphanumeric column that provides the description for the DAM Specific Allergen Group Status Code ([DAM_ALRGN_GRP_STATUS_CD](#)).

Valid Values Table

DAM_ALRGN_GRP_STATUS_CD	DAM_ALRGN_GRP_STATUS_CD_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[DAM Specific Allergen Group Code Status Code Description Table](#)

DAM_ALRGN_GRP_STATUS_CD_DESC_T

DAM Allergen Group Status Code Description (Translated)

a 100-character alphanumeric column that provides the description for the DAM Specific Allergen Group Status Code (**DAM_ALRGN_GRP_STATUS_CD**).

Related Tables

[DAM Specific Allergen Group Code Status Code Description Table--French](#)

DAM_ALRGN_HIC_SEQN

DAM Allergen Hierarchical Ingredient Code Sequence Number (Stable ID)

a six-character numeric column that identifies allergen ingredients in the Ingredient List Identifier ([HIC_SEQN](#)).

The DAM_ALRGN_HIC_SEQN field does not include ingredients (e.g., “preservative free,” “sodium chloride,” “dextrose”) that should not be filed as an allergen ingredient. This number is a stable identifier.

Related Tables

[Drug Allergy Screening HICL_SEQNO/HIC Relation Table](#)

DAM_ALRGN_XSENSE

DAM Cross-Sensitive Allergen Group Code

a four-character numeric column that represents a group of DAM Specific Allergen Group Codes (**DAM_ALRGN_GRP**) where cross-sensitivities may exist. This number is a stable identifier.

Systems alert healthcare professionals to the possibility of a cross-sensitive allergic reaction using the allergen's cross-sensitive group.

Sample Valid Values

DAM_ALRGN_XSENSE	DAM_ALRGN_XSENSE_DESC
0001	BETA LACTAM ANTIBIOTIC
0002	GLUCOCORTICOIDS
0003	ASPIRIN-LIKE ANALGESIC, SALICYLATES
0005	OPIOID ANALGESICS
0006	BARBITURATES
0007	TETRACYCLINES
0008	PHENOTHIAZINES
0009	MACROLIDES
0010	AMINOGLYCOSIDES
0011	NITROFURAN DERIVATIVES
0012	MEPERIDINE & RELATED
0013	TRICYCLIC COMPOUNDS
0014	HYDANTOINS
0015	DRUGS CONTAINING SULFONAMIDE MOIETY
0016	HEPARIN AGENTS
0017	ACETAMINOPHEN
0018	URINARY PURINE INHIBITOR
0019	BENZODIAZEPINES
0020	NICOTINIC ACID DERIVATIVES
0021	INSULINS

Related Tables

[DAM Allergen Group/Cross-Sensitivity Link Table](#)

DAM Ingredient/Cross-Sensitivity Link Table

DAM Cross-Sensitive Allergen Group Code Description Table

DAM Cross-Sensitive Allergen Group Code Description Table--French

DAM_ALRGN_XSENSE_DESC

DAM Cross-Sensitive Allergen Group Code Description

a 50-character alphanumeric column that provides the DAM Cross-Sensitive Allergen Group Code (**DAM_ALRGN_XSENSE**) text description.

This column is case sensitive.

Sample Valid Values Table

DAM_ALRGN_XSENSE	DAM_ALRGN_XSENSE_DESC
0190	ABACAVIR
0171	ACAMPROSATE AND DERIVATIVES
0017	ACETAMINOPHEN
0453	ACETIC ACID
0085	ACYCLOVIR AND DERIVATIVES
0535	ADALIMUMAB
0251	ADENOSINE
0454	AGAR
0228	ALBUMIN PRODUCTS
0386	ALIPHATIC ALCOHOLS
0115	ALKYL SULFONATE
0089	ALLYLAMINE ANTIFUNGAL
0287	ALPHA 2 ADRENERGIC AGONIST (IMIDAZOLE)
0129	ALPHA INTERFERON MOIETY
0455	ALUMINUM SILICATE
0296	AMANTIDINE AND DERIVATIVES
0252	AMBENONIUM
0046	AMIDE TYPE ANESTHETICS
0347	AMIFOSTINE
0126	AMINOCAPROIC ACID

Related Tables

[DAM Cross-Sensitive Allergen Group Code Description Table](#)

DAM_ALRGN_XSENSE_DESC_T

DAM Cross-Sensitive Allergen Group Code Description (Translated)

a 100-character alphanumeric column that provides the DAM Cross-Sensitive Allergen Group Code (
DAM_ALRGN_XSENSE) text description.

This column is case sensitive.

Related Tables

[DAM Cross-Sensitive Allergen Group Code Description Table--French](#)

DAM_ALRGN_XSENSE REPL EFF DT

DAM Cross-Sensitive Allergen Group Code Replacement Effective Date

an eight-character numeric column that identifies the date when the DAM_ALRGN_XSENSE replacement became effective. The date format is YYYYMMDD.

Related Tables

[DAM Cross-Sensitive Allergen Group Code History Table](#)

DAM_ALRGN_XSENSE_STAT_CD_DSC_T

DAM Cross-Sensitive Allergen Group Status Code Description (Translated)

a 100-character alphanumeric column that provides the description for the DAM Cross-Sensitive Allergen Group Status Code ([DAM_ALRGN_XSENSE_STATUS_CD](#)).

Related Tables

[DAM Cross-Sensitive Allergen Group Code Status Code Description Table--French](#)

DAM_ALRGN_XSENSE_STATUS_CD

DAM Cross-Sensitive Allergen Group Status Code

a one-character numeric column that indicates whether the DAM Cross-Sensitive Allergen Group Code ([DAM_ALRGN_XSENSE](#)) is live, replaced, or retired. Text description for DAM_ALRGN_XSENSE_STATUS_CD is provided by the DAM Cross-Sensitive Allergen Group Status Code Description ([DAM_ALRGN_XSENSE_STATUS_CD_DSC](#)) column.

DAM_ALRGN_XSENSE_STATUS_CD	DAM_ALRGN_XSENSE_STATUS_CD_DSC
0	Live
1	Replaced
2	Retired

Related Tables

[DAM Cross-Sensitive Allergen Group Code Description Table](#)

[DAM Cross-Sensitive Allergen Group Code Status Code Description Table](#)

[DAM Cross-Sensitive Allergen Group Code Description Table--French](#)

[DAM Cross-Sensitive Allergen Group Code Status Code Description Table--French](#)

DAM_ALRGN_XSENSE_STATUS_CD_DSC

DAM Cross-Sensitive Allergen Group Status Code Description

a 50-character alphanumeric column that provides the description for the DAM Cross-Sensitive Allergen Group Status Code ([DAM_ALRGN_XSENSE_STATUS_CD](#)).

DAM_ALRGN_XSENSE_STATUS_CD	DAM_ALRGN_XSENSE_STATUS_CD_DSC
0	Live
1	Replaced
2	Retired

Related Tables

[DAM Cross-Sensitive Allergen Group Code Status Code Description Table](#)

DAM_CONCEPT_ID

DAM Allergen Concept ID

an eight-character numeric column that represents one of the following concepts:

- MED Medication Name ID ([MED_NAME_ID](#))
- DAM Specific Allergen Group Code ([DAM_ALRGN_GRP](#))
- Hierarchical Base Ingredient Code Sequence Number ([HIC4_SEQN](#))

The DAM Allergen Concept ID Type ([DAM_CONCEPT_ID_TYP](#)) column identifies which of these three concepts the DAM_CONCEPT_ID represents.

Related Tables

[DAM Patient Profile Allergen Pick List Table](#)

[DAM Patient Profile Allergen Pick List Table--French](#)

DAM_CONCEPT_ID_DESC

DAM Allergen Concept ID Description

a 50-character alphanumeric column that provides the DAM Concept ID ([DAM_CONCEPT_ID](#)) description.

The DAM_CONCEPT_ID_DESC text description coincides with the DAM_CONCEPT_ID's type. For example, if the DAM_CONCEPT_ID is a base ingredient ([HIC4_SEQN](#)), the DAM_CONCEPT_ID_DESC reflects the Hierarchical Base Ingredient Code Description ([HIC4_DESC](#)).

Related Tables

[DAM Patient Profile Allergen Pick List Table](#)

DAM_CONCEPT_ID_DESC_T

DAM Allergen Concept ID Description (Translated)

a 100-character alphanumeric column that provides the DAM Concept ID ([DAM_CONCEPT_ID](#)) description.

The DAM_CONCEPT_ID_DESC text description coincides with the DAM_CONCEPT_ID's type. For example, if the DAM_CONCEPT_ID is a base ingredient ([HIC4_SEQN](#)), the DAM_CONCEPT_ID_DESC reflects the Hierarchical Base Ingredient Code Description ([HIC4_DESC](#)).

Related Tables

[DAM Patient Profile Allergen Pick List Table--French](#)

DAM_CONCEPT_ID_TYP

DAM Allergen Concept ID Type

a three-character numeric column that identifies the DAM Allergen Concept ID (**DAM_CONCEPT_ID**) column type. Text description for DAM_CONCEPT_ID_TYP is provided by the DAM Allergen Concept ID Type Description (**DAM_CONCEPT_ID_TYP_DESC**) column.

Valid Values Table

DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID_TYP_DESC
001	Specific Allergen Group
002	Medication Name ID
006	Ingredient

Related Tables

[DAM Patient Profile Allergen Pick List Table](#)

[DAM Pick List Concept ID Description Table](#)

[DAM Patient Profile Allergen Pick List Table--French](#)

[DAM Pick List Concept ID Description Table--French](#)

DAM_CONCEPT_ID_TYP_DESC

DAM Allergen Concept ID Type Description

a 50-character alphanumeric column that provides the DAM Allergen Concept ID Type (**DAM_CONCEPT_ID_TYP**) description.

Valid Value Tables

DAM_CONCEPT_ID_TYP	DAM_CONCEPT_ID_TYP_DESC
001	Specific Allergen Group
002	Medication Name ID
006	Ingredient

Related Tables

[DAM Pick List Concept ID Description Table](#)

DAM_CONCEPT_ID_TYP_DESC_T

DAM Allergen Concept ID Type Description (Translated)

a 50-character alphanumeric column that provides the DAM Allergen Concept ID Type (
DAM_CONCEPT_ID_TYP) description.

Related Tables

[DAM Pick List Concept ID Description Table--French](#)

DAM_CONCEPT_STATUS_CD

DAM Concept Status Code

a one-character alphanumeric column that identifies if an FDB concept is Live, Retired, Replaced, or Unassociated.

Valid Values Table

DAM_CONCEPT_STATUS_CD	DAM_CONCEPT_STATUS_CD_DESC
0	Live
1	Retired
2	Replaced
9	Unassociated

Related Tables

[DAM Concept Description Table](#)

[Drug Allergy Concept Attributes Table](#)

DAM_CONCEPT_STATUS_CD_DESC

DAM Concept Status Code Description

a a 50-character alphanumeric column that provides the text description of the [DAM Concept Status Code (DAM_CONCEPT_STATUS_CD)].

Valid Values Table

DAM_CONCEPT_STATUS_CD	DAM_CONCEPT_STATUS_CD_DESC
0	Live
1	Retired
2	Replaced
9	Unassociated

Related Tables

DAM Concept Description Table

DAM_ENVIRON_AGENT_IND

DAM Spans Environment Agent Indicator

a one-character alphanumeric column that identifies if an FDB concept spans a role of an environmental agent.

Valid Values Table

DAM_ENVIRON_AGENT_IND	DESCRIPTION
0	FDB concept does not span the role of an environmental agent.
1	FDB concept spans the role of an environmental agent.

Related Tables

[Drug Allergy Concept Attributes Table](#)

DAM_FOOD_IND

DAM Spans Food Indicator

a one-character alphanumeric column that identifies if an FDB concept spans a role of a food.

Valid Values Table

DAM_FOOD_IND	DESCRIPTION
0	FDB concept does not span the role of a food.
1	FDB concept spans the role of a food.

Related Tables

[Drug Allergy Concept Attributes Table](#)

DAM_GRP_POTENTIALLY_INACTV_IND

DAM Specific Allergen Group Potentially Inactive Indicator

a one-character numeric column that differentiates DAM Specific Allergen Groups (**DAM_ALRGN_GRP**) that may require manual screening from those that never require manual screening.

DAM_ALRGN_GRPs with a Potentially Inactive Indicator value of 1 may require manual allergy screening for inactive ingredients.

The values for this indicator are determined using U.S. products. FDB cannot guarantee its validity for Canadian products.

Valid Values Table

DAM_GRP_POTENTIALLY_INACTV_IND	DAM_CONCEPT_ID_TYP_DESC
0	No manual screening necessary
1	Could contain inactive ingredients. If this group is implicated in a patient's profile as an allergen, the end-user must manually screen IDCs for inactive ingredients.

Related Tables

[DAM Specific Allergen Group Code Description Table](#)

[DAM Specific Allergen Group Code Description Table--French](#)

DAM_MED_IND

DAM Spans Medication Indicator

a one-character alphanumeric column that identifies if an FDB concept spans ingredients associated to packaged products within the applicable region.

Valid Values Table

DAM_MED_IND	DESCRIPTION
0	FDB concept does not span ingredients associated to packaged products within the applicable region.
1	FDB concept spans ingredients associated to packaged products within the applicable region.

Related Tables

[Drug Allergy Concept Attributes Table](#)

DAM_NON_ALRGN_IND

DAM Non Allergen Indicator

a one-character alphanumeric column that identifies if an FDB concept spans a role of a no known allergy or uncertainty of an allergy.

Valid Values Table

DAM_NON_ALRGN_IND	DESCRIPTION
0	FDB concept does not span a role of a no known allergy or uncertainty of an allergy.
1	FDB concept spans a role of a no known allergy or uncertainty of an allergy.

Related Tables

[Drug Allergy Concept Attributes Table](#)

DAM_PICKLIST_IND

DAM Picklist Indicator

a one-character alphanumeric column that indicates whether a given FDB concept is found in the allergen pick list.

Valid Values Table

DAM_PICKLIST_IND	DESCRIPTION
0	FDB concept is not found in the allergen pick list.
1	FDB concept is found in the allergen pick list.

Related Tables

[Drug Allergy Concept Attributes Table](#)

DAM_XSENSE_POTENTIAL_INCTV_IND

DAM Cross-Sensitive Allergen Group Potentially Inactive Indicator

a one-character numeric column that differentiates DAM Cross-Sensitive Allergen Groups (

[DAM_ALRGN_XSENSE](#)) that may require manual screening from those that never require manual screening.

DAM_ALRGN_XSENSEs with a Potentially Inactive Indicator value of 1 may require manual allergy screening for inactive ingredients.

The values for this indicator are determined using U.S. products. FDB cannot guarantee its validity for Canadian products.

Valid Value Tables

DAM_GRP_POTENTIALLY_INACTV_IND	DAM_CONCEPT_ID_TYP_DESC
0	No manual screening necessary
1	Could contain inactive ingredients. If this group is implicated in a patient's profile as an allergen, the end-user must manually screen IDCs for inactive ingredients.

Related Tables

[DAM Cross-Sensitive Allergen Group Code Description Table](#)

[DAM Cross-Sensitive Allergen Group Code Description Table--French](#)

DATASET_CODE

Dataset Code

a six-character alphanumeric column that identifies a copyrighted dataset.

Example—DATASET_CODE and associated columns

DATASET_CODE	SEQUENCE_NO	COPYRIGHT_TEXT
DIN	1	Source: Canadian Drug Product Database. Health Canada. http://www.hc-sc.gc.ca/
DIN	2	dhp-mps/prodpharma/databasdon/index-eng.php; Reproduced with permission from the
DIN	3	Minister of Health Canada, 2014.
NHP	1	Source: Canadian Licensed Natural Health Products Database. Health Canada. http://webprod5.hc-sc.gc.ca/lhpd-bdpsn/h/index-eng.jsp . Reproduced with permission
NHP	2	
NHP	3	from the Minister of Health Canada, 2014.

Related Tables

Copyright Table

DCC

Drug Category Code

a one-character alphanumeric column that indicates that a drug product belongs to a category that is commonly treated as an exception in third party plans.

Valid Values Table

DCC	DCC_DESC
0	UNSPECIFIED
1	DRUGS TO TREAT IMPOTENCY
2	GROWTH HORMONE, GHRH, AND RELATED AGENTS
3	NARCOLEPSY AND SLEEP DISORDER THERAPY
A	ANTI-ANXIETY AGENTS
B	FERTILITY AGENTS
C	CONTRACEPTIVES, ORAL
D	DIAGNOSTICS
E	FLUORIDE PREPARATIONS (EXCL.VIT.COMB.)
F	ANTIOBESITY DRUGS
G	ANTACIDS
H	HEMATINICS
I	INSULINS
J	SMOKING DETERRENTS
K	AIDS RELATED
L	LAXATIVES
M	REUSABLE NEEDLES (ALL)
N	DISPOSABLE NEEDLES (ALL)
O	REUS.SYRINGES W/WO NEEDLES (NON-INSULIN)
P	DISP.SYRINGES W/WO NEEDLES (NON-INSULIN)
Q	REUSABLE SYRINGES W/WO NEEDLES (INSULIN)
R	DISP.SYRINGES W/WO NEEDLES (INSULIN)
S	DIABETIC SUPPLIES, MISC.
T	CONTRACEPTIVES, TOPICAL

U	NON-REIMBURSABLE COSMETIC INDICATIONS
V	VITAMINS, COMMONLY EXCLUDED
W	CONTRACEPTIVES, SYSTEMIC, NON-ORAL
Y	OSTOMY SUPPLIES
Z	ATTENTION DEFICIT DISORDER/NARCOLEPSY

Related Tables[Drug Category Description Table](#)[Drug Category Description Table—French](#)[Clinical Formulation ID Table](#)[Clinical Formulation ID Table--French](#)

DCC_DESC

Drug Category Code Description

a 40-character alphanumeric column that provides the text description for a Drug Category Code (**DCC**).

Valid Values Table

DCC	DCC_DESC
0	UNSPECIFIED
1	DRUGS TO TREAT IMPOTENCY
2	GROWTH HORMONE, GHRH, AND RELATED AGENTS
3	NARCOLEPSY AND SLEEP DISORDER THERAPY
A	ANTI-ANXIETY AGENTS
B	FERTILITY AGENTS
C	CONTRACEPTIVES, ORAL
D	DIAGNOSTICS
E	FLUORIDE PREPARATIONS (EXCL.VIT.COMB.)
F	ANTIOBESITY DRUGS
G	ANTACIDS
H	HEMATINICS
I	INSULINS
J	SMOKING DETERRENTS
K	AIDS RELATED
L	LAXATIVES
M	REUSABLE NEEDLES (ALL)
N	DISPOSABLE NEEDLES (ALL)
O	REUS.SYRINGES W/WO NEEDLES (NON-INSULIN)
P	DISP.SYRINGES W/WO NEEDLES (NON-INSULIN)
Q	REUSABLE SYRINGES W/WO NEEDLES (INSULIN)
R	DISP.SYRINGES W/WO NEEDLES (INSULIN)
S	DIABETIC SUPPLIES, MISC.
T	CONTRACEPTIVES, TOPICAL

U	NON-REIMBURSABLE COSMETIC INDICATIONS
V	VITAMINS, COMMONLY EXCLUDED
W	CONTRACEPTIVES, SYSTEMIC, NON-ORAL
Y	OSTOMY SUPPLIES
Z	ATTENTION DEFICIT DISORDER/NARCOLEPSY

Related Tables[Drug Category Description Table](#)

DCC_DESC_T

Drug Category Code Description (Translated)

a 60-character alphanumeric column that provides the text description for a Drug Category Code (**DCC**).

Related Tables

[Drug Category Description Table--French](#)

DCNV_CNVF

DRCM Units Conversion Factor

a 16-character numeric column whose value is applied to the prescribed dose to convert it to units common in DRCM.

Example—DCNV_CNVF and associated columns

DCNV_PUI	UNITS_RUI	DCNV_MTHI	DCNV_CNVF
08	01	2	0000001000.00000
01	08	1	0000001000.00000

Related Tables

[DRCM Unit Conversion Table](#)

DCNV_MTHI

DRCM Units Math Indicator

a one-character alphanumeric column that describes the mathematical process used to convert the prescribed dose to DRCM dose.

Valid Values Table

DCNV_MTHI	DCNV_MTHI_DESC
1	multiply
2	divide

Related Tables

[DRCM Math Process Code Description Table](#)

[DRCM Unit Conversion Table](#)

DCNV_MTHI_DESC

DRCM Units Math Indicator Description

a 50-character alphanumeric column that provides the text description of the Units Math Indicator ([DCNV_MTHI](#)).

Valid Values Table

DCNV_MTHI	DCNV_MTHI_DESC
1	multiply
2	divide

Related Tables

[DRCM Math Process Code Description Table](#)

DCNV_PUI

DRCM Prescribed Unit Indicator

a two-character alphanumeric column that identifies the units of the input dose according to the DRCM Units Description Table.

Sample Valid Values

DCNV_PUI	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

Related Tables

DRCM Unit Conversion Table

DDC_MONOSN

Drug-Drug Interaction Monograph Text Sequence Number (Consumer)

a three-character numeric column used to maintain the proper order of text in a complete consumer monograph.

Example—DDC_MONOSN and associated columns

DDI_MONOX	DDC_MONOSN	IACIDENTN	IACTEXTN	IAMREFCAT
00001	001	Z	This information is generalized and not intended as specific medical advice.	
00001	002	Z	Consult your healthcare professional before taking or discontinuing any drug	
00001	003	Z	or commencing any course of treatment.	
00001	004	B		
00001	005	T	Monograph Title	
00001	006	T	Anticoagulants/Salicylates	
00001	007	B		
00001	008	L	Medical Warning	
00001	009	L	Serious. These medicines may interact and cause very harmful effects.	
00001	010	L	Contact your healthcare professional (e.g. doctor or pharmacist) for	
00001	011	L	more information.	
00001	012	B		
00001	013	A	How The Interaction Occurs	
00001	014	A	When these two medicines are taken together, aspirin may decrease the	

00001	015	A	ability of your blood to clot properly.	
00001	016	B		
00001	017	E	What Might Happen	
00001	018	E	You may experience an increased chance for bleeding including bleeding	
00001	019	E	from your gums, nosebleeds, unusual bruising, or dark stools.	
00001	020	B		
00001	021	M	What You Should Do About This Interaction	
00001	022	M	Ask your healthcare professionals (e.g. doctor or pharmacist) about	
00001	023	M	taking these medicines together. They may recommend a non-aspirin product.	
00001	024	M	If your doctor prescribes these medicines together, you may need to have	
00001	025	M	your bleeding times checked more often. If you have any signs of bleeding,	
00001	026	M	such as bleeding from your gums, nosebleeds, unusual bruising, or dark	
00001	027	M	stools, contact your doctor right away.	
00001	028	M	Your healthcare professionals may already be aware of this interaction	

00001	029	M	and may be monitoring you for it. Do not start, stop, or change the dosage	
00001	030	M	of any medicine before checking with them first.	
00001	031	B		
00001	032	R	References	
00001	033	B		
00001	034	R	1.Quick AJ, Clesceri L. Influence of acetylsalicylic acid and salicylamide	2
00001	035	R	on the coagulation of blood. J Pharmacol Exp Ther 1960;128:95-8.	2
00001	036	R	2.Watson RM, Pierson RN, Jr. Effect of anticoagulant therapy upon	2
00001	037	R	aspirin-induced gastrointestinal bleeding. Circulation 1961 Sep;24:613-6.	2

Example—DDC_MONOSN and associated columns

DDI_MONOX	DDC_MONOSN	IACIDENTN	IACTEXTN	IAMREFCAT
00002	001	Z	This information is generalized and not intended as specific medical advice.	
00002	002	Z	Consult your healthcare professional before taking or discontinuing any drug	
00002	003	Z	or commencing any course of treatment.	
00002	004	B		
00002	005	T	Monograph Title	

00002	006	T	Anticoagulants/Anabolic Steroids	
00002	007	B		
00002	008	L	Medical Warning	
00002	009	L	Serious. These medicines may interact and cause very harmful effects.	
00002	010	L	Contact your healthcare professional (e.g. doctor or pharmacist) for more information.	
00002	011	L		
00002	012	B		
00002	013	A	How The Interaction Occurs	
00002	014	A	The cause of the interaction is not known. When these two medicines are taken together, the steroid may increase the effects of the blood-thinner.	
00002	015	A		
00002	016	B		
00002	017	E	What Might Happen	
00002	018	E	You may experience an increased chance for bleeding including bleeding from your gums, nosebleeds, unusual bruising, or dark stools.	
00002	019	E		
00002	020	B		
00002	021	M	What You Should Do About This Interaction	
00002	022	M	Ask your healthcare professionals (e.g. doctor or pharmacist) as	

00002	023	M	soon as possible about taking these two medicines together. They may already	
00002	024	M	be aware of this interaction and may be monitoring you for it. If your	
00002	025	M	doctor prescribes these medicines together, you may need to check your	
00002	026	M	bleeding times more often. Do not start, stop, or change the dosage of any	
00002	027	M	medicine before checking with them first.	
00002	028	B		
00002	029	R	References	
00002	030	B		
00002	031	R	1.Schrogie JJ, Solomon HM. The anticoagulant response to bishydroxycoumarin.	2
00002	032	R	II. The effect of D-thyroxine, clofibrate, and norethandrolone. Clin	2
00002	033	R	Pharmacol Ther 1967 Jan-Feb;8(1):70-7.	2
00002	034	R	2.Koch-Weser J, Sellers EM. Drug interactions with coumarin anticoagulants	6
00002	035	R	(First of two parts). N Eng J Med 1971 Aug 26;285(9):487-98.	6

Related Tables

[Consumer Drug Interaction Monograph Text Table](#)

DDC_SEVSN

Drug-Drug Interaction Severity Level Text Sequence Number (Consumer)

a two-character numeric column used to maintain the proper order of the text in the severity level section of the consumer-based monograph.

Example—DDC_SEVSN and associated columns

DDI_SL	DDC_SEVSN	DDC_SEVTXT
1	01	Severe. These medicines may interact and cause very harmful effects and
1	02	are usually not taken together. Contact your healthcare professional
1	03	(e.g. doctor or pharmacist) for more information.
2	01	Serious. These medicines may interact and cause very harmful effects.
2	02	Contact your healthcare professional (e.g. doctor or pharmacist) for
2	03	more information.
3	01	Moderate. These medicines may cause some risk when taken together.
3	02	Contact your healthcare professional (e.g. doctor or pharmacist) for
3	03	more information.
9	01	Unknown - Alternative Therapy Interaction. These medications may cause
9	02	some risk when taken together. Contact your healthcare professional
9	03	(e.g. doctor or pharmacist) for more information.

Related Tables

[Consumer Drug Interaction Severity Levels Table](#)

DDC_SEVTXT

Drug-Drug Interaction Severity Level Text (Consumer)

a 70-character alphanumeric column that provides the text description for the Drug-Drug Interaction Severity Level (**DDI_SL**) in the consumer-based monograph.

Valid Values Table

DDI_SL	DDC_SEVTXT
1	Severe. These medicines may interact and cause very harmful effects and are usually not taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.
2	Serious. These medicines may interact and cause very harmful effects. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.
3	Moderate. These medicines may cause some risk when taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.
9	Unknown - Alternative Therapy Interaction. These medications may cause some risk when taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.

Related Tables

[Consumer Drug Interaction Severity Levels Table](#)

DDI_ABSI

Drug-Drug Interaction Reference Category Indicator - Meeting Abstract

a one-character alphanumeric column that indicates whether a meeting abstract is utilized as a reference in the monograph.

Valid Values Table

DDI_ABSI	Description
0	No reference of that type in monograph
1	At least one reference of that type in monograph

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_AGD

Drug-Drug Interaction Agent Description

a 41-character alphanumeric column that identifies the names of the interacting agents for a particular drug interaction ([DDI_CODEX](#)), enabling clinicians to recommend and/or select an alternative agent.

The Drug-Drug Interaction Agent Description Sequence Number ([DDI_AGSN](#)) maintains the proper order of the agents for display.

Example—DDI_AGD and associated columns

DDI_CODEX	DDI_DES	DDI_AGSN	DDI_AGD
00001	ANTICOAGULANTS/SALICYLATES	001	ACENOCOUMAROL
00001	ANTICOAGULANTS/SALICYLATES	002	ANISINDIONE
00001	ANTICOAGULANTS/SALICYLATES	003	CHLORPHENINDIONE
00001	ANTICOAGULANTS/SALICYLATES	004	COUMARIN
00001	ANTICOAGULANTS/SALICYLATES	005	DICUMAROL
00001	ANTICOAGULANTS/SALICYLATES	006	PHENINDIONE
00001	ANTICOAGULANTS/SALICYLATES	007	PHENPROCOUMON
00001	ANTICOAGULANTS/SALICYLATES	008	WARFARIN POTASSIUM
00001	ANTICOAGULANTS/SALICYLATES	009	WARFARIN SODIUM
00003	SELECTED ORAL ANTIDIabetics/SELECTED ANTICOAGULANTS	001	CHLORPROPAMIDE
00003	SELECTED ORAL ANTIDIabetics/SELECTED ANTICOAGULANTS	002	TOLBUTAMIDE
00004	ANTICOAGULANTS/BARBUTERATES	001	ACENOCOUMAROL
00004	ANTICOAGULANTS/BARBUTERATES	002	ANISINDIONE
00004	ANTICOAGULANTS/BARBUTERATES	003	CHLORPHENINDIONE

00004	ANTICOAGULANTS/BARBITURATES	004	COUMARIN
00004	ANTICOAGULANTS/BARBITURATES	005	DICUMAROL
00004	ANTICOAGULANTS/BARBITURATES	006	PHENINDIONE
00004	ANTICOAGULANTS/BARBITURATES	007	PHENPROCOUMON
00004	ANTICOAGULANTS/BARBITURATES	008	WARFARIN POTASSIUM
00004	ANTICOAGULANTS/BARBITURATES	009	WARFARIN SODIUM

Related Tables[Drug-Drug Interaction Agent Description Table](#)

DDI_AGD_T

Drug-Drug Interaction Agent Description (Translated)

a 60-character alphanumeric column that identifies the names of the interacting agents for a particular drug interaction ([DDI_CODEX](#)), enabling clinicians to recommend and/or select an alternative agent.

The Drug-Drug Interaction Agent Description Sequence Number ([DDI_AGSN](#)) maintains the proper order of the agents for display.

Related Tables

[Drug-Drug Interaction Agent Description Table](#)

DDI_AGSN

Drug-Drug Interaction Agent Description Sequence Number

a three-character numeric column used to display interacting agents (**DDI_AGD**) in proper order for a particular drug interaction (**DDI_CODEX**).

Example—DDI_AGSN and associated columns

DDI_CODEX	DDI_DES	DDI_AGSN	DDI_AGD
00001	ANTICOAGULANTS/SALICYLATES	001	ACENOCOUMAROL
00001	ANTICOAGULANTS/SALICYLATES	002	ANISINDIONE
00001	ANTICOAGULANTS/SALICYLATES	003	CHLORPHENINDIONE
00001	ANTICOAGULANTS/SALICYLATES	004	COUMARIN
00001	ANTICOAGULANTS/SALICYLATES	005	DICUMAROL
00001	ANTICOAGULANTS/SALICYLATES	006	PHENINDIONE
00001	ANTICOAGULANTS/SALICYLATES	007	PHENPROCOUMON
00001	ANTICOAGULANTS/SALICYLATES	008	WARFARIN POTASSIUM
00001	ANTICOAGULANTS/SALICYLATES	009	WARFARIN SODIUM
00003	SELECTED ORAL ANTIDIABETICS/SELECTED ANTICOAGULANTS	001	CHLORPROPAMIDE
00003	SELECTED ORAL ANTIDIABETICS/SELECTED ANTICOAGULANTS	002	TOLBUTAMIDE
00004	ANTICOAGULANTS/BARBITURATES	001	ACENOCOUMAROL
00004	ANTICOAGULANTS/BARBITURATES	002	ANISINDIONE
00004	ANTICOAGULANTS/BARBITURATES	003	CHLORPHENINDIONE
00004	ANTICOAGULANTS/BARBITURATES	004	COUMARIN

00004	ANTICOAGULANTS/BARBITURATES	005	DICUMAROL
00004	ANTICOAGULANTS/BARBITURATES	006	PHENINDIONE
00004	ANTICOAGULANTS/BARBITURATES	007	PHENPROCOUMON
00004	ANTICOAGULANTS/BARBITURATES	008	WARFARIN POTASSIUM
00004	ANTICOAGULANTS/BARBITURATES	009	WARFARIN SODIUM

Related Tables[Drug-Drug Interaction Agent Description Table](#)

DDI_CASEI

Drug-Drug Interaction Reference Category Indicator - Case Reports

a one-character alphanumeric column that indicates whether a case report is utilized as a reference in the monograph.

Valid Values Table

DDI_CASEI	Description
0	No reference of that type in monograph
1	At least one reference of that type in monograph

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_CODEX

Drug-Drug Expanded Interaction Code

a five-character numeric column that represents a drug interaction between two drugs or between the therapeutic classes of two drugs.

The Drug-Drug Expanded Interaction Code must be associated with the new prescription as well as the current patient profile. These fields are available for inclusion at the FDB International Drug Code (**IDC**), MED Routed Medication ID (**ROUTED_MED_ID**), or Clinical Formulation ID (**GCN_SEQNO**) level.

Sample Valid Values Table

DDI_CODEX	DDI_DES
00001	ANTICOAGULANTS/SALICYLATES
00002	ANTICOAGULANTS/ANABOLIC STEROIDS
00003	SELECTED ORAL ANTIDIABETICS/SELECTED ANTICOAGULANTS
00004	ANTICOAGULANTS/BARBITURATES
00005	ANTICOAGULANTS/FIBRATES
00006	ANTICOAGULANTS/OXY-PHENYLBUTAZONE
00007	ANTICOAGULANTS/CIMETIDINE
00008	ANTICOAGULANTS/QUINIDINE
00009	ANTICOAGULANTS/THYROID
00010	ANTICOAGULANTS/CHOLESTYRAMINE
00011	CHOLINERGICS/QUINIDINE
00012	BETA-BLOCKERS/THEOPHYLLINES
00013	ANTIDIABETICS/NON-CARDIOSELECTIVE BETA-BLOCKERS
00015	ANTICOAGULANTS/ANTITHYROID DRUGS
00016	EPINEPHRINE/BETA-BLOCKERS
00017	DIAZOXIDE/THIAZIDE DIURETICS
00018	HYDANTOINS/SELECTED ANTICOAGULANTS
00019	QUINIDINE/HYDANTOINS
00020	DIGITALIS GLYCOSIDES/QUINIDINE

FDB will continue to support users receiving the older IACODx and IACODNx fields. However, the

maximum number of interaction pairs as well as the maximum number of interactions assigned in IACODx and IACODNx have been exceeded. The old IACODx and IACODNx are in “maintenance mode” and no newly recognized or defined drug-drug interaction can be added to those data elements. Therefore, all DDIM customers are encouraged to convert to the IACODNX series of data elements.

Related Tables

[DDIM Routed Medication Table](#)

[Drug-Drug Interaction Agent Description Table](#)

[Drug-Drug Interaction Agent Description Table--French](#)

[Drug-Drug Interaction/Clinical Effects Relation Table](#)

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

[GCN_SEQNO/Drug-Drug Interaction Code Relation Table](#)

DDI_DC_DAYS_SCREEN_AMOUNT

Drug-Drug Interaction Discontinued Medication Screening Amount

a five-character numeric column that provides the amount of time in days after the discontinuation of a medication to continue screening for drug-drug interactions.

Related Tables

[Drug-Drug Interaction Discontinued Clinical Formulation Screening Table](#)

DDI_DES

Drug-Drug Interaction Description

a 60-character alphanumeric column that provides the text description for the Drug-Drug Expanded Interaction Code (**DDI_CODEX**); it describes the drugs or the therapeutic classes of drugs involved in the drug interaction.

Sample Valid Values Table

DDI_CODEX	DDI_DES
00002	ANTICOAGULANTS/ANABOLIC STEROIDS
00015	ANTICOAGULANTS/ANTITHYROID DRUGS
00004	ANTICOAGULANTS/BARBITURATES
00010	ANTICOAGULANTS/CHOLESTYRAMINE
00007	ANTICOAGULANTS/CIMETIDINE
00005	ANTICOAGULANTS/FIBRATES
00006	ANTICOAGULANTS/OXY-PHENYLBUTAZONE
00008	ANTICOAGULANTS/QUINIDINE
00001	ANTICOAGULANTS/SALICYLATES
00009	ANTICOAGULANTS/THYROID
00013	ANTIDIABETICS/NON-CARDIOSELECTIVE BETA-BLOCKERS
00012	BETA-BLOCKERS/THEOPHYLLINES
00011	CHOLINERGICS/QUINIDINE
00017	DIAZOXIDE/THIAZIDE DIURETICS
00020	DIGITALIS GLYCOSIDES/QUINIDINE
00016	EPINEPHRINE/BETA-BLOCKERS
00018	HYDANTOINS/SELECTED ANTICOAGULANTS
00019	QUINIDINE/HYDANTOINS
00003	SELECTED ORAL ANTIDIABETICS/SELECTED ANTICOAGULANTS

Related Tables

[Drug-Drug Interaction Master Table](#)

DDI_DES_T

Drug-Drug Interaction Description

a 90-character alphanumeric column that provides the text description for the Drug-Drug Expanded Interaction Code (**DDI_CODEX**); it describes the drugs or the therapeutic classes of drugs involved in the drug interaction.

Related Tables

[Drug-Drug Interaction Master Table--French](#)

DDI_DISPLAY_ACTION_DESC

Drug-Drug Interaction Display Action Description

a 50-character alphanumeric column that provides the text description for a Drug-Drug Interaction Display Action Identifier.

Valid Values Table

DDI_DISPLAY_ACTION_ID	DDI_DISPLAY_ACTION_DESC
1	Halt
2	Interrupt
3	Informative
4	Surveillance
5	Suppress

Related Tables

[Drug-Drug Interaction Display Action Table](#)

DDI_DISPLAY_ACTION_ID

Drug-Drug Interaction Display Action Identifier

an eight-character numeric column that identifies the recommended display action for a drug-drug interaction.

Valid Values Table

DDI_DISPLAY_ACTION_ID	DDI_DISPLAY_ACTION_DESC
1	Halt
2	Interrupt
3	Informative
4	Surveillance
5	Suppress

Related Tables

[Drug-Drug Interaction Clinical Formulation Exception Table](#)

[Drug-Drug Interaction Display Action Table](#)

[Drug-Drug Interaction Monograph Master Table](#)

DDI_EXCEPT_ADD_DT

Drug-Drug Interaction Exception Add Date

an eight-character numeric column that provides the first date that a drug-drug interaction exception for a clinical formulation, routed medication, or routed generic pair was active. The date format is YYYYMMDD.

Related Tables

[Drug-Drug Interaction Clinical Formulation Exception Table](#)

DDI_IVASI

Drug-Drug Interaction Reference Category Indicator - Invitro/Animal Study

a one-character alphanumeric column that indicates whether in vitro or animal data is utilized as a reference in the monograph.

Valid Values Table

DDI_IVASI	Description
0	No reference of that type in monograph
1	At least one reference of that type in monograph

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_MFGI

Drug-Drug Interaction Reference Category Indicator - Manufacturer Info

a one-character alphanumeric column that indicates whether information from the manufacturer is utilized as a reference in the monograph.

Manufacturer's information encompasses product labeling, "Dear Healthcare Professional" letters, and correspondence between manufacturers and FDB.

Valid Values Table

DDI_MFGI	Description
0	No reference of that type in monograph
1	At least one reference of that type in monograph

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_MONOX

Drug-Drug Interaction Expanded Monograph Number

a five-character numeric column associated with each record in the Monograph Table. A complete monograph is composed of all records with the same monograph number.

Example—DDI_MONOX 254 and associated columns

DDI_MONOX	ADI_MONOSN	IAMIDENTN	IAMTEXTN
00254	001	T	MONOGRAPH TITLE: Mitotane/Spiromolactone
00254	002	B	
00254	003	L	SEVERITY LEVEL: 2-Severe Interaction: Action is required to reduce the
00254	004	L	risk of severe adverse reaction.
00254	005	B	
00254	006	A	MECHANISM OF ACTION: Unknown.
00254	007	B	
00254	008	E	CLINICAL EFFECTS: Possible loss of therapeutic effects of mitotane.
00254	009	B	
00254	010	P	PREDISPOSING FACTORS: None determined
00254	011	B	
00254	012	M	PATIENT MANAGEMENT: Observe the patient for a decrease or absence of
00254	013	M	therapeutic effect of mitotane during combined use of spironolactone. If the
00254	014	M	effects of mitotane are not observed or are diminished, discontinue
00254	015	M	spironolactone therapy.
00254	016	B	

00254	017	D	DISCUSSION: Documentation for this interaction consists of a single case
00254	018	D	history. Following addition of mitotane to the treatment schedule of a
00254	019	D	patient receiving spironolactone, the expected effects of mitotane did not
00254	020	D	occur. When spironolactone was stopped, the effects of mitotane were
00254	021	D	observed.
00254	022	B	
00254	023	R	REFERENCES:
00254	024	B	
00254	025	R	1.Wortsman J, Soler NG. Mitotane. Spironolactone antagonism in Cushing's
00254	026	R	syndrome. JAMA 1977 Dec 5;238(23):2527.

Example—DDI_MONOX 296 and associated columns

DDI_MONOX	ADI_MONOSN	IAMIDENTN	IAMTEXTN
00296	001	T	MONOGRAPH TITLE: Cyclosporine/Amiodarone
00296	002	B	
00296	003	L	SEVERITY LEVEL: 3-Moderate Interaction: Assess the risk to the patient
00296	004	L	and take action as needed.
00296	005	B	
00296	006	A	MECHANISM OF ACTION: Amiodarone may inhibit the metabolism of cyclosporine.
00296	007	B	

00296	008	E	CLINICAL EFFECTS: Increased levels of cyclosporine, which may result in
00296	009	E	renal toxicity.
00296	010	B	
00296	011	P	PREDISPOSING FACTORS: None determined.
00296	012	B	
00296	013	M	PATIENT MANAGEMENT: Monitor cyclosporine levels and renal function in
00296	014	M	patients receiving concurrent therapy. During concurrent therapy with
00296	015	M	amiodarone, cyclosporine dosages may need to be decreased by over 50%.
00296	016	B	
00296	017	D	DISCUSSION: Documentation on this interaction is limited to case reports
00296	018	D	involving ten transplant patients. In the first report, the dosage of
00296	019	D	cyclosporine required to maintain a therapeutic trough concentration of
00296	020	D	200-250ng/ml (measured by high-performance liquid chromatography) decreased
00296	021	D	from 5.4-5.8mg/Kg/day to 2.3mg/Kg/day following the addition of amiodarone.
00296	022	D	Cyclosporine clearance decreased from 0.22L/hr/Kg to 0.1L/hr/Kg 12 days
00296	023	D	after the addition of amiodarone. In the second report, there was a twofold

00296	024	D	increase in cyclosporine levels following the addition of amiodarone to
00296	025	D	stabilized cyclosporine therapy. A retrospective study of eight transplant
00296	026	D	patients who received concurrent therapy with cyclosporine and amiodarone
00296	027	D	reported that cyclosporine levels increased in all subjects despite a
00296	028	D	decrease in cyclosporine dosage (from 6.2mg/Kg/day to 3.5mg/Kg/day).
00296	029	B	
00296	030	R	REFERENCES:
00296	031	B	
00296	032	R	1.Nicolau DP, Uber WE, Crumbley AJ, 3rd, Strange C. Amiodarone-cyclosporine
00296	033	R	interaction in a heart transplant patient. J Heart Lung Transplant 1992
00296	034	R	May-Jun;11(3 Pt 1):564-8.
00296	035	R	2.Chitwood KK, Abdul-Haqq AJ, Heim-Duthoy KL. Cyclosporine-amiodarone
00296	036	R	interaction. Ann Pharmacother 1993 May;27(5):569-71.
00296	037	R	3.Mamprin F, Mullins P, Graham T, Kendall S, Biocene B, Large S, Wallwork J,
00296	038	R	Schofield P. Amiodarone-cyclosporine interaction in cardiac
00296	039	R	transplantation. Am Heart J 1992 Jun;123(6):1725-6.

Related Tables

Consumer Drug Interaction Monograph Text Table

Drug-Drug Interaction Clinical Formulation Exception Table

Drug-Drug Interaction Discontinued Clinical Formulation Screening Table

Drug-Drug Interaction Master Table

Drug-Drug Interaction Master Table--French

Drug-Drug Interaction Monograph Master Table

Drug-Drug Interaction Monograph Text Table

DDI_PGEDI

Drug-Drug Interaction Page References EDI

a nine-character alphanumeric column that identifies the page reference in FDB's Evaluation of Drug Interactions that provides additional information on the interaction.

Example—DDI_PGEDI and associated columns

DDI_CODEX	DDI_DES	DDI_SL	DDI_MONOX	DDI_PGEDI
00001	ANTICOAGULANTS/ SALICYLATES	2	00001	04/027.00
00002	ANTICOAGULANTS/ ANABOLIC STEROIDS	2	00002	04/075.00
00003	SELECTED ORAL ANTIDIABETICS/SEL ECTED ANTICOAGULANTS	2	00003	14/043.00

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_PHARMACODYNAMIC_IND

Drug-Drug Interaction Pharmacodynamic Indicator

a one-character alphanumeric column that indicates if a drug-drug interaction is pharmacodynamic (additive or antagonistic) in nature.

Related Tables

[Drug-Drug Interaction Monograph Master Table](#)

DDI_PHARMACOKINETIC_IND

Drug-Drug Interaction Pharmacokinetic Indicator

a one-character alphanumeric column that indicates if a drug-drug interaction is pharmacokinetic (affects the absorption, distribution, metabolism, or excretion of the drugs) in nature.

Related Tables

[Drug-Drug Interaction Monograph Master Table](#)

DDI_REV1

Drug-Drug Interaction Reference Category Indicator - Review

a one-character alphanumeric column that indicates whether a review article is utilized as a reference in the monograph.

Use of review articles is limited to those articles that draw new conclusions from previous works.

Valid Values Table

DDI_REV1	Description
0	No reference of that type in monograph
1	At least one reference of that type in monograph

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_SL

Drug-Drug Interaction Severity Level

a one-character alphanumeric column that identifies the severity of a drug-drug interaction for professional and consumer-based monographs.

Valid Values Table

DDI_SL	DDI_SLTXT	DDC_SEVTXT
1	Contraindicated Drug Combination: This drug combination is contraindicated and generally should not be dispensed or administered to the same patient.	Severe. These medicines are not usually taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.
2	Severe Interaction: Action is required to reduce the risk of severe adverse interaction.	Serious. These medicines may interact and cause very harmful effects. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.
3	Moderate Interaction: Assess the risk to the patient and take action as needed.	Moderate. These medicines may cause some risk when taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.
9	Undetermined Severity - Alternative Therapy Interaction: Assess the risk to the patient and take action as needed.	Unknown - Alternative Therapy Interaction. These medications may cause some risk when taken together. Contact your healthcare professional (e.g. doctor or pharmacist) for more information.

Related Tables

[Consumer Drug Interaction Severity Levels Table](#)

[Drug-Drug Interaction Clinical Formulation Exception Table](#)

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

[Drug-Drug Interaction Monograph Master Table](#)[Drug-Drug Interaction Severity Levels Table](#)

[Drug-Drug Interaction Severity Levels Table--French](#)

DDI_SLSN

Drug-Drug Interaction Severity Level Text Sequence Number

a two-character numeric column used to maintain the proper order of the text in the severity level section of the monograph.

Example—DDI_SLSN and associated columns

DDI_SL	DDI_SLSN	DDI_SLTXT
1	01	Contraindicated Drug Combination: This drug combination is
1	02	contraindicated and generally should not be dispensed or administered
1	03	to the same patient.
2	01	Severe Interaction: Action is required to reduce the risk of severe
2	02	adverse interaction.
3	01	Moderate Interaction: Assess the risk to the patient and take action
3	02	as needed.
9	01	Undetermined Severity - Alternative Therapy Interaction: Assess the
9	02	risk to the patient and take action as needed.

Related Tables

[Drug-Drug Interaction Severity Levels Table](#)

[Drug-Drug Interaction Severity Levels Table--French](#)

DDI_SLTXT

Drug-Drug Interaction Severity Level Text

a 70-character alphanumeric column that provides the text description for the Drug-Drug Interaction Severity Level (DDI_SL).

Valid Values Tables

DDI_SL	DDI_SLTXT
1	Contraindicated Drug Combination: This drug combination is contraindicated and generally should not be dispensed or administered to the same patient.
2	Severe Interaction: Action is required to reduce the risk of severe adverse interaction.
3	Moderate Interaction: Assess the risk to the patient and take action as needed.
9	Undetermined Severity - Alternative Therapy Interaction: Assess the risk to the patient and take action as needed.

Related Tables

[Drug-Drug Interaction Severity Levels Table](#)

DDI_SLTXT_T

Drug-Drug Interaction Severity Level Text (Translated)

a 100-character alphanumeric column that provides the text description for the Drug-Drug Interaction Severity Level (DDI_SL).

Related Tables

[Drug-Drug Interaction Severity Levels Table--French](#)

DDI_TREE

Decision Tree ID

This column is not currently being used.

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDI_TRIALI

Drug-Drug Interaction Reference Category Indicator - Human Clinical Trial

a one-character alphanumeric column that indicates whether a human clinical trial is utilized as a reference in the monograph.

Human clinical trials encompass clinical trials of any size and type (single-blind, double-blind, placebo and non-placebo controlled, controlled, non-controlled, and so on).

Valid Values Table

DDI_TRIALI	Description
0	No reference of that type in monograph
1	At least one reference of that type in monograph

Related Tables

[Drug-Drug Interaction Master Table](#)

[Drug-Drug Interaction Master Table--French](#)

DDXCN

DDCM Drug-Disease Contraindications Code

a five-character numeric column that is a system assigned dumb number for each drug group and identifies a list of contraindications (i.e., Diagnosis IDs, DxIDs) for a specified drug group.

The text description for DDXCN is provided by the DDCM Drug-Disease Contraindications Drug Description ([DDXCN_DRUG_DESC](#)).

Sample Valid Values Table

DDXCN	DDXCN_DRUG_DESC
50001	ACETAMINOPHEN
50002	CHOLINE SALICYLATE
50003	CAFFEINE
50004	SELECT OPIOID NARCOTICS
50005	SERTRALINE
50006	OXYMETHOLONE
50007	ADRENOCORTICOID(TOPICAL)
50008	OFLOXACIN
50009	CEFPROZIL
50010	CORTICOTROPIN
50011	ALCOHOL(TOPICAL)
50012	ALLOPURINOL
50013	ALPHA1-PROTEINASE INHIBITOR
50014	ALPROSTADIL(INTRACAVERNOSAL)
50015	ALPROSTADIL(SYST)
50016	AMANTADINE
50017	AMINOBENZOATE POTASSIUM
50018	AMINOCAPROIC ACID
50019	AMINOGLUTETHIMIDE
50020	AMINOGLYCOSIDES

The following table shows DDXCN data for a specified product: PREDNISOLONE 5MG TABLET (Clinical

Formulation ID [**GCN_SEQNO**] value 006721).

Example—DDXCN and associated columns

DDXCN	DDXCN_SN	FDBDX	DXID
50534	00	01.011901	000039
50534	01	01.054400	000178
50534	02	01.054900	000183
50534	03	01.117900	000352
50534	04	01.136900	000412
50534	05	03.242900	000580
50534	06	03.244900	000584
50534	07	03.250000	000594
50534	08	03.250010	000595
50534	09	03.272400	000707
50534	10	03.273800	000712
50534	11	05.298900	000962
50534	12	06.365100	001205
50534	13	07.401900	001432
50534	14	07.428000	001578
50534	15	07.429900	001606
50534	16	09.530100	001991
50534	17	09.531900	002013
50534	18	09.532900	002024
50534	19	09.533900	002035
50534	20	09.535500	002051
50534	21	09.556900	002089
50534	22	09.562110	002113
50534	23	09.569890	002172
50534	24	09.571600	002184
50534	25	10.593900	002292
50534	26	13.733000	002896

Related Tables

DDCM Drug Description Table

DDCM™ GCN_SEQNO/Drug-Disease Code Relation Table

DDCM Master Table

DDCM™ Routed Medication Table

DDXCN_DRUG_DESC

DDCM Drug-Disease Contraindications Drug Description

a 100-character alphanumeric column that provides the text description of the drug group that is associated with a Drug-Disease Contraindications Code (**DDXCN**) in the Drug-Disease Contraindications Module (DDCM). This drug group description is usually ingredient-based but can be broader and include a collection of ingredients (for example, "Bulk Laxatives") or may be narrower and include only certain dose forms or routes, etc. (for example, "Potassium Cl (Oral,Non-Solid)").

Sample Valid Values Table

DDXCN	DDXCN_DRUG_DESC
50001	ACETAMINOPHEN
50002	CHOLINE SALICYLATE
50003	CAFFEINE
50004	SELECT OPIOID NARCOTICS
50005	SERTRALINE
50006	OXYMETHOLONE
50007	ADRENOCORTICOID(TOPICAL)
50008	OFLOXACIN
50009	CEFPROZIL
50010	CORTICOTROPIN
50011	ALCOHOL(TOPICAL)
50012	ALLOPURINOL
50013	ALPHA1-PROTEINASE INHIBITOR
50014	ALPROSTADIL(INTRACAVERNOSAL)
50015	ALPROSTADIL(SYST)
50016	AMANTADINE
50017	AMINOBENZOATE POTASSIUM
50018	AMINOCAPROIC ACID
50019	AMINOGLUTETHIMIDE
50020	AMINOGLYCOSIDES

Related Tables

DDCM Drug Description Table

DDXCN_REF

DDCM Reference

a 26-character alphanumeric column that provides an abbreviated reference source citation for a specified DDXCN.

The following table shows the DXCN_REF data for a range of DDXCNs.

Example—DDXCN_REF and associated columns

DDXCN	DDXCN_SN	FDBDX	DDXCN_SL	DDXCN_REF	DXID
51081	10	06.377490	3	ZYVOX PI, 05/08	1334
51081	9	06.356901	3	ZYVOX PI, 05/08	1146
51081	7	04.288004	2	ZYVOX PI, 05/08	886
51081	6	04.287500	2	ZYVOX PI, 05/08	878
51081	5	04.285900	2	ZYVOX PI, 05/08	842
51081	4	04.284807	2	ZYVOX PI, 05/08	836
51081	3	04.284800	2	ZYVOX PI, 05/08	829
51081	2	03.276203	2	ZYVOX PI, 05/08	740
51081	0	01.008450	2	ZYVOX PI, 05/08	26
51081	8	06.333991	1	MEDWATCH 11/05	1072
51081	11	16.780300	3	MEDWATCH 04/07	3053
51081	2	03.259200	2	EMC.MEDICINES .ORG.UK	654

Related Tables

DDCM Master Table

DDXCN_SL

DDCM Severity Level

a one-character alphanumeric column that contains the severity level assigned to each DxID record. This level describes the severity of the drug-disease contraindication.

Valid Values Table

DDXCN_SL	DDXCN_SL_DESC
1	Contraindication
2	Severe Warning
3	Moderate Warning

- **Contraindication** is reserved for warnings that are most significant, where harm is likely to occur to the patient. The drug should generally not be given to a patient for severity level 1 assignments.
- **Severe Warning** is assigned to those diagnoses (DxIDs) that are clinically significant, where the condition can be managed/treated before the drug may be given safely.
- **Moderate Warning** is assigned to those DxIDs where adequate patient monitoring may make it safer for the drug's use.

Related Tables

[DDCM Master Table](#)

[DDCM Severity Level Table](#)

DDXCN_SL_DESC

DDCM Severity Level Description

a 255-character alphanumeric column that provides the text description for a DDCM Severity Level ([DDXCN_SL](#)).

Valid Values Table

DDXCN_SL	DDXCN_SL_DESC
1	Contraindication
2	Severe Warning
3	Moderate Warning

Related Tables

[DDCM Master Table](#)

[DDCM Severity Level Table](#)

DDXCN_SN

DDCM Sequence Number

a two-character numeric column that contains a code for each DDXCN entry in the Drug-Disease Contraindications Module (DDCM). When added to the DDXCN, it forms a unique code that is specific to each drug/contraindicated disease pair. The sequence number begins at 00 and increments by one for each additional contraindication. Therefore, one or more contraindications may be contained in the DDCM Master Table for each DDXCN on the drug record.

The following table shows DDXCN_SN data for a specified product: PREDNISOLONE 5MG TABLET (Clinical Formulation ID [[GCN_SEQNO](#)] 6721).

Example—DDXCN_SN and associated columns

DDXCN	DDXCN_SN	FDBDX	DXID
50534	00	01.011901	00000039
50534	01	01.054400	00000178
50534	02	01.054900	00000183
50534	03	01.117900	00000352
50534	04	01.136900	00000412
50534	05	03.242900	00000580
50534	06	03.244900	00000584
50534	07	03.250000	00000594
50534	08	03.250010	00000595
50534	09	03.272400	00000707
50534	10	03.273800	00000712
50534	11	05.298900	00000962
50534	12	06.365100	00001205
50534	13	07.401900	00001432
50534	14	07.428000	00001578
50534	15	07.429900	00001606
50534	16	09.530100	00001991
50534	17	09.531900	00002013
50534	18	09.532900	00002024
50534	19	09.533900	00002035
50534	20	09.535500	00002051

50534	21	09.556900	00002089
50534	22	09.562110	00002113
50534	23	09.569890	00002172
50534	24	09.571600	00002184
50534	25	10.593900	00002292
50534	26	13.733000	00002896

Related Tables**DDCM Master Table**

DF

Drug Form Code

a one-character alphanumeric column that indicates the type of billing unit to be used for a product.

Valid Values Table

DF	Description
1	each (tablets, kits, etc.)
2	milliliters (liquids)
3	grams (solids)

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

DGNAME

Drug Name

a 30-character alphanumeric column that identifies the unique drug name.

Example—DGNAME and associated columns

DGNAME	LBLMSG1	LBLMSG2	PEMONO
ALLOPURINOL - ORAL	ASK YOUR DOCTOR/PHARMACIST	ABOUT FLUID REQUIREMENTS.	1
HCTZ W/AMILORIDE-ORAL	HAVE REGULAR BLOOD PRESSURE	AND POTASSIUM CHECKS.	2
ASPIRIN-ORAL	CONSULT A DOCTOR BEFORE	GIVING ASPIRIN TO CHILDREN.	3
BELLADONNA ALK. AND BARB.-ORAL	MAY CAUSE DROWSINESS.	CAUTION USING MACHINERY.	4
CARBAMAZEPINE-ORAL	MAY CAUSE DROWSINESS.	CAUTION USING MACHINERY.	5
BENZODIAZEPINES(MISC.)-ORAL	MAY CAUSE DROWSINESS.	CAUTION USING MACHINERY.	6
BENZODIAZEPINES(OTHE R)-ORAL	MAY CAUSE DROWSINESS.	CAUTION USING MACHINERY.	6
BROMOCRIPTINE-ORAL	MAY CAUSE DROWSINESS.	CAUTION USING MACHINERY.	7
BRONCHODILATOR-AER ORAL INHALR	ASK YOUR DOCTOR/PHARMACIST	ABOUT INHALATION TECHNIQUE.	8
ACETAMINOPHEN-ORAL	KEEP THIS MEDICINE OUT OF	REACH OF CHILDREN.	9
NIFEDIPINE-ORAL	LIMIT ALCOHOLIC BEVERAGES;	MAY ENHANCE DIZZINESS.	10

Related Tables

[Patient Education Master Table](#)

DIN

Canadian Drug Identification Number

an eight-character alphanumeric column that provides the Canadian Drug Identification Number (DIN) assigned by Health Canada to all drug products (prescription and over-the-counter) that have been evaluated by the Therapeutic Products Directorate (TPD) and are approved for sale in Canada.

As defined by Health Canada, the DIN is assigned to a drug product prior to being marketed in Canada. It uniquely identifies all drug products sold in a dosage form in Canada and is located on the prescription label, and over-the-counter drug products that have been evaluated and authorized for sale in Canada. A DIN uniquely identifies the product manufacturer, product name, active ingredient(s), strength(s) of active ingredient(s), pharmaceutical form, and route of administration.

Within MedKnowledge, the product name issued by the Therapeutic Products Directorate for a specified product is supplied by the Canadian Product Name column (**ICABN**). The manufacturer name is supplied by the Manufacturer Description (IDDF) (**IMFGD**) column.

Sample Valid Values Table

DIN	ICABN	IMFGD
02242281	ENTROPHEN	PENDOPHARM INC.
02237418	ACETAMINOPHEN	PENDOPHARM INC.
00013285	VALIUM 5 TAB	HOFFMANN-LAROCHE LTD
00013668	ATASOL FORTE TAB 500MG	CHURCH AND DWIGHT LTD/LTEE
00021482	TEVA-HYDROCHLOROTHIAZIDE	TEVA CANADA LIMITED
00021695	NOVO-PREDNISONE 5MG	NOVOPHARM LTD
00030937	PROVERA 5MG TABLETS	PFIZER CANADA INC
00037427	NOVO-TRIPTYN TAB 50MG	NOVOPHARM LTD
00156876	PREDNISONE TAB 5MG	PRO DOC LABORATOIRE LTEE
00216666	NOVASEN TAB 325MG	NOVOPHARM LTD
00229296	NOVASEN ECT 650MG	NOVOPHARM LTD
00232378	NOVO-PREDNISONE TAB 50MG	NOVOPHARM LTD
00885886	AMOX 250 CAP 250MG	JAAPHARM CANADA INC
00885924	TRISULFA TAB	JAAPHARM CANADA INC
02243086	ZYPREXA ZYDIS	ELI LILLY CANADA IN

- (i) Formerly, General Public (GP) numerical identifiers were issued by the Therapeutic Programme to identify proprietary medicines - products that may be purchased without prescriptions in any retail outlet.

The Therapeutic Programme no longer issues General Public (GP) numerical identifiers. They have now been replaced by DINs.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

DLIM_DOC_LEVEL_CODE

DLIM Documentation Level Code

a two-character alphanumeric column that describes the relative strength of literature-based evidence supporting the related laboratory interference.

Valid Values Table

DLIM_DOC_LEVEL_CODE	DLIM_DOC_LEVEL_CODE_DESC
01	Established
02	Probable
03	Possible
99	Not Applicable

Related Tables

[DLIM Laboratory Interference Master Table](#)

[DLIM Documentation Level Code Description Table](#)

DLIM_DOC_LEVEL_CODE_DESC

DLIM Documentation Level Code Description

a 50-character alphanumeric column that provides the text description for a DLIM Documentation Level Code ([DLIM_DOC_LEVEL_CODE](#)).

Valid Values Table

DLIM_DOC_LEVEL_CODE	DLIM_DOC_LEVEL_CODE_DESC
01	Established
02	Probable
03	Possible
99	Not Applicable

Related Tables

[DLIM Documentation Level Code Description Table](#)

DLIM_DRUG_GRP_ID

DLIM Drug Group Identifier

a five-character numeric column that uniquely identifies a set of drugs associated to a given laboratory interference. Multiple laboratory interferences may be associated to a given **DLIM_DRUG_GRP_ID**.

Sample Valid Values Table

DLIM_DRUG_GRP_ID	DLIM_DRUG_GRP_ID_DESC
00048	Spironolactone
00092	Procainamide
00096	Propoxyphene
00195	Salicylates Other Than Aspirin/Salicylate Metabolites
00211	Human Chorionic Gonadotropin
00218	Cefazolin
00252	Secobarbital
00267	Dopamine
00273	Lidocaine (Intravenous)
00284	Zinc
00288	Heparin (Strength Greater than 10 unit per ml)
00289	Sodium Citrate
00293	Calcium Gluconate
00298	Acetazolamide
00346	Digitoxin
00348	Digoxin Immune Fab
00468	Trimethoprim
00717	Iron/Ferrous/Ferric Preparations (oral ONLY)
00863	Dobutamine
01005	Primaquine
01040	Phenazopyridine (Systemic)
01082	Choriogonadotropin Alfa(recombinant)

Related Tables

[DLIM Laboratory Interference Master Table](#)

[DLIM Drug Group Identifier Table](#)

[DLIM GCN_SEQNO to Drug Group Table](#)

[DLIM Routed Medication Identifier to Drug Group Table](#)

DLIM_DRUG_GRP_ID_DESC

DLIM Drug Group Description

a 100-character alphanumeric column that provides the text description for a DLIM Drug Group Identifier ([DLIM_DRUG_GRP_ID](#)).

Sample Valid Values Table

DLIM_DRUG_GRP_ID	DLIM_DRUG_GRP_ID_DESC
00048	Spironolactone
00092	Procainamide
00096	Propoxyphene
00195	Salicylates Other Than Aspirin/Salicylate Metabolites
00211	Human Chorionic Gonadotropin
00218	Cefazolin
00252	Secobarbital
00267	Dopamine
00273	Lidocaine (Intravenous)
00284	Zinc
00288	Heparin (Strength Greater than 10 unit per ml)
00289	Sodium Citrate
00293	Calcium Gluconate
00298	Acetazolamide
00346	Digitoxin
00348	Digoxin Immune Fab
00468	Trimethoprim
00717	Iron/Ferrous/Ferric Preparations (oral ONLY)
00863	Dobutamine
01005	Primaquine
01040	Phenazopyridine (Systemic)
01082	Choriogonadotropin Alfa(recombinant)

Related Tables

[DLIM Drug Group Identifier Table](#)

DLIM_DRUG_ID

DLIM Drug Identifier

an eight-character numeric column that represents a FDB drug concept identifier, such as Clinical Formulation ID ([GCN_SEQNO](#)), or Routed Medication Identifier.

Sample Valid Values Table

DLIM_DRUG_ID	DLIM_DRUG_ID_TYP_CODE	DLIM_DRUG_ID_TYP_CODE_DESC
00001925	01	GCN_SEQNO
00001927	01	GCN_SEQNO
00018575	01	GCN_SEQNO
00034810	01	GCN_SEQNO
00034818	01	GCN_SEQNO
00051948	01	GCN_SEQNO

Related Tables

[DLIM Clinically Reviewed Status Table](#)

DLIM_DRUG_ID_TYP_CODE

DLIM Drug Identifier Type Code

a two-character alphanumeric column that indicates whether the FDB drug concept identifier is a Clinical Formulation ID ([GCN_SEQNO](#)) or Routed Medication Identifier.

Valid Values Table

DLIM_DRUG_ID_TYP_CODE	DLIM_DRUG_ID_TYP_CODE_DESC
01	GCN_SEQNO
02	Routed Medication Identifier

Related Tables

[DLIM Clinically Reviewed Status Table](#)

[DLIM Drug Identifier Type Code Description Table](#)

DLIM_DRUG_ID_TYP_CODE_DESC

DLIM Drug Identifier Type Code Description

a 100-character alphanumeric column that provides a text description for the DLIM Drug Identifier Type Code (DLIM_DRUG_ID_TYP_CODE).

Valid Values Table

DLIM_DRUG_ID_TYP_CODE	DLIM_DRUG_ID_TYP_CODE_DESC
01	GCN_SEQNO
02	Routed Medication Identifier

Related Tables

[DLIM Drug Identifier Type Code Description Table](#)

DLIM_INTER_TYP_CODE

DLIM Interference Type Code

a two-character alphanumeric column that uniquely identifies the type of possible laboratory interference expected by the related drug.

Valid Values Table

DLIM_INTER_TYP_CODE	DLIM_INTER_TYP_CODE_DESC
01	Falsely Increases
02	Falsely Decreases
03	Causes False Positive
04	Causes False Negative
05	Falsely Increases or Falsely Decreases
06	Causes False Negative or False Positive
99	Not Applicable

Related Tables

[DLIM Laboratory Interference Master Table](#)

[DLIM Interference Type Code Description Table](#)

DLIM_INTER_TYP_CODE_DESC

DLIM Interference Type Code Description

a 50-character alphanumeric column that provides the text description for a DLIM Interference Type Code ([DLIM_INTER_TYP_CODE](#)).

Valid Values Table

DLIM_INTER_TYP_CODE	DLIM_INTER_TYP_CODE_DESC
01	Falsely Increases
02	Falsely Decreases
03	Causes False Positive
04	Causes False Negative
05	Falsely Increases or Falsely Decreases
06	Causes False Negative or False Positive
99	Not Applicable

Related Tables

[DLIM Laboratory Interference Master Table](#)

[DLIM Interference Type Code Description Table](#)

DLIM_MONOGRAPH_ID

DLIM Monograph Identifier

an eight-character numeric column that uniquely identifies discussion text and related reference citations for a drug-lab interference. The following example provides the DLIM Monograph ID of 00000109 along with its four associated DLIM Text ([DLIM_TEXT](#)) descriptions and their respective DLIM Text Sequence Numbers ([DLIM_TEXT_SEQNO](#)).

Example—[DLIM_MONOGRAPH_ID](#) and associated columns

DLIM_MONOGRAPH_ID	DLIM_TEXT_SEQNO	DLIM_TEXT
00000109	00001	Dopamine Falsely Increases Serum Total Bilirubin, Jendrassik-Grof. Evidence: Established
00000109	00002	According to the manufacturer of the Reflotron test for serum total bilirubin, therapeutic concentrations of dopamine may interfere with the analytical determination and yield falsely elevated results.
00000109	00003	Dopamine may interfere with serum total bilirubin determination and yield falsely elevated results. Recognition of this laboratory interference may avoid unnecessary diagnostic tests to rule out hepatobiliary disease or hemolytic disease.
00000109	00004	Reflotron Bilirubin Test. Boehringer Mannheim Corporation, 1993.

Related Tables

[DLIM Laboratory Interference Master Table](#)

[DLIM Monograph Identifier Table](#)

[DLIM Monograph Table](#)

DLIM_MONOGRAPH_TITLE

DLIM Monograph Title

a 255-character alphanumeric column that provides a title for a drug-lab interference monograph.

Sample Valid Values Table

DLIM_MONOGRAPH_ID	DLIM_MONOGRAPH_TITLE
00000109	Dopamine - Serum Total Bilirubin, Jendrassik-Grof
00000150	Dopamine - Serum Creatinine, Alkaline Picrate (Jaffe Reaction)
00000151	Dopamine - Serum Creatinine, Enzymatic-Creatinine Amidohydrolase (1 slide method)

Related Tables

[DLIM Monograph Identifier Table](#)

DLIM_STATUS_CODE

DLIM Status Code

a two-character alphanumeric column that indicates the clinical review status of a drug concept identifier by FDB for possible inclusion in a drug-lab interference.

Valid Values Table

DLIM_STATUS_CODE	DLIM_STATUS_CODE_DESC
00	None; researched and not related to a lab interference
01	Reviewed; associated to one or more lab interference records
98	Not Yet Evaluated
99	Not Applicable

Related Tables

[DLIM Clinically Reviewed Status Table](#)

[DLIM Status Code Description Table](#)

DLIM_STATUS_CODE_DESC

DLIM Status Code Description

a 100-character alphanumeric column that provides a text description for the DLIM Status Code ([DLIM_STATUS_CODE](#)).

Valid Values Table

DLIM_STATUS_CODE	DLIM_STATUS_CODE_DESC
00	None; researched and not related to a lab interference
01	Reviewed; associated to one or more lab interference records
98	Not Yet Evaluated
99	Not Applicable

Related Tables

[DLIM Status Code Description Table](#)

DLIM_TEXT

DLIM Text

a 255-character alphanumeric column that provides monograph content for a drug-lab interference. The following example provides the DLIM_TEXT values for the DLIM Monograph ID (**DLIM_MONOGRAPH_ID**) of 00000109 along with its associated DLIM Text Sequence Numbers (**DLIM_TEXT_SEQNO**).

Example—**DLIM_MONOGRAPH_ID** and associated columns

DLIM_MONOGRAPH_ID	DLIM_TEXT_SEQNO	DLIM_TEXT
00000109	00001	Dopamine Falsely Increases Serum Total Bilirubin, Jendrassik-Grof. Evidence: Established
00000109	00002	According to the manufacturer of the Reflotron test for serum total bilirubin, therapeutic concentrations of dopamine may interfere with the analytical determination and yield falsely elevated results.
00000109	00003	Dopamine may interfere with serum total bilirubin determination and yield falsely elevated results. Recognition of this laboratory interference may avoid unnecessary diagnostic tests to rule out hepatobiliary disease or hemolytic disease.
00000109	00004	Reflotron Bilirubin Test. Boehringer Mannheim Corporation, 1993.

Related Tables

[DLIM Monograph Table](#)

DLIM_TEXT_SEQNO

DLIM Text Sequence Number

a five-character numeric column that sorts related lines of text in a drug-lab interference monograph in proper order. The following example provides the DLIM Text Sequence Numbers for the DLIM Monograph ID ([DLIM_MONOGRAPH_ID](#)) of 00000109 and its four associated DLIM Text ([DLIM_TEXT](#)) descriptions.

Example—[DLIM_TEXT_SEQNO](#) and associated columns

DLIM_MONOGRAPH_ID	DLIM_TEXT_SEQNO	DLIM_TEXT
00000109	00001	Dopamine Falsely Increases Serum Total Bilirubin, Jendrassik-Grof. Evidence: Established
00000109	00002	According to the manufacturer of the Reflotron test for serum total bilirubin, therapeutic concentrations of dopamine may interfere with the analytical determination and yield falsely elevated results.
00000109	00003	Dopamine may interfere with serum total bilirubin determination and yield falsely elevated results. Recognition of this laboratory interference may avoid unnecessary diagnostic tests to rule out hepatobiliary disease or hemolytic disease.
00000109	00004	Reflotron Bilirubin Test. Boehringer Mannheim Corporation, 1993.

Related Tables

[DLIM Monograph Table](#)

DLIM_TXT_TYP_CODE

DLIM Text Type Code

a two-character alphanumeric column that uniquely identifies the monograph sections that appear in the DLIM Text ([DLIM_TEXT](#)) column.

Valid Values Table

DLIM_TXT_TYP_CODE	DLIM_TXT_TYP_CODE_DESC
01	Brief Overview
10	Discussion
20	Potential Significant Impact on Patient Care
91	References (Manufacturer's Information)
92	References (Human Study)
92	References (Case Report)
94	References (Meeting Abstract)
95	References (In vitro/Animal Study)
95	References (Review Article)
97	References (AHFS)
99	References (Unclassified)

Related Tables

[DLIM Monograph Table](#)

[DLIM Monograph Text Type Description Table](#)

DLIM_TXT_TYP_CODE_DESC

DLIM Text Type Code Description

a 50-character alphanumeric column that provides the text description for the DLIM Text Type Code (**DLIM_TXT_TYP_CODE**).

Valid Values Table

DLIM_TXT_TYP_CODE	DLIM_TXT_TYP_CODE_DESC
01	Brief Overview
10	Discussion
20	Potential Significant Impact on Patient Care
91	References (Manufacturer's Information)
92	References (Human Study)
92	References (Case Report)
94	References (Meeting Abstract)
95	References (In vitro/Animal Study)
95	References (Review Article)
97	References (AHFS)
99	References (Unclassified)

Related Tables

[DLIM Monograph Text Type Description Table](#)

DNAME

Drug-Food Interaction Drug Name

a 21-character alphanumeric column that describes the drug class to which the drug portion of the interaction belongs.

Example—DNAME and associated columns

FDCDE	DNAME	FD_SL	RESULT	FDMG1	FDMG2
002	BETA-BLOCKERS	2	FOOD MAY INCREASE SERUM DRUG CONCENTRATIONS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.
005	PHENYTOIN	1	ENTERAL FEEDS MAY DECREASE DRUG ABSORPTION.	STOP NG TUBE FEEDS 2 HRS	BEFORE AND AFTER DOSE.
006	ERYTHROMYCIN	2	FOOD MAY DECREASE DRUG ABSORPTION.	TAKE NON-ENTERIC COATED	FORM ON EMPTY STOMACH.
007	HYDRALAZINE	2	FOOD MAY ALTER ANTIHYPERTENSIVE EFFECTS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.

Related Tables

Drug-Food Interaction Master Table

DNAME_T

Drug-Food Interaction Drug Name (Translated)

a 30-character alphanumeric column that describes the drug class to which the drug portion of the interaction belongs.

Related Tables

Drug-Food Interaction Master Table--French

DOSE

Dosage Form Description

a ten-character alphanumeric column that provides an abbreviated text description for a Dosage Form Code (GCDF).

Descriptive terms include tablet, capsule, and cream. Abbreviations may be used to conform to space requirements.

Although this column is free-format, the data has been generated from a table to provide consistent spelling.

Sample Valid Values Table

GCDF	DOSE	GCDF_DESC
1B	BLADIRRIG	BLADDER IRRIGATION
1C	CACHET	CACHET
1D	CAPHARD	CAPSULE, HARD
1E	CAPSOFT	CAPSULE, SOFT
1F	COATEDTAB	COATED TABLET
1G	COLLODION	COLLODION
1H	COMPRLOZ	COMPRESSED LOZENGE
1I	CONCHDSOL	CONCENTRATE FOR HAEMODIALYSIS SOLUTION
1J	CONCRCTSOL	CONCENTRATE FOR RECTAL SOLUTION
1K	CONCSOLINF	CONCENTRATE FOR SOLUTION FOR INFUSION
1L	CONCSOLINJ	CONCENTRATE FOR SOLUTION FOR INJECTION
1M	CUTANEMUL	CUTANEOUS EMULSION
1N	CUTANFOAM	CUTANEOUS FOAM
1O	CUTANPASTE	CUTANEOUS PASTE
1P	CUTANPWD	CUTANEOUS POWDER
1Q	CUTANSOL	CUTANEOUS SOLUTION
1R	CUTANSPPWD	CUTANEOUS SPRAY, POWDER
1S	CUTANSPSOL	CUTANEOUS SPRAY, SOLUTION
1T	CUTANSPSUS	CUTANEOUS SPRAY, SUSPENSION

0A	UNIDENTIFIED	UNIDENTIFIED
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Related Tables

[Dosage Form Description Table](#)

[Dosage Form Description Table--French](#)

DOSING_ADJ_TYPE_CD

DRCM Dosing Adjustment Type Code

a four-character numeric column that provides the dosing adjustment type. The text description is provided by the DRCM Dosing Adjustment Type Description (**DOSING_ADJ_TYPE_DESC**) column.

Sample Valid Values Table

DOSING_ADJ_TYPE_CD	DOSING_ADJ_TYPE_DESC
1	See footnote
2	Administration is not recommended in this level of organ impairment
3	Adjust dose using multiplier
4	Adjust frequency
5	Adjust dose using multiplier and adjust frequency
6	Adjust dose to fixed amount
7	Adjust dose to fixed amount and adjust frequency
8	No adjustment necessary
9	See monograph
10	Default
11	No adjustment information

Related Tables

[DRCM Dosing Adjustment Type Table](#)

[DRCM Renal Master Table](#)

DOSING_ADJ_TYPE_DESC

DRCM Dosing Adjustment Type Description

a 70-character alphanumeric column that provides the text description for the DRCM Dosing Adjustment Type Code ([DOSING_ADJ_TYPE_CD](#)).

Sample Valid Values Table

DOSING_ADJ_TYPE_CD	DOSING_ADJ_TYPE_DESC
1	See footnote
2	Administration is not recommended in this level of organ impairment
3	Adjust dose using multiplier
4	Adjust frequency
5	Adjust dose using multiplier and adjust frequency
6	Adjust dose to fixed amount
7	Adjust dose to fixed amount and adjust frequency
8	No adjustment necessary
9	See monograph
10	Default
11	No adjustment information

Related Tables

[DRCM Dosing Adjustment Type Table](#)

DOSING AGE SOURCE DESC

Dosing Age Source Description

a 50-character alphanumeric column that provides the text description of the Dosing Age Source Identifier ([DOSING_AGE_SOURCE_ID](#)).

Valid Values Table

DOSING_AGE_SOURCE_ID	DOSING_AGE_SOURCE_DESC
1	Derived from Adult
2	Source Reference for Age Range
3	Supporting Reference May Not Be Specific to Age

Related Tables

[Dosing Age Source Description Table](#)

[Min/Max Dosing Age Source Description Table](#)

DOSING_AGE_SOURCE_ID

Dosing Age Source Identifier

a four-character numeric column that identifies if the dosing range coded for an age-specific record was based on evaluation of references relating to a different age range. The Supporting Reference May Not Be Specific to Age is a default value assigned to dosing records when the DOSING_AGE_SOURCE_ID column was created. This value will remain until the dosing records are reviewed and assigned a value of either Derived from Adult or Source Reference for Age Range.

The text description is provided by the Dosing Age Source Description ([DOSING_AGE_SOURCE_DESC](#)) column.

Valid Values Table

DOSING_AGE_SOURCE_ID	DOSING_AGE_SOURCE_DESC
1	Derived from Adult
2	Source Reference for Age Range
3	Supporting Reference May Not Be Specific to Age

Related Tables

[Dosing Age Source Description Table](#)

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

[Min/Max Dosing Age Source Description Table](#)

[MMGR Master Table](#)

[MMGD Master Table](#)

[NEOM Master Table](#)

[PDM Master Table](#)

DOSING_MODULE_UNIT_ABBREV

Dosing Module Unit Abbreviation

a 30-character alphanumeric column that reflects the values in the units description columns for Min/Max, DRCM, NEOM, and POEM. Use this column to retrieve the TJC- and ISMP-compliant unit description from the [UNIT_DESC_EXPANDED](#) or [UNIT_DESC_ABBREV](#) columns.

The values in this column reflect the values in the following columns:

- IVMSTRU
- IVMVOLU
- MMA_MXDU
- MMAR_MNDU
- MMAR_MXDU
- MMG_MNDU
- MMG_MXDU
- MMGR_MNDU
- MMGR_MXDU
- NEOM_UNIT_CODE_DESC
- PDM_UNDESC
- POEDESC1
- UNITS_DESC

i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the Units Description Table to obtain the [UNIT_DESC_EXPANDED](#) or [UNIT_DESC_ABBREV](#) column for ordering and patient records.

Sample Valid Values Table

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
APP	application	application
APPFUL	applicatorful	applicatorful
APPFUL/DAY	applicatorful/day	applicatorful per day
APPLIC	application	application
APPLIC/DAY	application/day	application per day
APPLICATOR/DAY	applicatorful/day	applicatorful per day
BAR	bar	bar

BAR/DAY	bar/day	bar per day
CM	cm	centimeter
CM/DAY	cm/day	centimeter per day
G	gram	gram
MEQ	mEq	milliequivalent
MG	mg	milligram
ML	mL	milliliter

Related Tables[Units Description Table](#)

DOSTPI_DES

DRCM Dose Type Indicator Description

a 25-character alphanumeric column that provides the text description of the DRCM Dose Type Indicator ([DR2_DOSTPI](#)).

Valid Values Table

DR2_DOSTPI	DOSTPI_DES
01	LOADING
02	MAINTENANCE
07	SINGLE DOSE

Related Tables

[DRCM Dose Type Description Table](#)

DPT_ALLOWANCE

DPT Duplication Allowance

a two-character numeric column that specifies the maximum number of duplicate therapy matches that can occur within a class without generating an alert.

Example—DPT_ALLOWANCE and associated columns

DPT_CLASS_ID	DPT_CLASS_DESC	DPT_ALLOWANCE
00001058	Antihistamines	00
00001059	Ophthalmic Antiglaucoma	02
00000483	HMGCo-A Reductase Inhibitors	00
00001062	Antihyperlipidemics	01
00001061	Antimalarial	01
00001063	Antiplatelet Drugs	00

Related Tables

[DPT Class Table](#)

[Class Table--French](#)

DPT_CLASS_DESC

DPT Class Description

a 60-character alphanumeric column that provides the text description for a DPT Class Identifier ([DPT_CLASS_ID](#)).

Sample Valid Values Table

DPT_CLASS_ID	DPT_CLASS_DESC
00000451	Alpha-Beta Blockers
00000452	Antipseudomonal Carbapenems
00000466	Antipsychotics, Atypical
00000467	Antipsychotics, Dopamine/Serotonin Antagonists O.U.
00000463	Benzamide (Antipsychotics)
00000060	Butyrophenones
00000456	Cephalosporins - 4th Generation
00000465	Dihydroindolones (Antipsychotics)
00000464	Diphenylbutylpiperidines (Antipsychotic)
00000454	Extended Spectrum or Antipseudomonal Antibiotics
00000453	Extended Spectrum Penicillins
00000468	Iminodibenzyl Derivatives (Antipsychotics)
00000470	Mucous Membrane Protectants
00000457	Ophthalmic Parasympathetic Agents
00000459	Ophthalmic Sympatholytic Agents
00000455	Penicillins
00000458	Phenothiazines
00000461	Thioxanthenes
00000469	Vaginal Sulfonamides
00000471	Visco-Elastics, Intra-articular

Related Tables

[DPT Class Table](#)

DPT_CLASS_DESC_T

DPT Class Description (Translated)

a 90-character alphanumeric column that provides the text description for a DPT Class Identifier ([DPT_CLASS_ID](#)).

Related Tables

[Class Table--French](#)

DPT_CLASS_ID

DPT Class Identifier

an eight-character numeric column that links a drug product to its appropriate Duplicate Therapy Class. A drug product may have more than one DPT_CLASS_ID assigned to it; therefore, it may belong to more than one Duplicate Therapy Class.

There are over 400 duplicate therapy classes in the Duplicate Therapy Module.

Sample Valid Values Table

DPT_CLASS_ID	DPT_CLASS_DESC
00000451	Alpha-Beta Blockers
00000452	Antipseudomonal Carbapenems
00000453	Extended Spectrum Penicillins
00000454	Extended Spectrum or Antipseudomonal Antibiotics
00000455	Penicillins
00000456	Cephalosporins - 4th Generation
00000457	Ophthalmic Parasympathetic Agents
00000458	Phenothiazines
00000459	Ophthalmic Sympatholytic Agents
00000460	Butyrophenones
00000461	Thioxanthenes
00000463	Benzamide (Antipsychotics)
00000464	Diphenylbutylpiperidines (Antipsychotic)
00000465	Dihydroindolones (Antipsychotics)
00000466	Antipsychotics, Atypical
00000467	Antipsychotics, Dopamine/Serotonin Antagonists O.U.
00000468	Iminodibenzyl Derivatives (Antipsychotics)
00000469	Vaginal Sulfonamides
00000470	Mucous Membrane Protectants
00000471	Visco-Elastics, Intra-articular

Related Tables

[DPT Class Table](#)

Class Table--French

DPT GCN_SEQNO Table

DPT Routed Medication ID Table

DR2_CRCLTH

DRCM Creatinine Clearance Threshold

a three-character numeric column that indicates lowest creatinine clearance to which the dosing record applies.

The dosage regimen should be adjusted for patients with a lower or equal creatinine clearance.

If more than one Creatinine clearance is provided in the literature, the highest (most conservative) value is reported.

- (i) The Renal Impairment Assessment Indicator is Y for all agents that must be adjusted in renal impairment, regardless of the presence or absence of creatinine clearance information.

- (i) DRCM does not provide dosage adjustments for renal impairment.

Example—DR2_CRCLTH and associated columns

GCN_SEQNO	DR2_CRCLTH	DR2_CRCLU
000011	050	01
015358	070	01
015921	029	01

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_CRCLU

DRCM Creatinine Clearance Units Indicator

a two-character alphanumeric column that indicates the unit of measurement for the DRCM Creatinine Clearance Threshold ([DR2_CRCLTH](#)).

Valid Values Table

DR2_CRCLU	Description
01	ML/MIN
02	ML/MIN/1.73M ²

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_DOSTPI

DRCM Dose Type Indicator

a two-character alphanumeric column that identifies the type of dose being screened.

Valid Values Table

DR2_DOSTPI	DOSTPI_DES	Description
01	LOADING	Initial dose(s) given to rapidly achieve total body stores (for example, desired plasma level) of the drug.
02	MAINTENANCE	The dose needed to replace what is lost by the body during the dosing interval.
07	SINGLE DOSE	A dose that is given one time only. This includes situations where the one dose completely treats the condition, vaccinations, and most chemotherapy orders. Additionally, FDB uses the approach that if a patient is seen in an institutional setting (clinic, emergency room, private MD office) for a condition and there is a reasonable possibility that the drug will be administered during that encounter, FDB will code a Single Dose for that drug. Chemotherapy that is given once every few days as part of a regimen will have a Single Dose coded for these orders.

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Dose Type Description Table](#)

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

[DRCM Renal Master Table](#)

DR2_HEPIMP

DRCM Hepatic Impairment Assessment Indicator

a one-character alphanumeric column that indicates whether a dosage regimen needs to be adjusted for hepatic impairment.

Valid Values Table

DR2_HEPIMP	Description
Y	Dose needs to be adjusted for hepatic impairment
N	Dose does not need to be adjusted for hepatic impairment

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_HIAGED

DRCM High Age in Days

a five-character numeric column that indicates the highest patient age (in days) to which the dosing information applies.

Example—DR2_HIAGED and associated columns

GCN_SEQNO	DR2_RT	DR2_LOAGED	DR2_HIAGED	FDBDX	DR2_DOSTPI
015921	052	06570	40150	08.486003	02
023187	006	06570	40150	999	02
019239	079	06570	40150	06.346200	08

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_HIDOSD

DRCM High Dose Per Day

a nine-character numeric column that indicates the high drug dose per day specific to the patient age, reason for use, dose type, and route of administration.

DR2_HIDOSD signifies the upper dosing limit, barring special or severe circumstances, shown to be efficacious for the indicated condition. It does not include outliers in dosing data due to severe cases or special conditions like the Max Dose Per Day (**DR2_MXDOSD**) column does, and is therefore always less-than-or-equal-to the DR2_MXDOSD value.

For example, if the normal dosing range of a given drug is 1000 to 2000 MG per day, but 3000 MG per day has been shown to be effective under severe circumstances, the DR2_HIDOSD would equal 2000 MG and the DR2_MXDOSD would equal 3000 MG.

Example—DR2_HIDOSD and associated columns

GCN_SEQNO	Dr2_DOSTPI	DR2_LODOSD	DR2_LODOSU	DR2_HIDOSD	DR2_HIDOSU
000011	01	00000.015	02	00000.030	02
000011	02	00000.003	02	00000.011	02
000011	01	00000.015	02	00000.030	02

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_HIDOSU

DRCM High Dose Units Code

a two-character alphanumeric column that indicates the units for the High Dose per Day.

Sample Valid Values Table

DR2_HIDOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
20	INH/DAY
21	SPR/DAY
22	ML/DAY
26	U/KG/DAY
27	U/KG/H
42	PACKET/DAY

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_HIDOTX

DRCM High Duration of Therapy

a five-character numeric column that indicates the usually recommended amount of time for which a drug should be administered.

High duration of therapy is expressed in days. A zero in this field means that the high duration is either not applicable (e.g., chronic medication) or not specified.

-  High Duration of Therapy values may be the same as Low Duration of Therapy values, or these values may represent a range.

Example—DR2_HIDOTX and associated columns

GCN_SEQNO	DR2_LODOTX	DR2_HIDOTX	DR2_MXDOTX
009523	00090	00180	00000
029927	00010	00014	00000
050268	00000	00000	00000

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_HIFREQ

DRCM High Frequency of Administration

a five-character numeric column that represents the high end of the frequency of administration.

Frequency of administration specifies the number of times that a drug is administered to the patient per day.

Example—DR2_HIFREQ and associated columns

GCN_SEQNO	DR2_LOFREQ	DR2_HIFREQ
000011	03.00	06.00
000011	02.00	03.00
000012	03.00	06.00

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_LOAGED

DRCM Low Age in Days

a five-character numeric column that indicates the lowest patient age (in days) to which the dosing information applies.

Example—DR2_LOAGED and associated columns

GCN_SEQNO	DR2_RT	DR2_LOAGED	DR2_HIAGED	FDBDX	DR2_DOSTPI
015921	052	06570	40150	01.011901	02
023187	006	06570	40150	19.E93315	02
019239	079	06570	40150	06.346200	08

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_LODOSD

DRCM Low Dose Per Day

a nine-character numeric column that indicates the minimum drug dose per day specific to the patient age, reason for use, dose type, and route of administration.

DR2_LODOSD signifies the lowest dose shown to be efficacious for the indicated condition.

Example—DR2_LODOSD and associated columns

GCN_SEQNO	DR2_DOSTPI	DR2_LODOSD	DR2_LODOSU	DR2_HIDOSD	DR2_HIDOSU
000011	01	00000.015	02	00000.030	02
000011	02	00000.003	02	00000.011	02
000011	01	00000.015	02	00000.030	02

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_LODOSU

DRCM Low Dose Units Code

a two-character alphanumeric column that indicates the unit of measure for the Low Dose per Day (DR2_LODOSD).

Sample Valid Values Table

DR2_LODOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
20	INH/DAY
21	SPR/DAY
22	ML/DAY
26	U/KG/DAY
27	U/KG/H
42	PACKET/DAY

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_LODOTX

DRCM Low Duration of Therapy

a five-character numeric column that indicates the lowest recommended amount of time, expressed in days, for which a drug should be administered.

-  Low Duration of Therapy values may be the same as High Duration of Therapy values, or these values may represent a range.

Example—DR2_LODOTX and associated columns

GCN_SEQNO	DR2_LODOTX	DR2_HIDOTX	DR2_MXDOTX
009523	00090	00180	00000
029927	00010	00014	00000
050268	00000	00000	00000

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_LOFREQ

DRCM Low Frequency of Administration

a five-character numeric column that indicates the low end of the frequency of administration.

Frequency of administration is expressed in terms of times of administration per day.

Example—DR2_LOFREQ and associated columns

GCN_SEQNO	DR2_LOFREQ	DR2_HIFREQ
000011	03.00	06.00
000011	02.00	03.00
000012	03.00	06.00

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_MX1DOS

DRCM Maximum Amount Per Single Dose

a nine-character numeric column that indicates the maximum amount of a drug that can be safely administered as one dose.

If the information is disease-specific, it is used only for that specific reason for use. If references give a general statement that is not disease-specific, that maximum single dose is used for all appropriate dose types.

 See the [DRCM Applications](#).

Example—DR2_MX1DOS and associated columns

GCN_SEQNO	DR2_MX1DOS	DR2_MXLIFD
000115	00003.250	00000.000
000142	00000.000	00000.000

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_MX1DSU

DRCM Maximum Single Dose Units Code

a two-character alphanumeric column that identifies the appropriate units for the Maximum Amount Per Single Dose (**DR2_MX1DSU**).

Valid Values Table

DR2_MX1DSU	UNITS_DESC
03	MG/KG
05	MCG/KG/MIN
09	MCG/MIN
10	U/KG
18	MG/KG/H
19	MCG/KG
28	MG
29	G
31	DRP
32	U
33	MCG
35	APPLIC
37	TAB-CAP
38	APPFUL
41	ML
47	MEQ/KG/HOUR
49	ML/KG
52	SUPP
54	MG/M2
59	MMU/KG
64	U/M2
65	MG/MIN
67	MEQ
75	MCG/M2

76	MG/KG/MIN
78	MCG/KG/H
86	NG/KG/MIN
87	MEQ/KG
90	MILI U
99	MEQ/H

Related Tables[DRCM Master Table](#)[DRCM Neonatal and Adult Master Table](#)

DR2_MXDOSD

DRCM Maximum Dose Per Day

a nine-character numeric column that indicates the maximum effective drug dose per day specific to the patient age, reason for use, dose type, and route of administration. This field should not be interpreted as the point of toxicity (although this may coincidentally be the case).

DR2_MXDOSD signifies the maximum dose shown to be efficacious for the indicated condition. This field includes outliers in dosing data (due to severe cases or special conditions), therefore it always equals or exceeds the High Dose Per Day ([DR2_HIDOSD](#)).

For example, if the normal dosing range of a given drug is 1000 to 2000 MG per day, but 3000 MG per day has been shown to be effective under severe circumstances, the DR2_HIDOSD would equal 2000 MG and the DR2_MXDOSD would equal 3000 MG.

Example—DR2_MXDOSD and associated columns

GCN_SEQNO	DR2_MXDOSD	DR2_MXDOSU
000011	00000.030	02
008195	00000.200	02
008201	00003.000	02

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_MXDOSU

DRCM Maximum Dose Units Code

a two-character alphanumeric column that identifies the appropriate units for the Maximum Dose Per Day (DR2_MXDOSD).

Sample Valid Values

DR2_MXDOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
20	INH/DAY
21	SPR/DAY
22	ML/DAY
26	U/KG/DAY
27	U/KG/H
42	PACKET/DAY
46	MCG/KG/DAY
47	MEQ/KG/HOUR
48	MCG/M2/DAY
50	U/M2/DAY

51	G/DAY
53	SUPP/DAY
55	G/M2/DAY
56	PAT/DAY
58	MMU/DAY
60	MMU/KG/DAY
62	MEQ/DAY
63	MEQ/KG/DAY
65	MG/MIN
72	MCG/H
76	MG/KG/MIN
77	ML/KG/DAY
78	MCG/KG/H
82	TAB-CAP/KG/D
86	NG/KG/MIN
88	MG/M2/H
89	ML/H
99	MEQ/H

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_MXDOTX

DRCM Maximum Duration of Therapy

a five-character numeric column that indicates the maximum recommended amount of time, expressed in days, for which a drug should be administered. A zero in this field means that the maximum duration of therapy is either not applicable (e.g., chronic medication) or not specified.

Example—DR2_MXDOTX and associated columns

GCN_SEQNO	DR2_LODOTX	DR2_HIDOTX	DR2_MXDOTX
004285	00000	00007	00010
029927	00010	00014	00000

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_MXLIFD

DRCM Maximum Lifetime Dose

a nine-character numeric column that indicates the maximum amount of a drug that can be safely administered over a patient's lifetime.

If this information is available, it is used for every reason for use and dose type.

-  The majority of drugs do not currently have a Maximum Lifetime Dose.

Example—DR2_MXLIFD and associated columns

GCN_SEQNO	LN	DR2_MXLIFD
024447	DOXIL 2 MG/ML VIAL	000000054
008823	BLEOMYCIN SULFATE 15U VIAL	000000032
009304	NEBCIN 80 MG/DEXTROSE 5%	000000.00

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_MXLIFU

DRCM Maximum Lifetime Dose Units Code

a two-character alphanumeric column that identifies the appropriate units for the DRCM Maximum Lifetime Dose (DR2_MXLIFD).

Valid Values Table

DR2_MXLIFU	UNITS_DESC
03	MG/KG
32	U
54	MG/M2

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_RENIMP

DRCM Renal Impairment Assessment Indicator

a one-character alphanumeric column that indicates whether a dosage regimen needs to be adjusted for renal impairment.

Valid Values Table

DR2_RENIMP	Description
Y	Dose needs to be adjusted for renal impairment
N	Dose does not need to be adjusted for renal impairment

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_RT

DRCM Route of Administration Indicator

a three-character alphanumeric column that identifies a clinical route.

Sample Valid Values Table

DR2_RT	ROUTES_DES
004	BUCCAL
030	CERVICAL
006	CONTINUOUS INFUSION
010	ENDOTRACHEAL
012	EPIDURAL
095	HAND BULB NEBULIZER
021	INHALATION
024	INTRA-ARTERIAL
025	INTRA-ARTICULAR
091	INTRACARDIAC
028	INTRA-CAVERNOSAL
033	INTRADERMAL
036	INTRALESIONAL
037	INTRALUMBAR
040	INTRAMUSCULAR
060	INTRANASAL
097	INTRAPERICARDIAL
044	INTRAPERITONEAL
045	INTRAPLEURAL
046	INTRASPINAL

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DRCM Renal Master Table

DRCM Route Conversion Table

DRCM Route Description Table

DR2_SL

DRCM Severity Level Indicator

a one-character alphanumeric column that relates a severity level to an excluded age range.

Sample Valid Values Table

DR2_SL	DR2_SL_DESC
1	Contraindication
2	Severe Precaution
3	Management or Monitoring Precaution

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Master Table](#)

[DRCM Severity Level Description Table](#)

DR2_SL_DESC

DRCM Severity Level Description

a 255-character alphanumeric column that provides the text description for the Dosage Range Check Module Severity Level Indicator.

Sample Valid Values Table

DR2_SL	DR2_SL_DESC
1	Contraindication
2	Severe Precaution
3	Management or Monitoring Precaution

Related Tables

[DRCM Severity Level Description Table](#)

DR2_SL_MESSAGE_TEXT

DRCM Severity Level Message Text

a 255-character alphanumeric column that contains the precaution severity level alert message for a drug screened for a patient within a specified age range

Sample Valid Values Table

DR2_SL	DR2_SL_DESC	DR2_SL_MESSAGE_TEXT
1	Contraindication	Democycline is contraindicated for this patient.
2	Severe Precaution	Potassium Acetate has a severe precaution for this patient.
3	Management or Monitoring Precaution	Desogestrel-ethynodiol has a management or monitoring precaution for this patient.

Related Tables

[DRCM Severity Level Description Table](#)

DR2_THAFHI

DRCM High Elimination Half-Life

a six-character numeric column that indicates the high end of the drug's half-life range, which indicates the time necessary to reduce the drug concentration in the blood by one-half.

The High Elimination Half-Life value can be a single value or a range in which a high and low value (DR2_THAFLO) are recorded. There are three patterns to the data within the DR2_THAFHI and DR2_THAFLO columns:

- Both the low and high values are zero. This indicates the low and high values are unknown.
- The low value is greater than zero and the high value is zero. This indicates the literature specifies only a single value. There is no range to the data.
- Both the low and high values are greater than zero. This specifies a known range to the data.

Half-life information is provided for reporting purposes only and is not intended as screening data.

Example—DR2_THAFHI and associated columns

GCN_SEQNO	DR2_LOAGED	DR2_HIAGED	DR2_THAFLO	DR2_THAFHI	DR2_THAFU
011671	0	29	3	7	02 (hours)
011671	30	364	1.4	3.5	02 (hours)
011671	365	4744	1.4	3.5	02 (hours)
011671	4745	40150	1.4	3.2	02 (hours)

Related Tables

[DRCM Neonatal and Adult Master Table](#)

DR2_THAFLO

DRCM Low Elimination Half-Life

a six-character numeric column that indicates the low end of the drug's half-life range, which indicates the time necessary to reduce the drug concentration in the blood by one-half.

The Low Elimination Half-Life value can be a single value or a range in which a low and high value are recorded. There are three patterns to the data within the DR2_THAFHI and DR2_THAFLO columns:

- Both the low and high values are zero. This indicates the low and high values are unknown.
- The low value is greater than zero and the high value is zero. This indicates the literature specifies only a single value. There is no range to the data.
- Both the low and high values are greater than zero. This specifies a known range to the data.

Half-life information is provided for reporting purposes only and is not intended as screening data.

Example—DR2_THAFHI and associated columns

GCN_SEQNO	DR2_LOAGED	DR2_HIAGED	DR2_THAFLO	DR2_THAFHI	DR2_THAFU
011671	0	29	3	7	02 (hours)
011671	30	364	1.4	3.5	02 (hours)
011671	365	4744	1.4	3.5	02 (hours)
011671	4745	40150	1.4	3.2	02 (hours)

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_THAFU

DRCM Units of Time Half-Life Indicator

a two-character alphanumeric column that identifies the units of time for the half-life range of a drug.

Valid Values Tables

DR2_THAFU	Description
01	Minutes
02	Hours
03	Days

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

DR2_UNITS

DRCM Units Code

a two-character alphanumeric column that identifies the appropriate unit used in the Dosage Range Check Module (DRCM).

- i To define the Units Code, match the code to the DRCM Dose Units Code Description (**UNITS_DESC**) column in the Dosage Range Check Unit Description Table.

Sample Valid Values Table

DR2_UNITS	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

Related Tables

DRCM Unit Description Table

DRC_MONO_FORMAT_CD

DRCM Monograph Format Code

a four-character numeric column that indicates how to present the monograph text.

Valid Values Table

DRC_MONO_FORMAT_CD	DRC_MONO_FORMAT_CD_DESC
1	New Line
2	Continuation of Previous Line

Related Tables

[DRCM Monograph Format Code Description Table](#)

DRC_MONO_FORMAT_CD_DESC

DRCM Monograph Format Code Description

a 50-character alphanumeric column that provides a text description for the DRCM Monograph Format Code ([DRC_MONO_FORMAT_CD](#)).

Valid Values Table

DRC_MONO_FORMAT_CD	DRC_MONO_FORMAT_CD_DESC
1	New Line
2	Continuation of Previous Line

Related Tables

[DRCM Monograph Format Code Description Table](#)

DRC_MONO_SECTION_CD

DRCM Monograph Section Code

a four-character numeric column that indicates the type of content contained in the related monograph text column. This allows users to select certain sections of the monograph to present according to their business needs.

Valid Values Table

DRC_MONO_SECTION_CD	DRC_MONO_SECTION_CD_DESC
1	Brief Overview
2	Discussion
3	Potential Significant Impact on Patient Care
4	References (Manufacturer's Information)
5	References (Human Study)
6	References (Case Report)
7	References (Meeting Abstract)
8	References (In vitro/Animal Study)
9	References (Review Article)
10	References (AHFS)
11	References (Unclassified)
12	Excretion Profile
13	Volume of Distribution
14	Protein Binding
15	Dosing Adjustment in Organ Dysfunction
16	Supplemental Dosing for Dialysis
17	Comments
18	References
19	Title
20	Opening Statement

Related Tables

[DRCM Monograph Section Code Description Table](#)

DRC_MONO_SECTION_CD_DESC

DRCM Monograph Section Code Description

a 50-character alphanumeric column that provides a text description for the DRCM Monograph Section Code ([DRC_MONO_SECTION_CD](#)).

Valid Values Tables

DRC_MONO_SECTION_CD	DRC_MONO_SECTION_CD_DESC
1	Brief Overview
2	Discussion
3	Potential Significant Impact on Patient Care
4	References (Manufacturer's Information)
5	References (Human Study)
6	References (Case Report)
7	References (Meeting Abstract)
8	References (In vitro/Animal Study)
9	References (Review Article)
10	References (AHFS)
11	References (Unclassified)
12	Excretion Profile
13	Volume of Distribution
14	Protein Binding
15	Dosing Adjustment in Organ Dysfunction
16	Supplemental Dosing for Dialysis
17	Comments
18	References
19	Title
20	Opening Statement

Related Tables

[DRCM Monograph Section Code Description Table](#)

DXID

FML Disease Identifier

an eight-character numeric column that represents medical diagnoses, disease states, and health-related conditions or procedures. This number is a stable identifier.

Each DxID has several descriptions, including a preferred professional description and any professional synonyms, as well as medical abbreviations and layperson synonyms. Each DxID is assigned a Disease Duration Code that represents the likely duration of the described DxID diagnosis. DxIDs are linked many-to-many to ICD Codes and one-to-one to First Databank Disease Codes ([FDBDX](#)).

A full text description of DXID is provided by ([DXID_DESC100](#)).

Sample Valid Values Table

DXID	DXID_DESC100
00000003	Brain Surgery
00000004	Spinal Puncture
00000005	Spinal Surgery
00000007	Sympathectomy
00000008	Neurosurgery
00000009	Cholera
00000010	Typhoid Fever
00000011	Paratyphoid Fever
00000012	Gastroenteritis due to Shigella Spp.
00000013	Botulism
00000014	Acute Intestinal Amebiasis
00000015	Acute Intestinal Amebiasis due to Entamoeba Histolytica
00000016	Chronic Intestinal Amebiasis
00000017	Liver Abscess Amebiasis
00000018	Liver Abscess Amebiasis due to Entamoeba Histolytica
00000019	Extraintestinal Amebiasis
00000020	Balantidiasis
00000021	Giardiasis
00000022	Isosporiasis
00000024	Staphylococcal Enterocolitis

00000025

Campylobacter Enterocolitis

Related Tables[DDCM Master Table](#)[DRCM Age Exclusion Table](#)[DRCM Master Table](#)[DRCM Neonatal and Adult Master Table](#)[DRCM Renal Master Table](#)[DXID to SNOMED CT Best Fit Table](#)[DXID to SNOMED CT Best Fit History Table](#)[FML Disease Identifier \(DxID\) Navigation Table](#)[FML Disease Identifier \(DxID\) Synonym Table](#)[FML Disease Identifier \(DxID\) Table](#)[INDM Master Table](#)[POEM GCN_SEQNO POEM Source Table](#)[SNOMED CT to DXID Search Table](#)[SNOMED CT to DXID Search Exclusion Table](#)[SNOMED CT to DXID Search Exclusion History Table](#)[SNOMED CT to DXID Search History Table](#)[SIDE Master Table](#)

DXID_DESC56

FML 56-character Description

a 56-character alphanumeric column that provides the mixed-case primary professional description for a Disease Identifier (**DXID**).

Sample Valid Values Table

DXID	DXID_DESC56	DXID_DESC100
00000002	Epidurography	Epidurography
00000003	Brain Surgery	Brain Surgery
00000004	Spinal Puncture	Spinal Puncture

Related Tables

[FML Disease Identifier \(DXID\) Table](#)

DXID_DESC100

FML 100-character Description

a 100-character alphanumeric column that provides the mixed-case primary professional description for a Disease Identifier (DXID).

Sample Valid Values Table

DXID	DXID_DESC56	DXID_DESC100
00000002	Epidurography	Epidurography
00000003	Brain Surgery	Brain Surgery
00000004	Spinal Puncture	Spinal Puncture

Related Tables

[FML Disease Identifier \(DXID\) Table](#)

DXID_DISEASE_DURATION_CD

FML Disease Duration Code

a one-character alphanumeric column that identifies the likely duration of the described DxID diagnosis or health-related condition. The text description for DXID_DISEASE_DURATION_CD is provided by ([DXID_DISEASE_DURATION_CD_DESC](#)).

Valid Values Table

DXID_DISEASE_DURATION_CD	DXID_DISEASE_DURATION_CD_DESC
0	Not Applicable
1	Acute
2	Chronic
3	Both

Related Tables

[FML Disease Duration Description Table](#)

[FML Disease Identifier \(DXID\) Table](#)

DXID_DISEASE_DURATION_CD_DESC

FML Disease Duration Code Description

a 50-character alphanumeric column that provides the text description for an FML Disease Duration Code.

Valid Values Table

DXID_DISEASE_DURATION_CD	DXID_DISEASE_DURATION_CD_DESC
0	Not Applicable
1	Acute
2	Chronic
3	Both

Related Tables

[FML Disease Duration Description Table](#)

DXID_STATUS

FML DxID Status Code

a one-character alphanumeric column that indicates whether an FML Disease Identifier (**DXID**) is currently live, has been replaced, or is retired. Text description for DXID_STATUS is provided by (**DXID_STATUS_DESC**).

Valid Values Table

DXID_STATUS	DXID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[FML Disease Identifier \(DXID\) Status Code Description Table](#)

[FML Disease Identifier \(DXID\) Table](#)

DXID_STATUS_DESC

FML DxID Status Code Description

a 50-character alphanumeric column that provides the text description for an FML DXID Status Code.

Valid Values Table

DXID_STATUS	DXID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[FML Disease Identifier \(DXID\) Status Code Description Table](#)

DXID_SYN_DESC56

FML 56-character Synonym Description

a 56-character alphanumeric column that provides a text description for a DxID concept synonym. The description can be a professional synonym, primary layman name, layman synonym, or an abbreviation.

DXID_SYNID	DXID	DXID_SYN_DESC56	DXID_SYN_DESC100
00000003	00002694	Itching Skin	Itching Skin
00000004	00002694	Itchy	Itchy
00000005	00003145	Diminished Appetite	Diminished Appetite

Related Tables

FML Disease Identifier (DXID) Synonym Table

DXID_SYN_DESC100

FML 100-character Synonym Description

a 100-character alphanumeric column that provides the text description for a DxID concept synonym. The description can be a professional synonym, primary layman name, layman synonym, or an abbreviation.

DXID_SYNID	DXID	DXID_SYN_DESC56	DXID_SYN_DESC100
00000003	00002694	Itching Skin	Itching Skin
00000004	00002694	Itchy	Itchy
00000005	00003145	Diminished Appetite	Diminished Appetite

Related Tables

FML Disease Identifier (DXID) Synonym Table

DXID_SYN_NMTYP

FML Name Type Code

a two-character alphanumeric column that identifies a Disease Identifier (DxID) synonym associated with a DxID concept and allows filtering or sorting between synonym types, including professional synonyms, primary layman terms, layman synonyms, and abbreviations. Text descriptions for DXID_SYN_NMTYP are provided by ([DXID_SYN_NMTYP_DESC](#).)

Valid Values Table

DXID_SYN_NMTYP	DXID_SYN_NMTYP_DESC
01	Professional Synonym
02	Primary Layman Name
03	Layman Synonym
04	Abbreviation

Related Tables

[FML Disease Identifier \(DXID\) Synonym Table](#)

[FML Synonym Name Type Description Table](#)

DXID_SYN_NMTYP_DESC

FML Name Type Code Description

a 50-character alphanumeric column that provides the text description for an FML Name Type Code.

Valid Values Table

DXID_SYN_NMTYP	DXID_SYN_NMTYP_DESC
01	Professional Synonym
02	Primary Layman Name
03	Layman Synonym
04	Abbreviation

Related Tables

[FML Synonym Name Type Description Table](#)

DXID_SYN_STATUS

FML Synonym Identifier Status Code

a one-character alphanumeric column that indicates whether the synonym for a given Disease Identifier (DxID) is live or has been retired. The text description for DXID_SYN_STATUS is provided by ([DXID_SYN_STATUS_DESC](#)).

Valid Values Table

DXID_SYN_STATUS	DXID_SYN_STATUS_DESC
0	Live
2	Retired

Related Tables

[FML Disease Identifier \(DXID\) Synonym Table](#)

[FML Synonym Status Description Table](#)

DXID_SYN_STATUS_DESC

FML Synonym Identifier Status Code Description

a 50-character alphanumeric column that provides the text description for an FML Synonym ID Status Code.

Valid Values Table

DXID_SYN_STATUS	DXID_SYN_STATUS_DESC
0	Live
2	Retired

Related Tables

[FML Synonym Status Description Table](#)

DXID_SYNID

FML Synonym Identifier

an eight-character numeric column containing a unique code that identifies a synonym for a given Disease Identifier (**DXID**). This number is a stable identifier.

Text descriptions for DXID_SYNID are provided in two formats: **DXID_SYN_DESC56** and **DXID_SYN_DESC100**.

DXID_SYNID	DxID	DXID_SYN_DESC56	DXID_SYN_DESC100
00000003	00002694	Itching Skin	Itching Skin
00000004	00002694	Itchy	Itchy
00000005	00003145	Diminished Appetite	Diminished Appetite

Related Tables

[FML Disease Identifier \(DXID\) Synonym Table](#)

E

ETC_CHANGE_TYPE_CODE
ETC_CHANGE_TYPE_CODE_DESC
ETC_COMMON_USE_IND
ETC_DEFAULT_USE_IND
ETC_DRUG_CONCEPT_LINK_IND
ETC_EFFECTIVE_DATE
ETC_FORMULARY_LEVEL_IND
ETC_HIERARCHY_LEVEL
ETC_ID
ETC_NAME
ETC_PARENT_ETC_ID
ETC_PRESENTATION_SEQNO
ETC_PRODUCT RELATED ETC_ID
ETC_RETIRE_DATE
ETC_RETIRE_IND
ETC_REVISION_SEQNO
ETC_SEARCH_ETC_ID
ETC_SORT_NUMBER
ETC_ULTIMATE_CHILD_IND
ETC_ULTIMATE_PARENT_ETC_ID
EVD_EXT_VOCAB_TYPE_ID
EVD_FDB_VOCAB_TYPE_ID
EXCLUSION_CODE
EXCLUSION_HIAGED
EXCLUSION_LOAGED
EXCLUSION_MESSAGE_TEXT
EXCLUSION_REASON_CD
EXCLUSION_REASON_TEXT_LONG

EXCLUSION_REASON_TEXT_SHORT

EXCLUSION_STATUS_CD

EXCLUSION_STATUS_CD_DESC

EXT_IDENTIFIER

EXT_IDENTIFIER_END_DT

EXT_IDENTIFIER_START_DT

EXT_IDENTIFIER_TYPE_DESC

EXT_IDENTIFIER_TYPE_ID

ETC_CHANGE_TYPE_CODE

ETC Change Type Code

a one-character alphanumeric column that identifies the type of history record in the history tables. A new entry will be added to the history table each time a new relationship is created, an attribute for a given relationship is updated, or a relationship between an ETC_ID and a drug concept is deleted.

Valid Values Table

ETC_CHANGE_TYPE_CODE	ETC_CHANGE_TYPE_CODE_DESC
A	ETC is associated to a given drug concept.
C	An attribute for a given association between an ETC and drug concept has changed.
D	AN ETC association to a given drug concept has been deleted.

Related Tables

- [ETC Change Type Code Description Table](#)
- [ETC to GCN_SEQNO Change History Table](#)
- [ETC to HIC_SEQN Assignment History Table](#)
- [ETC to HICL_SEQNO Assignment History Table](#)
- [ETC to Med Name ID Assignment History Table](#)
- [ETC to MedID Change History Table](#)

ETC_CHANGE_TYPE_CODE_DESC

ETC Change Type Code Description

a 90-character alphanumeric column that provides a text description for the ETC Change Type Code (**ETC_CHANGE_TYPE_CODE**).

Valid Values Table

ETC_CHANGE_TYPE_CODE	ETC_CHANGE_TYPE_CODE_DESC
A	ETC is associated to a given drug concept.
C	An attribute for a given association between an ETC and drug concept has changed.
D	AN ETC association to a given drug concept has been deleted.

Related Tables

[ETC Change Type Code Description Table](#)

ETC_COMMON_USE_IND

Common Use Indicator

a one-character alphanumeric column that identifies the most common classification for a given drug concept.

If a Clinical Formulation ID ([GCN_SEQNO](#)), Medication Identifier ([MEDID](#)), or FDB Product Identifier ([FDB_PRODUCT_ID](#)) belongs to more than one therapeutic classification, the ETC_COMMON_USE_IND is assigned to the classification identified as the most common use for the product. This column is not populated if there is no common use for a product with multiple classifications.

Valid Values Table

ETC_COMMON_USE_IND	Description
0	Not Applicable
1	Most Common Use

Related Tables

[ETC to GCN_SEQNO Assignment Table](#)

[ETC to GCN_SEQNO Change History Table](#)

[ETC to MedID Assignment Table](#)

[ETC to MedID Change History Table](#)

ETC_DEFAULT_USE_IND

ETC Default Use Indicator

a one-character alphanumeric column that identifies a suggested reporting classification for a given drug concept.

When a Clinical Formulation ID ([GCN_SEQNO](#)), Medication Identifier ([MEDID](#)), or FDB Product Identifier ([FDB_PRODUCT_ID](#)) belongs to more than one therapeutic classification, the ETC_DEFAULT_USE_IND is editorially assigned to one of the classifications. This prevents duplicate reporting of products in the hierarchy. If there is a common use for the product, ETC_DEFAULT_USE_IND is assigned to the same classification as the ETC Common Use Indicator ([ETC_COMMON_USE_IND](#)).

Valid Values Table

ETC_DEFAULT_USE_IND	Description
0	Not Applicable
1	Default Use

Related Tables

[ETC to GCN_SEQNO Assignment Table](#)

[ETC to GCN_SEQNO Change History Table](#)

[ETC to MedID Assignment Table](#)

[ETC to MedID Change History Table](#)

ETC_DRUG_CONCEPT_LINK_IND

ETC Drug Concept Link Indicator

a one-character alphanumeric column that indicates if a Clinical Formulation ID ([GCN_SEQNO](#)) is attached to a given ETC Identifier ([ETC_ID](#)). FDB Product Identifiers (FDB_PRODUCT_IDs), Hierarchical Code Number Sequence Numbers ([HIC_SEQNs](#)), Medication Identifiers ([MEDIDs](#)), and/or Medication Name Identifiers ([MED_NAME_IDS](#)) may or may not be linked as well.

Valid Values Table

ETC_DRUG_CONCEPT_LINK_IND	Description
0	No GCN_SEQNOs are associated to this ETC_ID.
1	GCN_SEQNOs ARE associated to this ETC_ID.

Related Tables

[ETC Table](#)

ETC_EFFECTIVE_DATE

ETC Effective Date

an eight-character numeric column that provides the date on which a relationship between a therapeutic classification and a drug concept is turned on or off, or the date on which attributes of that relationship were modified. The date format is YYYYMMDD.

Example—ETC_EFFECTIVE_DATE and associated columns

ETC_ID	ETC_EFFECTIVE_DATE
00037481401	00000354
00037481401	00000354
00037481401	00005686
00037481410	00000354

Related Tables

[ETC to GCN_SEQNO Change History Table](#)

[ETC to HICL_SEQNO Assignment History Table](#)

[ETC to HIC_SEQN Assignment History Table](#)

[ETC to Med Name ID Assignment History Table](#)

[ETC to MedID Change History Table](#)

ETC_FORMULARY_LEVEL_IND

ETC Formulary Level Indicator

a one-character alphanumeric column that provides a suggested level for building formularies, as determined by FDB clinical editors. This indicator may reside at any level of classification.

Valid Values Table

ETC_FORMULARY_LEVEL_IND	Description
0	Not Applicable
1	Suggested level for building formulary

Related Tables

[ETC Table](#)

ETC_HIERARCHY_LEVEL

ETC Hierarchy Level

a two-character numeric column that provides the position of the given therapeutic classification in the hierarchical structure (1 being the top level). It is used to organize and present formulary lists with different levels of indentation. The values are procedurally limited to 12 levels with a design that can be expanded if future needs dictate.

Example—ETC_HIERARCHY_LEVEL and associated columns

ETC_ID	ETC_NAME	ETC_ULTIMATE_PARENT_ETC_ID	ETC_SORT_NUMBER	ETC_HIERARCHY_LEVEL
00003146	Anesthetics	00000000	00053	01
00000617	General Anesthetics	00003146	00054	02
00000620	General Anesthetic - Inhalant	00003146	00055	03
00000612	Local Anesthetics - Parenteral	00003146	00069	02
00000613	Local Anesthetics - Amide	00003146	00070	03

Related Tables

ETC Table

ETC_ID

ETC Identifier

an eight-character numeric column that identifies a unique therapeutic classification. This number is a stable identifier.

Sample Valid Values Table

ETC_ID	ETC_NAME
00000242	Angiotensin II Receptor Blocker-Diuretic Combination
00000243	Central Alpha-2 Agonists-Diuretic Combinations
00000244	Peripheral Alpha-1 Receptor Blocker-Diuretic Combination
00000246	Hypotensive Other-Diuretic Combinations
00000247	Postganglionic Blocker-Diuretic Combinations
00000248	Diuretics
00000249	Diuretic - Carbonic Anhydrase Inhibitors
00000250	Diuretic - Loop
00000251	Diuretic - Mercurial
00000252	Diuretic - Osmotic
00000253	Diuretic - Potassium Sparing
00000254	Diuretic - Thiazides and Related
00000255	Diuretic - Miscellaneous
00000256	Diuretic - Miscellaneous and Miscellaneous Combinations
00000257	Diuretic - Miscellaneous & Potassium Combinations
00000258	Diuretic - Miscellaneous Combinations - Other
00000259	Cardiac Sympathomimetics and Combinations
00000260	Cardiac Sympathomimetic - Anaphylaxis Therapy Agents
00000261	Cardiac Sympathomimetic - Anaphylaxis Therapy Agent Combinations
00000262	Cardiac Sympathomimetic Combinations
00000263	Antihyperlipidemics
00000264	Antihyperlipidemic - Bile Acid Sequestrants
00000265	Antihyperlipidemic - Fibric Acid Derivatives

00000267	Alternative Therapy - Natural HMG CoA Reductase Inhibitors
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Example—ETC_ID and associated columns

ETC_SORT_NUMBER	ETC_ID	ETC_PARENT_ETC_ID	ETC_NAME
01418	00000287	00003152	Antihistamines - Ethylenediamines
01419	00000288	00003152	Antihistamines - Phenothiazines
01424	00003947	00000290	Antihistamines Non-Sedating - Piperazines

Related Tables

- [ETC HIC3 to ETC Cross Reference Table](#)
- [ETC to GCN_SEQNO Assignment Table](#)
- [ETC to GCN_SEQNO Change History Table](#)
- [ETC to HICL_SEQNO Assignment Table](#)
- [ETC to HICL_SEQNO Assignment History Table](#)
- [ETC to HIC_SEQN Assignment Table](#)
- [ETC to HIC_SEQN Assignment History Table](#)
- [ETC to MedID Assignment Table](#)
- [ETC to MedID Change History Table](#)
- [ETC to Med Name ID Assignment Table](#)
- [ETC to Med Name ID Assignment History Table](#)
- [ETC Table](#)

ETC_NAME

ETC Name

a 70-character alphanumeric column that provides the descriptive name for an ETC Identifier ([ETC_ID](#)).

Sample Valid Values Table

ETC_ID	ETC_NAME
00000267	Alternative Therapy - Natural HMG CoA Reductase Inhibitors
00000242	Angiotensin II Receptor Blocker-Diuretic Combination
00000264	Antihyperlipidemic - Bile Acid Sequestrants
00000265	Antihyperlipidemic - Fibric Acid Derivatives
00000263	Antihyperlipidemics
00000261	Cardiac Sympathomimetic - Anaphylaxis Therapy Agent Combinations
00000260	Cardiac Sympathomimetic - Anaphylaxis Therapy Agents
00000262	Cardiac Sympathomimetic Combinations
00000259	Cardiac Sympathomimetics and Combinations
00000243	Central Alpha-2 Agonists-Diuretic Combinations
00000249	Diuretic - Carbonic Anhydrase Inhibitors
00000250	Diuretic - Loop
00000251	Diuretic - Mercurial
00000255	Diuretic - Miscellaneous
00000257	Diuretic - Miscellaneous & Potassium Combinations
00000256	Diuretic - Miscellaneous and Miscellaneous Combinations
00000258	Diuretic - Miscellaneous Combinations - Other
00000252	Diuretic - Osmotic
00000253	Diuretic - Potassium Sparing
00000254	Diuretic - Thiazides and Related
00000248	Diuretics
00000246	Hypotensive Other-Diuretic Combinations
00000244	Peripheral Alpha-1 Receptor Blocker-Diuretic Combination

00000247	Postganglionic Blocker-Diuretic Combinations
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Example—ETC_NAME and associated columns

ETC_SORT_NUMBER	ETC_ID	ETC_PARENT_ETC_ID	ETC_NAME
01418	00000287	00003152	Antihistamines - Ethylenediamines
01419	00000288	00003152	Antihistamines - Phenothiazines
01424	00003947	00000290	Antihistamines Non-Sedating - Piperazines

Related Tables[ETC Table](#)

ETC_PARENT_ETC_ID

ETC Parent ETC Identifier

an eight-character numeric column that identifies the ETC Identifier (**ETC_ID**) that is one level higher than a given **ETC_ID**. This value will be zero for ultimate parents or orphans.

Example—ETC_PARENT_ETC_ID and associated columns

ETC_SORT_NUMBER	ETC_ID	ETC_PARENT_ETC_ID	ETC_NAME
01418	00000287	00003152	Antihistamines - Ethylenediamines
01419	00000288	00003152	Antihistamines - Phenothiazines
01424	00003947	00000290	Antihistamines Non-Sedating - Piperazines

Related Tables

[ETC Table](#)

ETC_PRESENTATION_SEQNO

ETC Presentation Sequence Number

a five-character numeric column that provides a sort order for sequencing ETC Identifiers ([ETC_IDs](#)) with the same parent.

Example—ETC_PRESENTATION_SEQNO and associated columns

ETC_ID	ETC_NAME	ETC_PARENT_ETC_ID	ETC_PRESENTATION_SEQNO
00000217	Antiarrhythmic - Class I Nonspecific	00003886	00040
00000218	Antiarrhythmic - Class I-A	00003886	00010
00000219	Antiarrhythmic - Class I-B	00003886	00020
00000220	Antiarrhythmic - Class I-C	00003886	00030

Related Tables

[ETC Table](#)

ETC_PRODUCT RELATED ETC_ID

ETC Product Related ETC Identifier

an eight-character numeric column that represents the ETC Identifier (**ETC_ID**) that is the child of an ETC Search ETC Identifier (**ETC_SEARCH_ETC_ID**) and is associated to Clinical Formulation IDs (**GCN_SEQNOs**). Only ETC_IDs that are linked to Clinical Formulation IDs (GCN_SEQNOs) are found in this column. ETC_IDs related to Clinical Formulation IDs (GCN_SEQNOs) may also be related to other drug concepts.

Example—ETC_PRODUCT RELATED ETC_ID and associated columns

ETC_SEARCH_ETC_ID	ETC_NAME	ETC_PRODUCT_RELATE D_ETC_ID	ETC_NAME
00000284	Antihistamines	00000287	Antihistamines - Ethylenediamines
00000284	Antihistamines	00000288	Antihistamines - Phenothiazines
00000284	Antihistamines	00003947	Antihistamines Non-Sedating - Piperazines

Related Tables

[ETC Search Table](#)

ETC_RETIRE_DATE

ETC Retired Date

an eight-character numeric column that provides the date on which an ETC Identifier (**ETC_ID**) was retired. The date format is YYYYMMDD.

Sample Valid Values Table

ETC_ID	ETC_NAME	ETC_RETIRE_IND	ETC_RETIRE_DATE
3548	Alternative Therapy - Homeopathic Products	1	20090715
3691	Antidote - Agricultural Poison	1	20070502
5853	Cardiac Inotropes - Xanthine Oxidase Inhibitors	1	20071119
3043	Fertility Regulator Combinations	1	20110518
150	Insulin - Mixed	1	20071119

Related Tables

[ETC Table](#)

ETC_RETIRED_IND

ETC Retired Indicator

a one-character alphanumeric column that indicates if an ETC Identifier ([ETC_ID](#)) is retired.

Valid Values Table

ETC_RETIRED_IND	Description
0	No, ETC_ID is not retired
1	Yes, ETC_ID is retired

Related Tables

[ETC Table](#)

ETC_REVISION_SEQNO

ETC Revision Sequence Number

a five-character numeric column that tracks the relationship history between a therapeutic classification and a drug concept and the changes to the attributes of that association.

Example—ETC_REVISION_SEQNO and associated columns

ETC_ID	ETC_REVISION_SEQNO
00037481401	00000354
00037481401	00000354
00037481401	00005686
00037481410	00000354

Related Tables

[ETC to GCN_SEQNO Change History Table](#)

[ETC to HIC_SEQN Assignment History Table](#)

[ETC to HICL_SEQNO Assignment History Table](#)

[ETC to Med Name ID Assignment History Table](#)

[ETC to MedID Change History Table](#)

ETC_SEARCH_ETC_ID

ETC Search ETC Identifier

an eight-character numeric column that represents the ETC Identifier (**ETC_ID**) that is used to search for all ETC Product Related ETC Identifiers (**ETC_PRODUCT RELATED ETC_IDs**)—the ETC_SEARCH_ETC_ID's children. It is used to go directly from any therapeutic classification to the ETC_ID related to the drug concept for formulary building.

Example—ETC_SEARCH_ETC_ID and associated columns

ETC_SEARCH_ETC_ID	ETC_NAME	ETC_PRODUCT_RELATE D_ETC_ID	ETC_NAME
00000284	Antihistamines	00000287	Antihistamines - Ethylenediamines
00000284	Antihistamines	00000288	Antihistamines - Phenothiazines
00000284	Antihistamines	00003947	Antihistamines Non-Sedating - Piperazines

Related Tables

[ETC Search Table](#)

ETC_SORT_NUMBER

ETC Sort Number

a five-character numeric column that sequences therapeutic classifications in a suggested order.

Example—ETC_SORT_NUMBER and associated columns

ETC_SORT_NUMBER	ETC_ID	ETC_PARENT_ETC_ID	ETC_NAME
01418	00000287	00003152	Antihistamines - Ethylenediamines
01419	00000288	00003152	Antihistamines - Phenothiazines
01424	00003947	00000290	Antihistamines Non-Sedating - Piperazines

i This number can change with each product update and should not be used as a classification identifier (use the [ETC_ID](#)).

i Use the ETC Hierarchy Level ([ETC_HIERARCHY_LEVEL](#)) and the ETC Presentation Sequence Number ([ETC_PRESENTATION_SEQNO](#)) for presenting the classifications in hierarchical order.

Related Tables

ETC Table

ETC_ULTIMATE_CHILD_IND

ETC Ultimate Child Indicator

a one-character alphanumeric column that indicates that a given ETC Identifier ([ETC_ID](#)) has no lower-level classifications associated to it.

Valid Values Table

ETC_ULTIMATE_CHILD_IND	Description
0	ETC_ID is NOT ultimate child (has children; lower-level classification values are related).
1	ETC_ID is ultimate child (has NO children; no lower-level classifications attached).

Related Tables

[ETC Table](#)

ETC_ULTIMATE_PARENT_ETC_ID

ETC Ultimate Parent ETC Identifier

an eight-character numeric column that identifies the therapeutic classification that is at the top of the hierarchy from the given ETC Identifier ([ETC_ID](#)). The value will be zero for ultimate parents.

Example—ETC_ULTIMATE_PARENT_ETC_ID and associated columns

ETC_ID	ETC_PARENT_ETC_ID	ETC_NAME	ETC_ULTIMATE_PARENT_ETC_ID
00000287	00003152	Antihistamines - Ethylenediamines	2709 - Respiratory Therapy Agents
00000288	00003152	Antihistamines - Phenothiazines	2709 - Respiratory Therapy Agents
00003947	00000290	Antihistamines Non-Sedating - Piperazines	2709 - Respiratory Therapy Agents

Related Tables

[ETC Table](#)

EVD_EXT_VOCAB_TYPE_ID

EVD External Vocabulary Type Identifier

a four-character numeric column that identifies the vocabulary type of a given EVD External Vocabulary Identifier.

Related Tables

[SNOMED CT Value Set Description Table](#)

EVD_FDB_VOCAB_TYPE_ID

EVD FDB Vocabulary Type Identifier

a four-character numeric column that describes the vocabulary type of a given FDB Vocabulary Identifier ([IMK_FDB_VOCAB_NO_ID](#)).

Valid Values Table

EVD_FDB_VOCAB_TYPE_ID	EVD_VOCAB_TYPE_DESC
1	MED_NAME_ID
2	ROUTED_MED_ID
3	MEDID
5	ROUTED_GEN_ID
6	GCN_SEQNO
7	ROUTED_DOSAGE_FORM_MED_ID
100	NDC
104	HIC_SEQN
110	DAM_ALRGN_GRP
120	DXID
130	UOM_MSTR_ID
131	ROUTE_MSTR_ID
132	DOSAGE_FORM_MSTR_ID
133	ANATOMIC_SITE_ID
134	ADMIN_METHOD_CD
135	PRN_ID
600	UCUM_CD
800	NCIT NCPDP Terminology
810	NCIT FDA SPL Terminology

Related Tables

[SNOMED CT to FDB Link Table](#)

EXCLUSION_CODE

Exclusion Code

The Exclusion Code is a one-character numeric column that identifies why the Clinical Formulation ID (GCN_SEQNO) was not included within the Dosage Range Check Module (DRCM).

Valid Values Table

EXCLUSION_CODE	Description
1	Not Applicable for Screening
2	Excluded by Policy Due to Low Risk/Low Potential for Harm
3	No Dosing Information Available in Approved Sources
4	In Review for Inclusion
5	Drugs Have Situational or Variably Dependent Dosing

A value of **1** is assigned when a Clinical Formulation ID (GCN_SEQNO) is not applicable for screening. Excluded formulations are medical supplies (such as bandages, crutches, and diapers).

A value of **2** is assigned when a Clinical Formulation ID (GCN_SEQNO) is excluded due to editorial policy. Either these drugs have dosing ranges that are too variable (parenteral fluids), or these drugs are in therapeutic classes that fall outside of the scope of DRCM (for example, herbals, emollients, anesthetic gasses, dietary supplements).

- Please note that medical supplies, which are excluded by policy, are assigned a value of 1 (indicating "Not Applicable for Screening").

A value of **3** is assigned when a Clinical Formulation ID (GCN_SEQNO) is excluded due to the inavailability of dosing information within approved sources. Formulations excluded for this purpose might include cough and cold medications and multi-vitamins.

A value of **4** is assigned when a Clinical Formulation ID (GCN_SEQNO) is new and is currently in review for inclusion.

A value of **5** is assigned when a Clinical Formulation ID (GCN_SEQNO) is excluded due to requiring patient data, lab data, or some other dependency that DRCM cannot capture. Unlike category 2, drugs in category 5 have very specific dosage ranges, and are within the scope of DRCM, but are outside the design of DRCM. Examples include rescue drugs and kits. The prescriber should be alerted to drugs in this category not being screened.

Related Tables

DRCM Exclusion Table

EXCLUSION_HIAGED

Exclusion High Age In Days

a five-character numeric column that corresponds to the high patient age (in days) of an age range excluded from the DRCM Neonatal and Adult Master Table ([RDRCNMA1_MSTR](#)).

Example—EXCLUSION_HIAGED and associated columns

GCN_SEQNO	DR2_RT	DR2_DOSTPI	EXCLUSION_LOAGED	EXCLUSION_HIAGED	FDBDX
867	064	07	0	2189	999

Related Tables

[DRCM Age Exclusion Table](#)

EXCLUSION_LOAGED

Exclusion Low Age In Days

a five-character numeric column that corresponds to the low patient age (in days) of an age range excluded from the DRCM Neonatal and Adult Master Table ([RDRCMA2_MSTR](#)).

Example—EXCLUSION_LOAGED and associated columns

GCN_SEQNO	DR2_RT	DR2_DOSTPI	EXCLUSION_LOAGED	EXCLUSION_HIAGED	FDBDX
867	064	07	0	2189	999

Related Tables

[DRCM Age Exclusion Table](#)

EXCLUSION_MESSAGE_TEXT

Exclusion Message Text

a 750-character alphanumeric column that contains the text message alert that explains the omission of a given age range.

Example—EXCLUSION_MESSAGE_TEXT and associated columns

DR2_SL_MESSAGE_TEXT	Desogestrel-ethynodiol has a management or monitoring precaution for this patient.
EXCLUSION_REASON_TEXT_SHORT	Birth control not indicated for post-menopausal women
NEXT_SCREENING_DOSE_TEXT	The next available dosing age range available is for 18 to 65 years of age
EXCLUSION_MESSAGE_TEXT	Desogestrel-ethynodiol has a management or monitoring precaution for this patient. Birth control not indicated for post-menopausal women. The next available dosing age range is for 18 to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.

Related Tables

[DRCM Age Exclusion Table](#)

EXCLUSION_REASON_CD

Exclusion Reason Code

an eight-character numeric column that denotes the reason an age range is excluded from the DRCM.

Example—EXCLUSION_REASON_CD and associated columns

EXCLUSION_REASON_CD	EXCLUSION_REASON_TEXT_SHORT	EXCLUSION_REASON_TEXT_LONG
867	Cough and cold products not efficacious for children under 6 years of age.	According to the American Academy of Pediatrics, combination cough and cold products are not efficacious in children under 6 years of age.

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Exclusion Reason Table](#)

EXCLUSION_REASON_TEXT_LONG

Exclusion Reason Text Long

a 255-character numeric alphanumeric column that provides the long text description for the reason an age range is excluded from the DRCM.

Example—EXCLUSION_REASON_TEXT_LONG and associated columns

EXCLUSION_REASON_CD	EXCLUSION_REASON_TEXT_SHORT	EXCLUSION_REASON_TEXT_LONG
867	Cough and cold products not efficacious for children under 6 years of age.	According to the American Academy of Pediatrics, combination cough and cold products are not efficacious in children under 6 years of age.

Related Tables

[DRCM Exclusion Reason Table](#)

EXCLUSION_REASON_TEXT_SHORT

Exclusion Reason Text Short

a 750-character numeric alphanumeric column that provides the short text description for the reason an age range is excluded from the DRCM.

Example—EXCLUSION_REASON_TEXT_SHORT and associated columns

EXCLUSION_REASON_CD	EXCLUSION_REASON_TEXT_SHO RT	EXCLUSION_REASON_TEXT_LONG
867	Cough and cold products not efficacious for children under 6 years of age.	According to the American Academy of Pediatrics, combination cough and cold products are not efficacious in children under 6 years of age.

Related Tables

[DRCM Exclusion Reason Table](#)

EXCLUSION_STATUS_CD

Exclusion Status Code

an eight-character numeric alphanumeric column that indicates whether an Exclusion Reasons is active or inactive.

Valid Values Table

EXCLUSION_STATUS_CD	EXCLUSION_STATUS_CD_DESC
0	Active
3	Inactive

Related Tables

[DRCM Exclusion Reason Table](#)

[DRCM Exclusion Status Description Table](#)

EXCLUSION_STATUS_CD_DESC

Exclusion Status Code Description

an eight-character numeric alphanumeric column that indicates whether an Exclusion Reason Code ([EXCLUSION_REASON_CD](#)) is active or inactive.

Valid Values Table

EXCLUSION_STATUS_CD	EXCLUSION_STATUS_CD_DESC
0	Active
3	Inactive

Related Tables

[DRCM Exclusion Status Description Table](#)

EXT_IDENTIFIER

External Identifier

a 100-character alphanumeric column that provides the external identifier for an FDB product.

 An External Identifier may be associated to one or many FDB Product ID(s).

Example—EXT_IDENTIFIER and associated columns

FDB_PRODUCT_ID	PRODUCT_BRAND_NAME	PRODUCT_LABEL_NAME	EXT_IDENTIFIER	EXT_IDENTIFIER_TYPE_ID	EXT_IDENTIFIER_DESC
522903	Salinex	Salinex 0.9 % nasal spray	80024381	1	NPN
530971	Salinex	Salinex 0.9 % nasal mist	80024381	1	NPN
530972	Salinex Children	Salinex Child 0.9% nasal spray	80024381	1	NPN

Related Tables

[Product Master Link Table](#)

EXT_IDENTIFIER_END_DT

External Identifier End Date

an eight-character numeric column that provides the date on which an External Identifier Identifier (**EXT_IDENTIFIER**) was removed.

Related Tables

[Product Master Link Table](#)

EXT_IDENTIFIER_START_DT

External Identifier Start Date

an eight-character numeric column that provides the date on which an External Identifier Identifier (**EXT_IDENTIFIER**) was added.

Example—EXT_IDENTIFIER_START_DT and associated columns

FDB_PRODUCT_ID	EXT_IDENTIFIER	EXT_IDENTIFIER_START_DT	EXT_IDENTIFIER_END_DT
499663	02237309	20150319	
499103	00266086	20150319	
500343	00268607	20150319	
500363	01970240	20150319	

Related Tables

[Product Master Link Table](#)

EXT_IDENTIFIER_TYPE_DESC

External Identifier Type Description

a 60-character alphanumeric column that provides the text description for an External Identifier Type ID (**EXT_IDENTIFIER**).

Valid Values Table

EXT_IDENTIFIER_TYPE_ID	EXT_IDENTIFIER_TYPE_DESC
1	NPN
2	GTIN
3	IDC
4	DIN

Related Tables

[External Identifier Type Table](#)

EXT_IDENTIFIER_TYPE_ID

External Identifier Type ID

an eight-character numeric column that defines an External Identifier ([EXT_IDENTIFIER](#)).

Valid Values Table

EXT_IDENTIFIER_TYPE_ID	EXT_IDENTIFIER_TYPE_DESC
1	NPN
2	GTIN
3	IDC
4	DIN

Related Tables

[External Identifier Type Table](#)

[Product Master Link Table](#)

F

FD_SL

FDB_PRODUCT_ID

FDBDX

FDCCDE_SN

FDCDE

FDCDE_SN

FDCTXT

FDMSG1

FDMSG1_T

FDMSG2

FDMSG2_T

FDTXT

FML_CLIN_CODE

FML_CLIN_CODE_DESC

FML_NAV_CODE

FML_NAV_CODE_DESC

FMLDXREPDT

FMLPRVDXID

FMLREPDXID

FD_SL

Drug-Food Severity Level

a one-character alphanumeric column that indicates the severity of the drug-food interaction.

Valid Values Table

FD_SL	Description
1	Most significant. Documented; (more clinical data may be needed). Action to reduce risk of adverse interaction usually required.
2	More significant. Documented; (more clinical data may be needed). Assess risk to patient and take action as needed.
3	Significant. Documented; (more clinical data may be needed). Conservative measures are recommended until more is known.
4	Less significant. Documented; (more clinical data may be needed). Recognize interaction potential; monitor patient
5	Minor significance. Documented; (more clinical data may be needed). Usually not a problem.

Related Tables

[Drug-Food Interaction Master Table](#)

[Drug-Food Interaction Master Table--French](#)

FDB_PRODUCT_ID

FDB Product Identifier

an eight-character numeric column that identifies a FDB product.

Related Tables

[FDB Product ID to Generic MEDID Move History Reason Table](#)

[FDB Product ID to Generic MEDID Move History Reason Table](#)

[MED Product/MEDID Move History Reason Table](#)

[MED Product to Medication ID Cross-Reference Table](#)

[MED Product to Generic Medication ID Cross-Reference Table](#)

[MED Product to Generic MEDID Relation History Table](#)

[MED Product to MEDID Relation History Table](#)

[MED Product/MEDID Move History Reason Table](#)

[Product Master Table](#)

[Product Master Attribute Table](#)

[Product Master Link Table](#)

[Routed Generic Product ID Link Table](#)

FDBDX

First Databank Disease Code

a nine-character alphanumeric column that identifies specific disease states or side effects.

The FDBDX has a one-to-one relationship to the FML Disease Identifier ([DXID](#)).

FDBDX	DXID
01.001182	00000002
01.002900	00000011
01.003001	00004915

Related Tables

[DDCM Master Table](#)

[DRCM Age Exclusion Table](#)

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

[DRCM Renal Master Table](#)

[FML Disease Identifier \(DxID\) Table](#)

[INDM Master Table](#)

[NEOM Master Table](#)

[POEM GCN_SEQNO POEM Source Table](#)

[SIDE Master Table](#)

FDCCDE_SN

Drug-Food Interaction Monograph Text Sequence Number (Consumer)

a three-character numeric column used to maintain the proper order of the text within a consumer drug-food interaction monograph.

Example—FDCCDE_SN and associated columns for Beta-blockers/food interaction

FDCDE	FDCCDE_SN	TXTDEC	FDCTXT
002	001	Z	This information is generalized and not intended as specific medical advice.
002	002	Z	Consult your healthcare professional before taking or discontinuing any
002	003	Z	drug, changing your diet or commencing any course of treatment.
002	004	B	
002	005	T	Monograph Title
002	006	T	Beta-blockers/food interaction
002	007	B	
002	008	L	Medical Warning
002	009	L	Very important. A change in your diet, medicine, or dosage may be
002	010	L	necessary. Promptly consult your doctor or pharmacist
002	011	B	
002	012	A	How the Interaction Occurs
002	013	A	When food is taken with this beta-blocker medicine, the amount of
002	014	A	medicine in your bloodstream may be higher than if it is taken on an empty
002	015	A	stomach. It is not clear why this is true. It may be due to an increase in

002	016	A	the amount of medicine you absorb into your bloodstream or a decrease in
002	017	A	the speed at which your body processes (metabolizes) it.
002	018	B	
002	019	E	What Might Happen
002	020	E	Your blood levels of this medicine may increase.
002	021	B	
002	022	M	What You Should Do About This Interaction
002	023	M	Always take this medicine with meals or always take it on an empty
002	024	M	stomach (one hour before or two hours after food). This will help you to
002	025	M	avoid unwanted changes in the level of this medicine in your blood. Contact
002	026	M	your healthcare professional (e.g., doctor or pharmacist) for more
002	027	M	information.
002	028	M	Your healthcare professionals may be aware of this interaction and may be
002	029	M	monitoring you for it. Do not start, stop, or change your medicine or diet
002	030	M	before checking with them first.
002	031	B	
002	032	M	References
002	033	R	1. Clin Pharmacol Ther 1981;30:31-4

002	034	R	2. Clin Pharmacol Ther 1981;30:790-5.
002	035	R	3. Brit J Clin Pharmacol 1982;13:575-6.
002	036	R	4. Clin Pharmacol Ther 1977;22:108-112.
002	037	R	5. Brit J Clin Pharmacol 1982;14:73-8.
002	038	R	6. Brit J Clin Pharmacol 1984;17:45S.
002	039	R	7. Clin Pharmacol Ther 1986;40:40S.
002	040	R	8. Clin Pharmacol Ther 1970;11:112.
002	041	B	

Related Tables[Consumer Food Interaction Monograph Text Table](#)

FDCDE

Drug-Food Interaction Food Code

a three-character numeric column used to identify and support the creation of professional and consumer advisory messages associated with the use of certain drugs and foods/food components in combination.

The FDCDE is used in conjunction with the master table and monograph files, which exist in separate files. These codes have application in most pharmacy/healthcare systems. The use of this data and related files in a pharmacy system should satisfy The Joint Commission (TJC) [United States] requirement for food-drug patient counseling.

Drug-Food Interaction Drug Name (**DNAME**) represents the drug or drug class involved in the interaction.

Valid Values Table

FDCDE	DNAME
002	BETA-BLOCKERS
005	PHENYTOIN
006	ERYTHROMYCIN
007	HYDRALAZINE
009	ISONIAZID
010	LEVODOPA
012	MAOI'S
015	ZINC
019	GRISEOFULVIN
028	THEOPHYLLINE
029	PROPANTHELINE
032	PENICILLINS
033	NITROFURANTOIN
034	METHOXSALEN
038	COLESTIPOL,CHOLESTY.
042	TETRACYCLINES
043	AZITHROMYCIN
044	DIDANOSINE
045	FELODIPINE
046	ITRACONAZOLE

047	COUMARIN ANTIGOAGS
048	ATOVAQUONE
049	QUINOLONES
050	SELECT CA CHNL BLKRS
051	CYCLOSPORINE
052	KETOCONAZOLE
053	MOCLOBEMIDE
054	SELECT NON-SED ANTIHS
055	SLT BENZODIAZEPINE
056	HMG COA AGENTS
057	CARBAMAZEPINE
058	CISAPRIDE
059	PIMOZIDE
060	AMIODARONE
061	CLOMIPRAMINE
062	SAQUINAVIR
063	TACROLIMUS;SIROLIMUS
064	CILOSTAZOL
065	BEXAROTENE
066	ESTROGENS
067	SERTRALINE

Related Tables

[Consumer Food Interaction Monograph Text Table](#)

[DFIM Routed Medication Table](#)

[Drug-Food Interaction Master Table](#)

[Drug-Food Interaction Master Table--French](#)

[Drug-Food Interaction Monograph Text Table](#)

[GCN_SEQNO/Drug-Food Code Relation Table](#)

FDCDE_SN

Drug-Food Interaction Monograph Text Sequence Number

a three-character numeric column used to maintain the proper order of the text within a professional drug-food interaction monograph.

Example—FDCDE_SN and associated columns for Beta-blockers/food interaction

FDCDE	FDCDE_SN	TXTCDE:	FDTXT
002	001	T	MONOGRAPH TITLE: Beta-blockers/food interaction
002	002	B	
002	003	L	SIGNIFICANCE LEVEL: 2-More significant. Documented; (more clinical data may
002	004	L	be needed). Assess risk to patient and take action as needed.
002	005	B	
002	006	A	MECHANISM OF ACTION: Food has been shown to increase the peak propranolol
002	007	A	concentration and AUC after oral administration.(1) After intravenous
002	008	A	propranolol, systemic clearance and AUC was not altered by food. The
002	009	A	magnitude of the interaction is patient dependent. In one study the mean
002	010	A	increase in availability was 53% and increase in peak serum concentration
002	011	A	was 70%.(2) This interaction has been demonstrated with both protein-lipid
002	012	A	meals and high carbohydrate meals.(1) Other data suggest that a minimum of

002	013	A	7 gm of protein per meal is required for the interaction and that the
002	014	A	magnitude of the interaction correlates with the amount of protein
002	015	A	ingested above this threshold.(2) It is theorized that food produces a
002	016	A	transient increase in liver blood flow (which is seen with protein but
002	017	A	not carbohydrate meals). Food induced changes in serum free fatty acids
002	018	A	does not appear to be involved.(3) Food has been reported to increase the
002	019	A	systemic bioavailability of other beta blockers including metoprolol(4)
002	020	A	and labetalol.(5)
002	021	B	
002	022	E	CLINICAL EFFECT: The bioavailability may be increased by concurrent
002	023	E	administration with food.
002	024	B	
002	025	M	PATIENT MANAGEMENT: There is no real advantage or disadvantage to this
002	026	M	interaction. The consensus is to suggest to patients that the drug
002	027	M	should be taken consistently with meals or on an empty stomach rather
002	028	M	than random ingestion in order to avoid wide fluctuations in serum
002	029	M	drug concentrations.

002	030	B	
002	031	D	DISCUSSION: This drug-food interaction is well documented.
002	032	B	
002	033	R	REFERENCES:
002	034	R	1. Clin Pharmacol Ther 1981;30:31-4.
002	035	B	
002	036	R	2. Clin Pharmacol Ther 1981;30:790-5.
002	037	B	
002	038	R	3. Brit J Clin Pharmacol 1982;13:575-6.
002	039	B	
002	040	R	4. Clin Pharmacol Ther 1977;22:108-112.
002	041	B	
002	042	R	5. Brit J Clin Pharmacol 1982;14:73-8.
002	043	B	
002	044	R	6. Brit J Clin Pharmacol 1984;17:45S.
002	045	B	
002	046	R	7. Clin Pharmacol Ther 1986;40:40S.
002	047	B	
002	048	R	8. Clin Pharmacol Ther 1970;11:112.
002	049	B	

Related Tables

[Drug-Food Interaction Monograph Text Table](#)

FDCTXT

Drug-Food Interaction Data (Consumer)

a 76-character alphanumeric column that contains the text for the drug-food interaction consumer monograph.

Example—FDCTXT and associated columns for Beta-blockers/food interaction

FDCDE	FDCCDE_SN	TXTDEC	FDCTXT
002	001	Z	This information is generalized and not intended as specific medical advice.
002	002	Z	Consult your healthcare professional before taking or discontinuing any
002	003	Z	drug, changing your diet or commencing any course of treatment.
002	004	B	
002	005	T	Monograph Title
002	006	T	Beta-blockers/food interaction
002	007	B	
002	008	L	Medical Warning
002	009	L	Very important. A change in your diet, medicine, or dosage may be
002	010	L	necessary. Promptly consult your doctor or pharmacist.
002	011	B	
002	012	A	How the Interaction Occurs
002	013	A	When food is taken with this beta-blocker medicine, the amount of
002	014	A	medicine in your bloodstream may be higher than if it is taken on an empty
002	015	A	stomach. It is not clear why this is true. It may be due to an increase in

002	016	A	the amount of medicine you absorb into your bloodstream or a decrease in
002	017	A	the speed at which your body processes (metabolizes) it.
002	018	B	
002	019	E	What Might Happen
002	020	E	Your blood levels of this medicine may increase.
002	021	B	
002	022	M	What You Should Do About This Interaction
002	023	M	Always take this medicine with meals or always take it on an empty
002	024	M	stomach (one hour before or two hours after food). This will help you to
002	025	M	avoid unwanted changes in the level of this medicine in your blood. Contact
002	026	M	your healthcare professional (e.g., doctor or pharmacist) for more
002	027	M	information.
002	028	M	Your healthcare professionals may be aware of this interaction and may be
002	029	M	monitoring you for it. Do not start, stop, or change your medicine or diet
002	030	M	before checking with them first.
002	031	B	
002	032	R	References
002	033	R	1. Clin Pharmacol Ther 1981;30:31-4.

002	034	R	2. Clin Pharmacol Ther 1981;30:790-5.
002	035	R	3. Brit J Clin Pharmacol 1982;13:575-6.
002	036	R	4. Clin Pharmacol Ther 1977;22:108-112.
002	037	R	5. Brit J Clin Pharmacol 1982;14:73-8.
002	038	R	6. Brit J Clin Pharmacol 1984;17:45S.
002	039	R	7. Clin Pharmacol Ther 1986;40:40S.
002	040	R	8. Clin Pharmacol Ther 1970;11:112.
002	041	B	

Related Tables[Consumer Food Interaction Monograph Text Table](#)

FDMSG1

Drug-Food Interaction - First Line Message

a 27-character alphanumeric column that serves as the first line of the Drug-Food Interaction - Result (**RESULT**), which provides brief instructions on how to avoid or counteract effects of the interaction.

Example—FDMSG1 and associated columns

FDCDE	DNAME	FD_SL	RESULT	FDMSG1	FDMSG2
002	BETA-BLOCKERS	2	FOOD MAY INCREASE SERUM DRUG CONCENTRATIONS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.
005	PHENYTOIN	1	ENTERAL FEEDS MAY DECREASE DRUG ABSORPTION.	STOP NG TUBE FEEDS 2 HRS	BEFORE AND AFTER DOSE
006	ERYTHROMYCIN	2	FOOD MAY DECREASE DRUG ABSORPTION.	TAKE NON-ENTERIC COATED	FORM ON EMPTY STOMACH.
007	HYDRALAZINE	2	FOOD MAY ALTER ANTIHYPERTENSIVE EFFECTS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.

Related Tables

[Drug-Food Interaction Master Table](#)

FDMSG1_T

Drug-Food Interaction - First Line Message (Translated)

a 45-character alphanumeric column that serves as the first line of the Drug-Food Interaction - Result (Translated) ([RESULT_T](#)), which provides brief instructions on how to avoid or counteract effects of the interaction.

Related Tables

[Drug-Food Interaction Master Table--French](#)

FDMSG2

Drug-Food Interaction - Second Line Message

a 27-character alphanumeric column that serves as the second line of the Drug-Food Interaction - Result (**RESULT**), which provides brief instructions on how to avoid or counteract effects of the interaction.

Although the first and second lines appear side-by-side in the master table, the second line is to be printed directly under the first line.

Example—FDMSG2 and associated columns

FDCDE	DNAME	FD_SL	RESULT	FDMSG1	FDMSG2
002	BETA-BLOCKERS	2	FOOD MAY INCREASE SERUM DRUG CONCENTRATIONS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.
005	PHENYTOIN	1	ENTERAL FEEDS MAY DECREASE DRUG ABSORPTION.	STOP NG TUBE FEEDS 2 HRS	BEFORE AND AFTER DOSE.
006	ERYTHROMYCIN	2	FOOD MAY DECREASE DRUG ABSORPTION.	TAKE NON-ENTERIC COATED	FORM ON EMPTY STOMACH.
007	HYDRALAZINE	2	FOOD MAY ALTER ANTIHYPERTENSIVE EFFECTS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.\

Related Tables

[Drug-Food Interaction Master Table](#)

FDMSG2_T

Drug-Food Interaction - Second Line Message (Translated)

a 45-character alphanumeric column that serves as the second line of the Drug-Food Interaction - Result (Translated) (**RESULT_T**), which provides brief instructions on how to avoid or counteract effects of the interaction.

Although the first and second lines appear side-by-side in the master table, the second line is to be printed directly under the first line.

Related Tables

[Drug-Food Interaction Master Table--French](#)

FDTXT

Drug-Food Interaction Data

a 76-character alphanumeric column that provides the text for the drug-food interaction professional monograph.

Example—FDTXT and associated columns for Beta-blockers food interaction

FDCDE	FDCDE_SN	TXTCDE	FDTXT
002	001	T	MONOGRAPH TITLE: Beta-blockers/food interaction
002	002	B	
002	003	L	SIGNIFICANCE LEVEL: 2-More significant. Documented; (more clinical data may
002	004	L	be needed). Assess risk to patient and take action as needed.
002	005	B	
002	006	A	MECHANISM OF ACTION: Food has been shown to increase the peak propranolol
002	007	A	concentration and AUC after oral administration.(1) After intravenous
002	008	A	propranolol, systemic clearance and AUC was not altered by food. The
002	009	A	magnitude of the interaction is patient dependent. In one study the mean
002	010	A	increase in availability was 53% and increase in peak serum concentration
002	011	A	was 70%.(2) This interaction has been demonstrated with both protein-lipid
002	012	A	meals and high carbohydrate meals.(1) Other data suggest that a minimum of

002	013	A	7 gm of protein per meal is required for the interaction and that the
002	014	A	magnitude of the interaction correlates with the amount of protein
002	015	A	ingested above this threshold.(2) It is theorized that food produces a
002	016	A	transient increase in liver blood flow (which is seen with protein but
002	017	A	not carbohydrate meals). Food induced changes in serum free fatty acids
002	018	A	does not appear to be involved.(3) Food has been reported to increase the
002	019	A	systemic bioavailability of other beta blockers including metoprolol(4)
002	020	A	and labetalol.(5)
002	021	B	
002	022	E	CLINICAL EFFECT: The bioavailability may be increased by concurrent
002	023	E	administration with food.
002	024	B	
002	025	M	PATIENT MANAGEMENT: There is no real advantage or disadvantage to this
002	026	M	interaction. The consensus is to suggest to patients that the drug
002	027	M	should be taken consistently with meals or on an empty stomach rather
002	028	M	than random ingestion in order to avoid wide fluctuations in serum
002	029	M	drug concentrations.

002	030	B	
002	031	D	DISCUSSION: This drug-food interaction is well documented.
002	032	B	
002	033	R	REFERENCES:
002	034	R	1. Clin Pharmacol Ther 1981;30:31-4.
002	035	B	
002	036	R	2. Clin Pharmacol Ther 1981;30:790-5.
002	037	B	
002	038	R	3. Brit J Clin Pharmacol 1982;13:575-6.
002	039	B	
002	040	R	4. Clin Pharmacol Ther 1977;22:108-112.
002	041	B	
002	042	R	5. Brit J Clin Pharmacol 1982;14:73-8.
002	043	B	
002	044	R	6. Brit J Clin Pharmacol 1984;17:45S
002	045	B	
002	046	R	7. Clin Pharmacol Ther 1986;40:40S.
002	047	B	
002	048	R	8. Clin Pharmacol Ther 1970;11:112.
002	049	B	

Related Tables

[Drug-Food Interaction Monograph Text Table](#)

FML_CLIN_CODE

FML Clinical Module Code

a two-character alphanumeric column that identifies the disease identifier-based clinical module that is being referenced.

Sample Valid Values Table

FML_CLIN_CODE	FML_CLIN_CODE_DESC
01	Indications Module
02	Side Effects Module
03	Drug-Disease Contraindications Module
04	Dosage Range Check Module
05	Prescriber Order Entry Module
06	Neonatal and Infant Dosage Range Check Module

Related Tables

[FML Clinical Module Description Table](#)

[FML Disease Identifier \(DxID\) Search Table](#)

[FML ICD Search Exclusion Table](#)

[FML ICD Search Table](#)

FML_CLIN_CODE_DESC

FML Clinical Module Code Description

a 50-character alphanumeric column that provides the text of the referenced Disease Decision Support or Dosing module.

Sample Valid Values Table

FML_CLIN_CODE	FML_CLIN_CODE_DESC
01	Indications Module
02	Side Effects Module
03	Drug-Disease Contraindications Module
04	Dosage Range Check Module
05	Prescriber Order Entry Module
06	Neonatal and Infant Dosage Range Check Module

Related Tables

[FML Clinical Module Description Table](#)

FML_NAV_CODE

FML Navigation Code

a two-character alphanumeric column that identifies whether a Search ICD or DxID concept is a narrower, broader, equal, or related concept, relative to the retrieved Related DxID. For example, Pneumococcal Pneumonia is a *narrower* concept than Pneumonia. Respiratory Disease is a *broader* concept than Pneumonia.

The text descriptions for the FML_NAV_CODE are provided by the FML Navigation Code Description ([FML_NAV_CODE_DESC](#)).

Valid Values Table

FML_NAV_CODE	FML_NAV_CODE_DESC
01	Equal
02	Broader
03	Narrower
04	Related

Related Tables

[FML Disease Identifier \(DxID\) Search Table](#)

[FML ICD Search Table](#)

[FML Navigation Description Table](#)

FML_NAV_CODE_DESC

FML Navigation Code Description

a 50-character alphanumeric column that provides the text description for the FML Navigation Code as “Narrower,” “Broader,” “Equal,” or “Related” relative to a given FML Related DxID ([RELATED_DXID](#))

Valid Values Table

FML_NAV_CODE	FML_NAV_CODE_DESC
01	Equal
02	Broader
03	Narrower
04	Related

Related Tables

[FML Navigation Description Table](#)

FMLDXREPDT

FML DxID Replacement Date

an eight-character numeric column that identifies the date on which an FML Disease Identifier (**DXID**) was replaced by another DxID. The date format is YYYYMMDD.

FMLPRVDXID	FMLREPDXID	FMLDXREPDT
00000754	00000753	20020927
00001100	00001102	20020521
00002162	00002161	20020927

Related Tables

[FML Disease Identifier \(DxID\) Replacement History Table](#)

FMLPRVDXID

FML Previous DxID

an eight-character numeric column that identifies an old Disease Identifier (**DXID**) that has been replaced by another DxID.

FMLPRVDXID	FMLREPDXID	FMLDXREPDT
00000754	00000753	20020927
00001100	00001102	20020521
00002162	00002161	20020927

Related Tables

[FML Disease Identifier \(DxID\) Replacement History Table](#)

FMLREPDXID

FML Replacement DxID

an eight-character numeric column that identifies the new Disease Identifier (**DXID**) that replaces the FML Previous DxID.

FMLPRVDXID	FMLREPDXID	FMLDXREPDT
00000754	00000753	20020927
00001100	00001102	20020521
00002162	00002161	20020927

Related Tables

[FML Disease Identifier \(DxID\) Replacement History Table](#)

G

GCDF

GCDF_DESC

GCDF_DESC_T

GCN

GCN_SEQNO

GCNSEQ_GI

GCRT

GCRT2

GCRT_DESC

GCRT_DESC_T

GENDER

GENERIC_MED_CONCEPT_ID

GENERIC_MEDID

GERI_BEERS_IND

GERI_CARD

GERI_CODE

GERI_DESC

GERI_END

GERI_HEDIS_IND

GERI_HEP

GERI_NARRATIVE

GERI_NEUR

GERI_PULM

GERI_RNL

GERI_SL

GERI_SL_DESC

GERI_STOPP_IND

GNN

GNN60

GNN60_T

GST_IND

GTC

GTC_DESC

GTC_DESC_T

GTIN

GCDF

Dosage Form Code (2-character)

a two-character alphanumeric column that represents a dosage form. The dosage form of a clinical formulation describes the physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug. A GCDF is associated to each Clinical Formulation ID ([GCN_SEQNO](#)) to identify that component of the clinical formulation.

Sample Valid Values Table

GCDF	DOSE	GCDF_DESC
0A	UNIDENT	UNIDENTIFIED
1B	BLADIRRIG	BLADDER IRRIGATION
1C	CACHET	CACHET
1D	CAPHARD	CAPSULE, HARD
1E	CAPSOFT	CAPSULE, SOFT
1F	COATEDTAB	COATED TABLET
1G	COLLODION	COLLODION
1H	COMPRLOZ	COMPRESSED LOZENGE
1I	CONCHDSOL	CONCENTRATE FOR HAEMODIALYSIS SOLUTION
1J	CONCRCTSOL	CONCENTRATE FOR RECTAL SOLUTION
1K	CONCSOLINF	CONCENTRATE FOR SOLUTION FOR INFUSION
1L	CONCSOLINJ	CONCENTRATE FOR SOLUTION FOR INJECTION
1M	CUTANEMUL	CUTANEOUS EMULSION
1N	CUTANFOAM	CUTANEOUS FOAM
1O	CUTANPASTE	CUTANEOUS PASTE
1P	CUTANPWD	CUTANEOUS POWDER
1Q	CUTANSOL	CUTANEOUS SOLUTION
1R	CUTANSPPWD	CUTANEOUS SPRAY, POWDER
1S	CUTANSPSOL	CUTANEOUS SPRAY, SOLUTION
1T	CUTANSPSUS	CUTANEOUS SPRAY, SUSPENSION

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[Dosage Form Description Table](#)

[Dosage Form Description Table--French](#)

GCDF_DESC

Dosage Form Code Description

a 40-character alphanumeric column that provides an extended text description for a Dosage Form Code (**GCDF**). The dosage form of a clinical formulation describes the physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug.

Sample Valid Values Table

GCDF	DOSE	GCDF_DESC
1B	BLADIRRIG	BLADDER IRRIGATION
1C	CACHET	CACHET
1D	CAPHARD	CAPSULE, HARD
1E	CAPSOFT	CAPSULE, SOFT
1F	COATEDTAB	COATED TABLET
1G	COLLODION	COLLODION
1H	COMPRLOZ	COMPRESSED LOZENGE
1I	CONCHDSOL	CONCENTRATE FOR HAEMODIALYSIS SOLUTION
1J	CONCRCTSOL	CONCENTRATE FOR RECTAL SOLUTION
1K	CONCSOLINF	CONCENTRATE FOR SOLUTION FOR INFUSION
1L	CONCSOLINJ	CONCENTRATE FOR SOLUTION FOR INJECTION
1M	CUTANEMUL	CUTANEOUS EMULSION
1N	CUTANFOAM	CUTANEOUS FOAM
1O	CUTANPASTE	CUTANEOUS PASTE
1P	CUTANPWD	CUTANEOUS POWDER
1Q	CUTANSOL	CUTANEOUS SOLUTION
1R	CUTANSPPWD	CUTANEOUS SPRAY, POWDER
1S	CUTANSPSOL	CUTANEOUS SPRAY, SOLUTION
1T	CUTANSPSUS	CUTANEOUS SPRAY, SUSPENSION
0A	UNIDENT	UNIDENTIFIED

Related Tables

Dosage Form Description Table

GCDF_DESC_T

Dosage Form Code Description (Translated)

a 60-character alphanumeric column that provides an extended text description for a Dosage Form Code (**GCDF**). The dosage form of a clinical formulation describes the physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug.

Related Tables

[Dosage Form Description Table--French](#)

GCN

Formulation ID

a five-character numeric column that represents the clinical formulation; it is specific to active ingredient list, route of administration, dosage form, and drug strength.

The Formulation ID (GCN) is the same across manufacturers and/or package sizes. The number by itself has no significance, but is useful for online computer applications, such as grouping candidates for substitution. Except as otherwise noted, the Formulation ID (GCN) can be used to group pharmaceutically equivalent products together.

- i Customers are encouraged to use the Clinical Formulation ID (GCN_SEQNO) instead of the Formulation ID (GCN) because of its greater specificity and its uniqueness to ingredient(s), dosage form, route, strength, and medical supplies. Additionally, as the number of clinical formulations grow, the GCN has the potential to reach a maximum number of 99,999 records, whereas the Clinical Formulation ID (GCN_SEQNO) will allow expanded growth for a longer period of time. However, FDB does not expect a shortage of GCN numbers for new formulations for the foreseeable future.

An important difference between GCN and GCN_SEQNO is that in GCN, all medical supplies that **do not contain clinically significant ingredients** are given the same number: 94200. Medical supplies that contain clinically significant ingredients are given GCN values other than of 94200.

There is a cross-walk file between the GCN and GCN_SEQNO to enable migration from GCN and to facilitate business between customers who have either GCN- or GCN_SEQNO-based structures. The GCN_SEQNO/GCN Relation Table cannot be used to cross-walk medical supplies except in the GCN_SEQNO to GCN direction.

The following table shows GCN data for specified products, including for medical supplies.

Example—GCN and associated columns

GCN	GCN_SEQNO	Description combined from GCN_SEQNO components
39053	008879	penicillin V potassium 250 mg oral tablet
39683	008998	amoxicillin 250 mg/5 mL oral susp recon
10200	011673	ranitidine HCl 150 mg oral tablet
94200	061017	syringe with cannula,disp.12 mL disp syringe
94200	067193	syringe,needle,insulin,sf 0.5 mL 29 gauge x 1/2" disp syringe

94200	061252	blood-glucose meter & wrist BP monitor kit
33984	070461	levonorgestrel 14 mcg/24 hour (3 years) Intrauterine IUD

Related Tables[GCN_SEQNO/GCN Relation Table](#)

GCN_SEQNO

Clinical Formulation ID

a six-character numeric column that represents a drug formulation identifier that groups together drug products by the following criteria and is stored in the following columns:

- **Ingredient List Identifier (HICL_SEQNO)**—(formerly called the Hierarchical Ingredient Code List Sequence Number) represents the list or set of ingredients in a drug formulation. The HICL_SEQNO includes active ingredients.
- **Route of Administration (GCRT)**—The Route of Administration Code represents a common or representative site or method by which the drug is administered, such as oral, injection, or topical.
- **Dosage Form (GCDF)**—The Dosage Form Code represents a dosage form of the clinical formulation, such as tablet or capsule.
- **Strength of Drug (STR)**—The Drug Strength Description describes the drug potency in metric units.

A unique Clinical Formulation ID (GCN_SEQNO) is assigned to each different combination of ingredient(s), strength, dosage form, and route of administration for a drug formulation. The Clinical Formulation ID (GCN_SEQNO) aggregates drug products that share like ingredient sets, route of administration, dosage form, and strength of drug but are marketed by multiple manufacturers. For example, the drug formulation of *acetaminophen with codeine 300 mg-30 mg Tablet Oral* has **Clinical Formulation ID (GCN_SEQNO) 4165**; however, it may be manufactured, packaged, and sold in literally hundreds of variations ranging from bottles of 500 to blister packs. The following table illustrates that unique clinical formulations are assigned to every variation of a drug formulation, even if the formulations differ only in one area:

Example—GCN_SEQNO associated columns

GCN_SEQNO	HICL_SEQNO	GNN	GCRT	RT	GCDF	GCDF_DESC	STR60
046213	001655	FLUOXETIN E	1	ORAL	CA	CAPSULE	10 mg
046214	001655	FLUOXETIN E	1	ORAL	CA	CAPSULE	20 mg
004165	001717	ACETAMINO PHEN WITH CODEINE	1	ORAL	TA	TABLET	300 mg-30 mg
000014	000004	DIGOXIN	A	INJECTION	HH	AMPUL (ML)	100 mcg/mL
000018	000004	DIGOXIN	1	ORAL	TA	TABLET	125 mcg

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[Clinical Formulation Ingredient Strength Component Table](#)

DDCM™ GCN_SEQNO/Drug-Disease Code Relation Table

DLIM™ GCN_SEQNO to Drug Group Table

DPT™ GCN_SEQNO Table

DRCM Age Exclusion Table

DRCM Exclusion Table

DRCM Master Table

DRCM Neonatal and Adult Master Table

DRCM Renal Master Table

Drug-Drug Interaction Clinical Formulation Exception Table

Drug-Drug Interaction Discontinued Clinical Formulation Screening Table

GCN_SEQNO/ATC Relation Table

GCN_SEQNO/Counseling Message Module Counseling Message Relation Table

GCN_SEQNO/Counseling Message Module French Language Counseling Message Relation Table

GCN_SEQNO/Drug-Drug Interaction Code Relation Table

GCN_SEQNO/Drug-Food Code Relation Table

GCN_SEQNO/GCN Relation Table

GCN_SEQNO/Patient Education French Monograph Code Relation Table

GCN_SEQNO/Patient Education Monograph Code Relation Table

GCN_SEQNO/Prioritized Label Warning Code Relation Table

GERI GCN_SEQNO Link Table

IDDF Canada Drug Product Table

IDDF Canada Drug Product Table--French

INDM GCN_SEQNO/Indications Code Relation Table

LACT GCN_SEQNO Link Table

MED GCN_SEQNO to Medication ID Cross-Reference Table

MED Medication Table

MED Medication Table--French

MMAD Master Table

MMAR Master Table

MMGD Master Table

MMGR Master Table

NEOM Master Table

PDM Master Table

PEDI GCN_SEQNO Link Table

POEM GCN_SEQNO POEM Source Table

POEM GCN_SEQNO Standard Order Table

PREG GCN_SEQNO Link Table

Prioritized AHFS DI Monograph GCN_SEQNO Table

Product Master Table

Routed Generic Clinical Formulation Identifier Link Table

SIDE GCN_SEQNO/Drug Side Effect Code Relation Table

GCNSEQ_GI

GCN_SEQNO-Level Multi-Source/Single Source Indicator

a one-character alphanumeric column that differentiates single-source from multiple-source drugs.

 The GCNSEQ_GI column contains data applicable to only the United States.

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

GCRT

Route of Administration Code (1-character)

a one-character alphanumeric column that provides the normal site or method by which a drug is administered, such as oral, injection, or topical. A GCRT is associated to each Clinical Formulation ID ([GCN_SEQNO](#)) to identify that component of the formulation.

Example—GCRT and associated columns

GCRT	RT	GCRT_DESC
1	ORAL	ORAL
2	INJECTION	INJECTION(UNSPECIFIED PARENTERAL ROUTES)
3	RECTAL	RECTAL
4	MUCOUS MEM	MUCOUS MEMBRANE (TOPICAL MOUTH & THROAT)
5	TOPICAL	TOPICAL (HAIR, NAILS AND SKIN)

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[Route of Administration Description Table](#)

[Route of Administration Description Table--French](#)

GCRT2

Route of Administration Code (2-character)

a two-character alphanumeric column that indicates the normal site or method by which a drug is administered in the body, such as oral, injection, or topical.

- i** The two-byte route code is identical to the route abbreviations used in clinical practice for some, but not all, codes. For example, the two-byte route code for "oral" is "PO", yet, the two-byte route code for "rectal" is "RC". These are easily customizable within the user's applications.

Example—GCRT2 and associated columns

GCRT	GCRT2	RT	GCRT_DESC
L	TL	TRANSLING	TRANSLINGUAL
5	TP	TOPICAL	TOPICAL (HAIR, NAILS AND SKIN)
U	UR	URETHRAL	URETHRAL
V	VG	VAGINAL	VAGINAL

Related Tables

[DRCM Route Conversion Table](#)

[NEOM Route Conversion Table](#)

[Route of Administration Description Table](#)

[Route of Administration Description Table--French](#)

GCRT_DESC

Route Code Interpretation

a 40-character alphanumeric column that provides an extended text description for a Route of Administration Code (GCRT or GCRT2).

Example—GRCRT_DESC and associated columns

GCRT	GCRT2	RT	GCRT_DESC
5	TP	TOPICAL	TOPICAL (HAIR, NAILS AND SKIN)
T	TD	TRANSDERM.	TRANSDERMAL
L	TL	TRANSLING	TRANSLINGUAL
U	UR	URETHRAL	URETHRAL
V	VG	VAGINAL	VAGINAL

Related Tables

[Route of Administration Description Table](#)

GCRT_DESC_T

Route Code Interpretation (Translated)

a 60-character alphanumeric column that provides an extended text description for a Route of Administration Code (GCRT or GCRT2).

Related Tables

[Route of Administration Description Table--French](#)

GENDER

Gender-Specific Drug Indicator

a one-character alphanumeric column that identifies drugs that are used for a specific gender.

GENDER can be used to help determine appropriateness of therapy based upon the sex of the patient (or to infer the sex of a patient). An indicator value is attached to the Formulation ID (**GCN**) or the Clinical Formulation ID (**GCN_SEQNO**) which identifies whether it is used in males, females, or both. This indicator is routinely applied to prescription (Rx) drugs where gender delineation is appropriate. Clinical Formulations linked to a combination of prescription and non-prescription products will have the indicator applied as to reflect the Rx use. No effort is currently made to populate this indicator for non-Rx products, such as herbal products or dietary supplements.

Using oral contraceptives as an example, the indicator value for Ortho-Novum 7-7-7™ is **3** (used exclusively in females). Finasteride (Proscar™), which is used to treat the condition of benign prostatic hypertrophy, is assigned the value of **1** (used exclusively in males).

Drugs which can be used in both males and females, but are used predominately in females, are assigned the value of **4** (most likely used in females). For example, conjugated estrogens are most commonly used in females for hormonal replacement, but can also be used to treat prostate cancer in males.

As another example, Leuprolide acetate repository 7.5mg (Lupron Depot™) can be used to treat precocious puberty in children; however, it is most likely used in males for the treatment of prostatic cancer and is therefore assigned an indicator value of **2** (most likely used in males).

Diazepam, a drug that is used to treat anxiety, can be used equally as often in males and females and is assigned the value of **0**.

Valid Values Table

GENDER	Description
0	Neutral; not gender specific (default)
1	Used exclusively in males
2	Most likely used in males
3	Used exclusively in females
4	Most likely used in females

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

GENERIC_MED_CONCEPT_ID

Generically Named MED Concept ID

an eight-character numeric column that represents the generically named companion of the product named MED Concept.

This column represents the generically named companion for each level of the MED Concept ID (MED_CONCEPT_ID). For example, the Medication Name ([MED_NAME](#)) Prozac with a Medication Name ID ([MED_NAME_ID](#)) value of 00091100 has a generically named MED_NAME called fluoxetine. Fluoxetine has a MED_NAME_ID value of 00086216. The following example table illustrates the link between these two MED_NAME_IDS as it exists in the [MED MED Concept/Generic MED Relation Table](#) (RMEDMGL0_MED_GENERIC_MED_LINK):

Example—The Generically Named MED_NAME_ID for Prozac

MED_CONCEPT_ID	MED_CONCEPT_ID_TYP	GENERIC_MED_CONCEPT_ID
00091100	2	00086216

The MED Concept ID Type ([MED_CONCEPT_ID_TYP](#)) specifies the MED_CONCEPT_ID's type. For example, the above scenario has a value of 2, therefore the MED_CONCEPT_ID represents a Routed Dosage Form ([ROUTED_DOSAGE_FORM_MED_ID](#)) and the corresponding GENERIC_MED_CONCEPT_ID contains the generically named companion of the ROUTED_DOSAGE_FORM_ID.

Related Tables

[MED MED Concept/Generic MED Relation Table](#)

GENERIC_MEDID

MED Generic Medication Identifier

an eight-character numeric column that identifies the distinct pharmaceutically named MED Medication ID (**MEDID**) associated with a given brand medication.

Brand medications (represented by the MEDID) may not have an associated GENERIC_MEDID when one of the following conditions exists:

1. This MEDID is the GENERIC_MEDID.
2. The MEDID is linked (or associated) to International Drug Codes (**IDC**) spanning more than one Clinical Formulation ID (**GCN_SEQNO**), and those Clinical Formulation IDs (**GCN_SEQNO**) span more than one Generic MEDID.
3. All related products (IDCs) are obsolete.

Example—GENERIC_MEDID and associated columns

MEDID	MED_MEDID_DESC	Generic_Medid
00515057	Tylenol No.1 8 mg-300 mg-15 mg Tab	00502559
00515069	Ulcidine 20 mg Tab	00503439
00514943	Triaminic 7.5 mg/0.8 mL Oral Drops	00505836
00554276	duloxetine 30 mg Cap, Delayed Release	00000000
00510994	Duricef 500 mg Cap	00502151
00501699	benzoyl peroxide 8 % Topical Gel	00000000
00508827	Abreva 10 % Topical Cream	00503068

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

GERI_BEERS_IND

On BEERS List

a one-character alphanumeric value that indicates whether the drug is on the BEERS List, denoting higher risk drugs in the elderly.

Valid Values Table

GERI_BEERS_IND	Description
Y	On BEERS List
N	Not on BEERS List

Related Tables

[Geriatric Precautions Master Table](#)

GERI_CARD

Geriatric Precaution Organ System Function - Cardiovascular

a one-character alphanumeric column that indicates whether using a drug in a geriatric patient puts the patient's cardiovascular organ system at increased risk.

Valid Values Table

GERI_CARD	Description
Y	Increased risk to cardiovascular organ system or increased adverse effects if cardiovascular organ system is impaired
N	No risk or adverse effect to cardiovascular organ system

Related Tables

[Geriatric Precautions Master Table](#)

GERI_CODE

Geriatric Precaution Code

a six-character numeric column that identifies drugs and drug classes that are contraindicated or require special consideration for use in geriatric patients.

Sample Valid Values Table

GERI_CODE	GERI_DESC
000001	DIGITALIS GLYCOSIDES, MIXTURE
000002	INAMRINONE
000003	QUINIDINE
000004	PROCAINAMIDE HYDROCHLORIDE
000005	DISOPYRAMIDE
000006	TOCAINIDE HYDROCHLORIDE
000008	FLECAINIDE ACETATE
000009	AMIODARONE
000010	ENCAINIDE HYDROCHLORIDE
000011	HYDRALAZINE HYDROCHLORIDE
000012	PRAZOSIN HYDROCHLORIDE
000013	DIAZOXIDE
000014	MINOXIDIL
000015	TERAZOSIN HYDROCHLORIDE
000016	GUANETHIDINE SULFATE
000017	GUANADREL SULFATE
000018	CLONIDINE HYDROCHLORIDE
000019	GUANABENZ ACETATE
000020	METHYLDOPA
000021	GUANFACINE HYDROCHLORIDE

Related Tables

[GERI GCN_SEQNO Link Table](#)

[GERI ROUTED_MED_ID Link Table](#)

[Geriatric Precautions Master Table](#)

GERI_DESC

Geriatric Precaution Description

a 41-character alphanumeric column that provides a description of the drug or drug class which the precaution applies to.

Sample Valid Values Table

GERI_CODE	GERI_DESC
000001	DIGITALIS GLYCOSIDES, MIXTURE
000002	INAMRINONE
000003	QUINIDINE
000004	PROCAINAMIDE HYDROCHLORIDE
000005	DISOPYRAMIDE
000006	TOCAINIDE HYDROCHLORIDE
000008	FLECAINIDE ACETATE
000009	AMIODARONE
000010	ENCAINIDE HYDROCHLORIDE
000011	HYDRALAZINE HYDROCHLORIDE
000012	PRAZOSIN HYDROCHLORIDE
000013	DIAZOXIDE
000014	MINOXIDIL
000015	TERAZOSIN HYDROCHLORIDE
000016	GUANETHIDINE SULFATE
000017	GUANADREL SULFATE
000018	CLONIDINE HYDROCHLORIDE
000019	GUANABENZ ACETATE
000020	METHYLDOPA
000021	GUANFACINE HYDROCHLORIDE

Related Tables

[Geriatric Precautions Master Table](#)

GERI_END

Geriatric Precaution Organ System Function - Endocrine

a one-character alphanumeric column that indicates whether using a drug in a geriatric patient puts the patient's endocrine organ system at increased risk.

Valid Values Table

GERI_END	Description
Y	Increased risk to endocrine organ system or increased adverse effects if endocrine organ system is impaired
N	No risk or adverse effect to endocrine organ system

Related Tables

[Geriatric Precautions Master Table](#)

GERI_HEDIS_IND

On HEDIS List

a one-character alphanumeric value that indicates whether the drug is on the HEDIS (Health Effectiveness and Information Set) drug list, identifying high-risk medications in the elderly and developed and maintained by the National Committee for Quality Assurance (NCQA).

Valid Values Table

GERI_HEDIS_IND	Description
Y	On HEDIS List
N	Not on HEDIS List

Related Tables

[Geriatric Precautions Master Table](#)

GERI_HEP

Geriatric Precaution Organ System Function - Hepatic

a one-character alphanumeric column that indicates whether using a drug in a geriatric patient puts the patient's hepatic organ system at increased risk.

Valid Values Table

GERI_HEP	Description
Y	Increased risk to hepatic organ system or increased adverse effects if hepatic organ system is impaired
N	No risk or adverse effect to hepatic organ system

Related Tables

[Geriatric Precautions Master Table](#)

GERI_NARRATIVE

Geriatric Precaution Narrative

a 500-character alphanumeric column that describes the geriatric precaution.

Example—GERI_NARRATIVE and associated columns

GERI_CODE	GERI_DESC	GERI_NARRATIVE
000389	Pseudoephedrine	Cardiovascular-Elderly are more sensitive to tachycardia and hypertensive effects. May exacerbate symptomatic coronary insufficiency. Genitourinary-May cause urinary retention. Neuro/Psych-May worsen cognitive impairment in some elderly with dementia. Insomnia risk.
000845	Acetaminophen (oral,rectal)	Hepatic-Elderly are more susceptible to hepatotoxicity. Strict adherence to a maximum daily dose of 3000mg is advised.
000009	Amiodarone	Cardiovascular-Risk for Torsades de pointes. Follow QTc intervals. Endocrine-Monitor for hyperthyroidism. Pulmonary-Toxicity has been reported days to weeks after drug initiation. Preexisting pulmonary disease incurs a poorer prognosis if toxicity develops. Monitor for cough and progressive dyspnea. Hepatic-Elevated hepatic transaminases are common. Neuro/Psych-Monitor for peripheral neuropathy, coordination and gait deficits. Optic neuropathy and neuritis has been reported.

Related Tables

Geriatric Precautions Master Table

GERI_NEUR

Geriatric Precaution Organ System Function - Neurologic/Psychiatric

a one-character alphanumeric column that indicates whether using a drug in a geriatric patient puts the patient's neurologic/psychiatric organ system at increased risk.

Valid Values Table

GERI_NEUR	Description
Y	Increased risk to neurologic/psychiatric organ system or increased adverse effects if neurologic/psychiatric organ system is impaired.
N	No risk or adverse effect to neurologic/psychiatric organ system.

Related Tables

[Geriatric Precautions Master Table](#)

GERI_PULM

Geriatric Precaution Organ System Function - Pulmonary

a one-character alphanumeric column that indicates whether using a drug in a geriatric patient puts the patient's pulmonary organ system at increased risk.

Valid Values Table

GERI_PULM	Description
Y	Increased risk to pulmonary organ system or increased adverse effects if pulmonary organ system is impaired
N	No risk or adverse effect to pulmonary organ system

Related Tables

[Geriatric Precautions Master Table](#)

GERI_RNL

Geriatric Precaution Organ System Function - Renal

a one-character alphanumeric column that indicates whether using a drug in a geriatric patient puts the patient's renal organ system at increased risk.

Valid Values Table

GERI_RNL	Description
Y	Increased risk to renal organ system or increased adverse effects if renal organ system is impaired
N	No risk or adverse effect to renal organ system

Related Tables

[Geriatric Precautions Master Table](#)

GERI_SL

Geriatric Precaution Severity Level

a one-character alphanumeric column that indicates whether a drug or drug class is contraindicated or requires special consideration for use in geriatric patients.

Valid Values Table

GERI_SL	GERI_SL_DESC
1	Contraindication
2	Management or Monitoring Precaution

Related Tables

[DRCM Severity Level Description Table](#)

[Geriatric Precautions Master Table](#)

[GERI Severity Level Description Table](#)

GERI_SL_DESC

Geriatric Precaution Severity Level Description

a 255-character alphanumeric column that provides the text description for Geriatric Precaution Severity Level (**GERI_SL**).

Valid Values Table

GERI_SL	GERI_SL_DESC
1	Contraindication
2	Management or Monitoring Precaution

Related Tables

[GERI Severity Level Description Table](#)

GERI_STOPP_IND

On STOPP List

a one-character alphanumeric value that indicates whether the drug is on the STOPP List, a subset of the STOPP/START screening tool criteria used to help identify inappropriate/appropriate drug use in the elderly.

Valid Values Table

GERI_STOPP_IND	Description
Y	On STOPP List
N	Not on STOPP List

Related Tables

[Geriatric Precautions Master Table](#)

GNN

Generic Name - Short Version

a 30-character alphanumeric column that identifies the drug ingredient names. In general, the generic drug descriptions used are the ones adopted by the United States Adopted Names (USAN) council. For example, cinacalcet hydrochloride is an USAN description for this drug ingredient and is used in the GNN. For some international regions, such as Canada, whenever there is a preferred regional description for that region for a specific ingredient, the preferred drug name description will be used in place of USAN description. For example, albuterol sulfate is a USAN description used in the U.S., but the same ingredient is described as salbutamol sulfate in Canada. Regional ingredient list descriptions also exist for Australia and the Middle East.

HICL_SEQNO	GNN (U.S.)	GNN (Canada)
001820	ASPIRIN	ACETYLSALICYLIC ACID
002073	ALBUTEROL SULFATE	SALBUTAMOL SULFATE
034493	ALISKIREN HEMIFUMARATE	ALISKIREN FUMARATE
035852	NIFEDIPINE/ASPIRIN	NIFEDIPINE/ACETYLSALICYLIC ACID

The sequence of ingredient names in multi-ingredient products is determined by the following blend of legacy and new priorities:

- The order of ingredients used by FDB is guided by the order of ingredients and strengths presented in product labeling by the innovator on approved drug products in the Canadian drug market. FDB presents this order of ingredients as it is the most readily recognized for Canadian drug products.
- The order of ingredients used by FDB for OTC formulations varies depending on the type of formulation. For antihistamine-decongestant type cough and cold formulations for example FDB has a policy for the order based on the pharmacology of the ingredient. Older formulations, regardless of type may follow the legacy, "historic" market driven priority described below.
- Historic market driven priority—a legacy prioritization system based on historic market driven needs. For example, expectorants and related cough-cold ingredients were historically placed early in the ingredient list to facilitate recognition as cough/cold formulations relative to billing and payor methods of using a variety of basic classifications (i.e., HIC3/GC3, TC, GTC) to determine reimbursement.

This may result in an ingredient list description that is in a different sequence than the label name (such as SULFAMETHOXAZOLE/TRIMETHOPRIM [GNN] and TRIM-SULF D/S TABLET [LN]).

- The Ingredient List ID (**HICL_SEQNO**) is obtained from the [Clinical Formulation ID Table \(RGCNSEQ4_GCNSEQNO_MSTR\)](#) and is then used to obtain the GNN from the Ingredient List Identifier Description Table.

Sample Valid Values Table

HICL_SEQNO	GNN	GNN60
1820	ACETYLSALICYLIC ACID	ACETYLSALICYLIC ACID
2073	SALBUTAMOL SULFATE	SALBUTAMOL SULFATE
4652	PSEUDOEPHED/ACETAMIN/TRIPROLIDIN	PSEUDOEPHEDRINE HCL/ACETAMINOPHEN/TRIPROLIDINE
5449	MAG HYDROX/AL HYDROX/OXETHAZ	MAGNESIUM HYDROXIDE/ALUMINUM HYDROXIDE/OXETHAZAINE
12233	BETAINE	BETAINE
22000	BIMATOPROST	BIMATOPROST
25663	D-METHORPHAN/ACETAMIN/DOXYLAMN	DEXTROMETHORPHAN HBR/ACETAMINOPHEN/DOXYLAMINE
25998	CINACALCET HCL	CINACALCET HCL
33442	HEPARIN SODIUM,PORCINE/NS/PF	HEPARIN SODIUM,PORCINE/NORMAL SALINE/PF
33502	ANIDULAFUNGIN	ANIDULAFUNGIN
34493	ALISKIREN FUMARATE	ALISKIREN FUMARATE
34665	SITAGLIPTIN PHOS/METFORMIN HCL	SITAGLIPTIN PHOSPHATE/METFORMIN HCL
35852	NIFEDIPINE/ACETYLSALICYLIC AC	NIFEDIPINE/ACETYLSALICYLIC ACID

Related Tables

[Ingredient List Identifier \(formerly Hierarchical Ingredient Code List Sequence Number\) Description Table](#)

[Ingredient List Identifier Description Table--French](#)

GNN60

Generic Name - Long Version

a 60-character alphanumeric column that identifies the drug ingredient names. In general, the generic drug descriptions used are the ones adopted by United States Adopted Names (USAN) council. For example, cinacalcet hydrochloride is an USAN description for this drug ingredient and is used in the GNN. For some international regions, such as Canada, whenever there is a preferred regional description for a specific ingredient, the preferred drug name description for that region will be used in place of USAN description. Albuterol sulfate is an USAN description used in the U.S., but the same ingredient is described as salbutamol sulfate in Canada. Regional ingredient list descriptions also exist for Australia and the Middle East.

HICL_SEQNO	GNN60 (U.S.)	GNN60 (Canada)
1820	ASPIRIN	ACETYLSALICYLIC ACID
2073	ALBUTEROL SULFATE	SALBUTAMOL SULFATE
34493	ALISKIREN HEMIFUMARATE	ALISKIREN FUMARATE
35852	NIFEDIPINE/ASPIRIN	NIFEDIPINE/ACETYLSALICYLIC ACID

The sequence of ingredient names in multi-ingredient products is determined by the following blend of legacy and new priorities:

- The order of ingredients used by FDB is guided by the order of ingredients and strengths presented in product labeling by the innovator on approved drug products in the Canadian drug market. FDB presents this order of ingredients as it is the most readily recognized for Canadian drug products.
- The order of ingredients used by FDB for OTC formulations varies depending on the type of formulation. For antihistamine-decongestant type cough and cold formulations for example FDB has a policy for the order based on the pharmacology of the ingredient. Older formulations, regardless of type may follow the legacy, "historic" market driven priority described below.
- Historic market driven priority—a legacy prioritization system based on historic market driven needs. For example, expectorants and related cough-cold ingredients were historically placed early in the ingredient list to facilitate recognition as cough/cold formulations relative to billing and payor methods of using a variety of basic classifications (i.e., HIC3/GC3, TC, GTC) to determine reimbursement.

This may result in an ingredient list description that is in a different sequence than the label name (such as SULFAMETHOXAZOLE/TRIMETHOPRIM [GNN] and TRIM-SULF D/S TABLET [LN]).

- i** The Ingredient List Identifier ([HICL_SEQNO](#)) is obtained from the [Clinical Formulation ID Table](#) ([RGCNSEQ4_GCNSEQNO_MSTR](#)) and is then used to obtain the GNN from the [Ingredient List Identifier Description Table](#) ([RHICLSQ1_HICLSEQNO_MSTR](#)).

Sample Valid Values Table

HICL_SEQNO	GNN	GNN60
1820	ACETYLSALICYLIC ACID	ACETYLSALICYLIC ACID
2073	SALBUTAMOL SULFATE	SALBUTAMOL SULFATE
4652	PSEUDOEPHED/ACETAMIN/TRIPROLID	PSEUDOEPHEDRINE HCL/ACETAMINOPHEN/TRIPROLIDINE
5449	MAG HYDROX/AL HYDROX/OXETHAZ	MAGNESIUM HYDROXIDE/ALUMINUM HYDROXIDE/OXETHAZAINE
12233	BETAINE	BETAINE
22000	BIMATOPROST	BIMATOPROST
25663	D-METHORPHAN/ACETAMIN/DOXYL AMN	DEXTROMETHORPHAN HBR/ACETAMINOPHEN/DOXYLAMINE
25998	CINACALCET HCL	CINACALCET HCL
33442	HEPARIN SODIUM,PORCINE/NS/PF	HEPARIN SODIUM,PORCINE/NORMAL SALINE/PF
33502	ANIDULAFUNGIN	ANIDULAFUNGIN
34493	ALISKIREN FUMARATE	ALISKIREN FUMARATE
34665	SITAGLIPTIN PHOS/METFORMIN HCL	SITAGLIPTIN PHOSPHATE/METFORMIN HCL
35852	NIFEDIPINE/ACETYLSALICYLIC AC	NIFEDIPINE/ACETYLSALICYLIC ACID

Related Tables

Ingredient List Identifier (formerly Hierarchical Ingredient Code List Sequence Number) Description Table

GNN60_T

Generic Name - Long Version (Translated)

a 90-character alphanumeric column that identifies the drug ingredient names. In general, the generic drug descriptions used are the ones adopted by United States Adopted Names (USAN) council. For example, cinacalcet hydrochloride is an USAN description for this drug ingredient and is used in the GNN. For some international regions, such as Canada, whenever there is a preferred regional description for a specific ingredient, the preferred drug name description for that region will be used in place of USAN description. Albuterol sulfate is an USAN description used in the U.S., but the same ingredient is described as salbutamol sulfate in Canada. Regional ingredient list descriptions also exist for Australia and the Middle East.

The sequence of ingredient names in multi-ingredient products is determined by the following blend of legacy and new priorities:

- The order of ingredients used by FDB is guided by the order of ingredients and strengths presented in product labeling by the innovator on approved drug products in the Canadian drug market. FDB presents this order of ingredients as it is the most readily recognized for Canadian drug products.
- The order of ingredients used by FDB for OTC formulations varies depending on the type of formulation. For antihistamine-decongestant type cough and cold formulations for example FDB has a policy for the order based on the pharmacology of the ingredient. Older formulations, regardless of type may follow the legacy, "historic" market driven priority described below.
- Historic market driven priority—a legacy prioritization system based on historic market driven needs. For example, expectorants and related cough-cold ingredients were historically placed early in the ingredient list to facilitate recognition as cough/cold formulations relative to billing and payor methods of using a variety of basic classifications (i.e., HIC3/GC3, TC, GTC) to determine reimbursement.

This may result in an ingredient list description that is in a different sequence than the label name (such as SULFAMETHOXAZOLE/TRIMETHOPRIM [GNN] and TRIM-SULF D/S TABLET [[LN](#)]).

-  The Ingredient List Identifier ([HICL_SEQNO](#)) is obtained from the Clinical Formulation ID Table ([FGCNSEQ4_GCNSEQNO_MSTR](#)) and is then used to obtain the GNN_T from the Ingredient List Identifier Description Table ([FHICLSQ1_HICLSEQNO_MSTR](#)).

Related Tables

[Ingredient List Identifier Description Table--French](#)

GST_IND

Goods and Services Tax Indicator

a one-character numeric column that indicates whether a product (GTIN) is subject to the Goods and Services Tax (GST) or the Harmonized Sales Tax (HST).

Valid Values Table

GST_IND	Description
0	Not subject to GST or HST tax
1	Subject to GST or HST tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

GTC

Therapeutic Class Code, Generic

a two-character numeric column that classifies drugs according to the most common intended use.

This classification provides the most general therapeutic groupings available from FDB. Users that need more definitive therapeutic classing should consider Standard Therapeutic Class, Specific Therapeutic Class, AHFS Therapeutic Class, or the Enhanced Therapeutic Classification System.

The GTC is obtained via the Clinical Formulation ID (GCN_SEQNO).

Valid Values Table

GTC	GTC_DESC
02	ANALGESICS
03	ANALGESIC AND ANTIHISTAMINE COMBINATION
05	ANESTHETICS
08	ANTI-OBESITY DRUGS
09	ANTIDOTES
11	ANTIARTHRITICS
14	ANTIASTHMATICS
17	ANTIHISTAMINES
18	ANTIHISTAMINE AND DECONGESTANT COMBINATION
20	ANTIINFECTIVES
23	ANTIINFECTIVES/MISCELLANEOUS
26	ANTINEOPLASTICS
29	ANTIPARKINSON DRUGS
32	AUTONOMIC DRUGS
35	BLOOD
38	CARDIAC DRUGS
41	CARDIOVASCULAR
44	CNS DRUGS
47	CONTRACEPTIVES
50	COUGH/COLD PREPARATIONS

53	DIAGNOSTIC
56	DIURETICS
59	ELECT/CALORIC/H2O
62	EENT PREPS
65	GASTROINTESTINAL
68	HORMONES
71	ANTIHYPERGLYCEMICS
72	IMMUNOSUPPRESANT
74	MISCELLANEOUS MEDICAL SUPPLIES, DEVICES, NON-DRUG
77	MUSCLE RELAXANTS
80	PSYCHOTHERAPEUTIC DRUGS
83	SEDATIVE/HYPNOTICS
86	SKIN PREPS
89	THYROID PREPS
92	BIOLOGICALS
94	PRE-NATAL VITAMINS
95	VITAMINS
97	SMOKING DETERRENTS
98	HERBALS
99	UNCLASSIFIED DRUG PRODUCTS

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[Generic Therapeutic Class Description Table](#)

[Generic Therapeutic Class Description Table--French](#)

GTC_DESC

Generic Therapeutic Class Description

a 50-character alphanumeric column that provides the text description for a Therapeutic Class Code, Generic (GTC).

Valid Values Table

GTC	GTC_DESC
02	ANALGESICS
03	ANALGESIC AND ANTIHISTAMINE COMBINATION
05	ANESTHETICS
08	ANTI-OBESITY DRUGS
09	ANTIDOTES
11	ANTIARTHRITICS
14	ANTIASTHMATICS
17	ANTIHISTAMINES
18	ANTIHISTAMINE AND DECONGESTANT COMBINATION
20	ANTIINFECTIVES
23	ANTIINFECTIVES/MISCELLANEOUS
26	ANTINEOPLASTICS
29	ANTIPARKINSON DRUGS
32	AUTONOMIC DRUGS
35	BLOOD
38	CARDIAC DRUGS
41	CARDIOVASCULAR
44	CNS DRUGS
47	CONTRACEPTIVES
50	COUGH/COLD PREPARATIONS
53	DIAGNOSTIC
56	DIURETICS
59	ELECT/CALORIC/H2O
62	EENT PREPS

65	GASTROINTESTINAL
68	HORMONES
71	HYPOGLYCEMICS
72	IMMUNOSUPPRESANT
74	MISCELLANEOUS MEDICAL SUPPLIES, DEVICES, NON-DRUG
77	MUSCLE RELAXANTS
80	PSYCHOTHERAPEUTIC DRUGS
83	SEDATIVE/HYPNOTICS
86	SKIN PREPS
89	THYROID PREPS
92	BIOLOGICALS
94	PRE-NATAL VITAMINS
95	VITAMINS
97	SMOKING DETERRENTS
98	HERBALS
99	UNCLASSIFIED DRUG PRODUCTS

Related Tables

Generic Therapeutic Class Description Table

GTC_DESC_T

Generic Therapeutic Class Description (Translated)

a 75-character alphanumeric column that provides the text description for a Therapeutic Class Code, Generic (GTC).

Related Tables

Generic Therapeutic Class Description Table--French

GTIN

Global Trade Item Number

a 14-character alphanumeric column that contains a unique identifier assigned to a packaged product by the manufacturer. The GTIN column is the key column in the packaging data licensed from McKesson Canada and created and maintained by McKesson Canada.

The GTIN number can contain a UPC. Zeros are added to the beginning of the UPC string to create the GTIN. Packaged Product data maintains separate columns to identify UPC Package Code ([UPC_PACKAGE_CODE](#)), UPC Vendor Code ([UPC_VENDOR_CODE](#)), and UPC Product Code ([UPC_PRODUCT_CODE](#)) portions of the GTIN.

The following example shows the IDC, GTIN, and Label Name (LN)

Example—GTIN and associated columns

GTIN	IDC	LN
00621903040285	03000029416	ATENOL 100MG TAB
00779219052017	03000029419	SOTALOL 80 MG TABLET
00056090159708	03000029421	PROTROPIN 10MG VIAL
00065914102394	03000029436	TOPICORT 0.25% OINTMENT

Related Tables

[IDDF Canada Packaged Product Master Table](#)

H

HC_AGE
HC_AGE_MAXIMUM
HC_AGE_MINIMUM
HC_CITY
HC_COMMON_NAME
HC_COMMON_NAME_F
HC_COMPANY_ADDRESS
HC_COMPANY_NAME
HC_COUNTRY
HC_DHE_UNIT_OF_MEASURE
HC_DHE_UNIT_OF_MEASURE_F
HC_DOSAGE_FORM
HC_DOSAGE_FORM_F
HC_DRIED_Herb_EQUIVALENT
HC_EXTRACT_TYPE_DESC
HC_EXTRACT_TYPE_DESC_F
HC_FREQUENCY
HC_FREQUENCY_MAXIMUM
HC_FREQUENCY_MINIMUM
HC_LICENSE_DATE
HC_LICENSE_NUMBER
HC_POPULATION_TYPE_DESC
HC_POPULATION_TYPE_DESC_F
HC_POSTAL_CODE
HC_POTENCY_AMOUNT
HC_POTENCY_CONSTITUENT
HC_POTENCY_UNIT_OF_MEASURE
HC_POTENCY_UNIT_OF_MEASURE_F

HC_PRIMARY_NAME
HC_PRODUCT_ID
HC_PRODUCT_NAME
HC_PROPER_NAME
HC_PROPER_NAME_F
HC_PROVINCE
HC_PURPOSE_E
HC_PURPOSE_F
HC_QUANTITY
HC_QUANTITY_DOSE
HC_QUANTITY_MAXIMUM
HC_QUANTITY_MAXIMUM_DOSE
HC_QUANTITY_MINIMUM
HC_QUANTITY_MINIMUM_DOSE
HC_QUANTITY_UNIT_OF_MEASURE
HC_QUANTITY_UNIT_OF_MEASURE_F
HC_RATIO_DENOMINATOR
HC_RATIO_NUMERATOR
HC_RISK_TEXT_E
HC_RISK_TEXT_F
HC_RISK_TYPE_DESC
HC_RISK_TYPE_DESC_F
HC_ROUTE_TYPE_DESC
HC_ROUTE_TYPE_DESC_F
HC_SOURCE_MATERIAL
HC_SOURCE_MATERIAL_F
HC_STATUS
HC_STATUS_F
HC_SUB_RISK_TYPE_DESC
HC_SUB_RISK_TYPE_DESC_F

HC_UOM_TYPE_DESC_AGE

HC_UOM_TYPE_DESC_AGE_F

HC_UOM_TYPE_DESC_FREQUENCY

HC_UOM_TYPE_DESC_FREQUENCY_F

HC_UOM_TYPE_DESC_QTY_DOSE

HC_UOM_TYPE_DESC_QTY_DOSE_F

HIC

HIC1

HIC1_DESC

HIC1_DESC_T

HIC1_SEQN

HIC2

HIC2_DESC

HIC2_DESC_T

HIC2_ROOT

HIC2_SEQN

HIC3

HIC3_DESC

HIC3_DESC_T

HIC3_GRP_N

HIC3_RELNO

HIC3_ROOT

HIC3_SEQN

HIC4

HIC4_DESC

HIC4_DESC_T

HIC4_POTENTIALLY_INACTV_IND

HIC4_ROOT

HIC4_SEQN

HIC_DESC

HIC_DESC_T

HIC_POTENTIALLY_INACTV_IND

HIC_REL_NO

HIC REPL EFF DT

HIC_ROOT

HIC_SEQN

HICL_SEQNO

HC_AGE

Health Canada Age

a 255-character column that contains the age associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the **Canadian Natural Health Products Recommended Dose Table** information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_AGE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_AGE_MAXIMUM

Health Canada Maximum Age

a 255-character alphanumeric column that contains the maximum age associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the **Canadian Natural Health Products Recommended Dose Table** information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_AGE_MAXIMUM and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_AGE_MINIMUM

Health Canada Minimum Age

a 255-character alphanumeric column that contains the minimum age associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the **Canadian Natural Health Products Recommended Dose Table** information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137) .

Example—HC_AGE_MINIMUM and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_CITY

Health Canada City

a 40-character alphanumeric column that contains the manufacturer's company city for a Canadian Natural Health product as provided by Health Canada.

Example—HC_CITY and associated columns

HC_PRODUCT_ID	580	580	580
HC_COMPANY_NAME	Red Bull GMBH	Jamieson Laboratories Ltd./Nutricorp International	Bioforce Canada Inc.
HC_COMPANY_ADDRESS	AM Brunnen 1	4025 Rhodes Drive	66 boul. Brunswick Bioforce Canada Inc.
HC_CITY	FUSCHL AM SE	Windsor	Montreal
HC_PROVINCE	Salzburg	Ontario	Quebec
HC_COUNTRY	Austria	Canada	Canada
HC_POSTAL_CODE	5330	N8W 5B5	H9B 2L3

Related Tables

[Canadian Natural Health Products Company Table](#)

HC_COMMON_NAME

Health Canada Common Name of Ingredient

a 200-character alphanumeric column that contains the common name of an ingredient associated to Canadian Natural Health products as provided by Health Canada.

- i According to Health Canada, "The common name of an ingredient is 'the name by which it is commonly known and is designated in a scientific or technical reference.'"

This example shows the proper and common names of **non-medicinal** ingredients associated to Health Canada NHP Product, *Greens+* ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_COMMON_NAME and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Stevia	Sodium Chloride	Watermelon flavour
HC_PROPER_NAME_F	Stevia	Chlorure de sodium	Watermelon flavour
HC_COMMON_NAME			
HC_COMMON_NAME_F			

This example shows the proper and common names of **medicinal** ingredients associated to Health Canada NHP Product, *Greens+* ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_COMMON_NAME and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin

Related Tables

[Canadian Natural Health Products Medicinal Ingredient Table](#)

[Canadian Natural Health Products Non-Medicinal Ingredient Table](#)

HC_COMMON_NAME_F

Health Canada Common Name of Ingredient (French)

a 200-character alphanumeric column that contains the common name of an ingredient associated to Canadian Natural Health products as provided by Health Canada.

- i According to Health Canada, "The common name of an ingredient is 'the name by which it is commonly known and is designated in a scientific or technical reference.'"

This example shows the proper and common names of **non-medicinal** ingredients associated to Health Canada NHP Product, *Greens+* ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_COMMON_NAME_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Stevia	Sodium Chloride	Watermelon flavour
HC_PROPER_NAME_F	Stevia	Chlorure de sodium	Watermelon flavour
HC_COMMON_NAME			
HC_COMMON_NAME_F			

This example shows the proper and common names of **medicinal** ingredients associated to Health Canada NHP Product, *Greens+* ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_COMMON_NAME_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin

Related Tables

[Canadian Natural Health Products Medicinal Ingredient Table](#)

[Canadian Natural Health Products Non-Medicinal Ingredient Table](#)

HC_COMPANY_ADDRESS

Health Canada Company Address

a 120-character alphanumeric column that contains the manufacturer's company address for a Canadian Natural Health product as provided by Health Canada.

Example—HC_COMPANY_ADDRESS and associated columns

HC_PRODUCT_ID	580	580	580
HC_COMPANY_NAME	Red Bull GMBH	Jamieson Laboratories Ltd./Nutricorp International	Bioforce Canada Inc.
HC_COMPANY_ADDRESS	AM Brunnen 1	4025 Rhodes Drive	66 boul. Brunswick Bioforce Canada Inc.
HC_CITY	FUSCHL AM SE	Windsor	Montreal
HC_PROVINCE	Salzburg	Ontario	Quebec
HC_COUNTRY	Austria	Canada	Canada
HC_POSTAL_CODE	5330	N8W 5B5	H9B 2L3

Related Tables

[Canadian Natural Health Products Company Table](#)

HC_COMPANY_NAME

Health Canada Health Canada Company Name

a 200-character alphanumeric column that contains the manufacturer's company name for a Canadian Natural Health product as provided by Health Canada.

Example—HC_COMPANY_NAME and associated columns

HC_PRODUCT_ID	580	580	580
HC_COMPANY_NAME	Red Bull GMBH	Jamieson Laboratories Ltd./Nutricorp International	Bioforce Canada Inc.
HC_COMPANY_ADDRESS	AM Brunnen 1	4025 Rhodes Drive	66 boul. Brunswick Bioforce Canada Inc.
HC_CITY	FUSCHL AM SE	Windsor	Montreal
HC_PROVINCE	Salzburg	Ontario	Quebec
HC_COUNTRY	Austria	Canada	Canada
HC_POSTAL_CODE	5330	N8W 5B5	H9B 2L3

Related Tables

[Canadian Natural Health Products Company Table](#)

HC_COUNTRY

Health Canada Country

a 40-character alphanumeric column that contains the manufacturer's company country for a Canadian Natural Health product as provided by Health Canada.

Example—HC_COUNTRY and associated columns

HC_PRODUCT_ID	580	580	580
HC_COMPANY_NAME	Red Bull GMBH	Jamieson Laboratories Ltd./Nutricorp International	Bioforce Canada Inc.
HC_COMPANY_ADDRESS	AM Brunnen 1	4025 Rhodes Drive	66 boul. Brunswick Bioforce Canada Inc.
HC_CITY	FUSCHL AM SE	Windsor	Montreal
HC_PROVINCE	Salzburg	Ontario	Quebec
HC_COUNTRY	Austria	Canada	Canada
HC_POSTAL_CODE	5330	N8W 5B5	H9B 2L3

Related Tables

[Canadian Natural Health Products Company Table](#)

HC_DHE_UNIT_OF_MEASURE

Health Canada Dried Herb Equivalent Unit of Measure

a 120-character alphanumeric column that contains the dried herb equivalent unit of measure for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_DHE_UNIT_OF_MEASURE and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_DHE_UNIT_OF_MEASURE_F

Health Canada Dried Herb Equivalent Unit of Measure (French)

a 120-character alphanumeric column that contains the dried herb equivalent unit of measure for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_DHE_UNIT_OF_MEASURE_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_DOSAGE_FORM

Health Canada NHP Product Dosage Form

a 120-character alphanumeric column that contains the dosage form associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

Example—HC_DOSAGE_FORM and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_LICENSE_NUMBER	80000416	80008485	80009137
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_DOSAGE_FORM	Toothpaste	Capsule	Powder
HC_DOSAGE_FORM_F	Pâte dentifrice	Capsule	Poudre
HC_LICENSE_DATE	25-05-05	19-12-08	21-01-09
HC_STATUS	Active	Active	Active
HC_STATUS_F	Actif	Actif	Actif

Related Tables

[Canadian Natural Health Products Product File Table](#)

HC_DOSAGE_FORM_F

Health Canada NHP Product Dosage Form (French)

a 120-character alphanumeric column that contains the Dosage Form associated to the HC_PRODUCT_ID for the Canadian Natural Health product as provided by Health Canada.

Example—HC_DOSAGE_FORM_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_LICENSE_NUMBER	80000416	80008485	80009137
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_DOSAGE_FORM	Toothpaste	Capsule	Powder
HC_DOSAGE_FORM_F	Pâte dentifrice	Capsule	Poudre
HC_LICENSE_DATE	25-05-05	19-12-08	21-01-09
HC_STATUS	Active	Active	Active
HC_STATUS_F	Actif	Actif	Actif

Related Tables

[Canadian Natural Health Products Product File Table](#)

HC_DRIED_HERB_EQUIVALENT

Health Canada Dried Herb Equivalent

a 10-character alphanumeric that contains the dried herb equivalent for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_DRIED_HERB_EQUIVALENT and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_HERB_EQUIV			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_EXTRACT_TYPE_DESC

Health Canada Extract Type Description

a 120-character alphanumeric column that contains the extract type description for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_EXTRACT_TYPE_DESC and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_EXTRACT_TYPE_DESC_F

Health Canada Extract Type Description (French)

a 120-character alphanumeric column that contains the extract type description for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_EXTRACT_TYPE_DESC_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_FREQUENCY

Health Canada Dosage Frequency

a 255-character alphanumeric column that contains the frequency associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

- i** This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_FREQUENCY and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1

HC_FREQUENCY_MINIMUM			
HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables

[Canadian Natural Health Products Recommended Dose Table](#)

HC_FREQUENCY_MAXIMUM

Health Canada Dosage Frequency Maximum

a 255-character alphanumeric column that contains the frequency maximum associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

- i** This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_FREQUENCY_MAXIMUM and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1

HC_FREQUENCY_MINIMUM			
HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_FREQUENCY_MINIMUM

Health Canada Dosage Frequency Minimum

a 255-character alphanumeric column that contains the frequency minimum associated to the [HC_PRODUCT_ID](#) for the Canadian Natural Health product as provided by Health Canada.

- i This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste ([HC_PRODUCT_ID](#) 755, [HC_LICENSE_NUMBER](#) 80000416), Modu Prost ([HC_PRODUCT_ID](#) 1046, [HC_LICENSE_NUMBER](#) 80008485), and Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_FREQUENCY_MINIMUM and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1

HC_FREQUENCY_MINIMUM			
HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_LICENSE_DATE

Health Canada NHP Granted License Date

a 255-character alphanumeric column that contains the granted license date associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

Example—HC_LICENSE_DATE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_LICENSE_NUMBER	80000416	80008485	80009137
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_DOSAGE_FORM	Toothpaste	Capsule	Powder
HC_DOSAGE_FORM_F	Pâte dentifrice	Capsule	Poudre
HC_LICENSE_DATE	25-05-05	19-12-08	21-01-09
HC_STATUS	Active	Active	Active
HC_STATUS_F	Actif	Actif	Actif

Related Tables

[Canadian Natural Health Products Product File Table](#)

HC_LICENSE_NUMBER

Health Canada Canadian NHP Product License Number

a 200-character alphanumeric column that contains the license number or NPN for Canadian Natural Health product as provided by Health Canada.

Example—HC_LICENSE_NUMBER and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_LICENSE_NUMBER	80000416	80008485	80009137
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_DOSAGE_FORM	Toothpaste	Capsule	Powder
HC_DOSAGE_FORM_F	Pâte dentifrice	Capsule	Poudre
HC_LICENSE_DATE	25-05-05	19-12-08	21-01-09
HC_STATUS	Active	Active	Active
HC_STATUS_F	Actif	Actif	Actif

Related Tables

[Canadian Natural Health Products Product File Table](#)

HC_POPULATION_TYPE_DESC

Health Canada Population Type Description

a 120-character alphanumeric column that contains the population type description, such as Adults, Children or All ages, associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_POPULATION_TYPE_DESC and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_POPULATION_TYPE_DESC_F

Population Type Description (French)

a 120-character alphanumeric column that contains the population type description, such as Adultes, Enfants or Tout âge, associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_POPULATION_TYPE_DESC_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_POSTAL_CODE

Health Canada Postal Code

a 40-character alphanumeric column that contains the manufacturer's company postal code for a Canadian Natural Health product as provided by Health Canada.

Example—HC_POSTAL_CODE and associated columns

HC_PRODUCT_ID	580	580	580
HC_COMPANY_NAME	Red Bull GMBH	Jamieson Laboratories Ltd./Nutricorp International	Bioforce Canada Inc.
HC_COMPANY_ADDRESS	AM Brunnen 1	4025 Rhodes Drive	66 boul. Brunswick Bioforce Canada Inc.
HC_CITY	FUSCHL AM SE	Windsor	Montreal
HC_PROVINCE	Salzburg	Ontario	Quebec
HC_COUNTRY	Austria	Canada	Canada
HC_POSTAL_CODE	5330	N8W 5B5	H9B 2L3

Related Tables

[Canadian Natural Health Products Company Table](#)

HC_POTENCY_AMOUNT

Health Canada Potency Amount

a 255-character numeric column that contains the potency amount contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

- i This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_POTENCY_AMOUNT and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			

HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			
HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_POTENCY_CONSTITUENT

Health Canada Potency Constituent

a 120-character alphanumeric column that contains the potency constituent contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_POTENCY_CONSTITUENT and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_POTENCY_UNIT_OF_MEASURE

Health Canada Potency Unit of Measure

a 120-character alphanumeric column that contains the potency unit of measure contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_POTENCY_UNIT_OF_MEASURE and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_POTENCY_UNIT_OF_MEASURE_F

Health Canada Potency Unit of Measure (French)

a 120-character alphanumeric column that contains the potency unit of measure contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_POTENCY_UNIT_OF_MEASURE_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_PRIMARY_NAME

Health Canada Primary Name Indicator

a one-character alphanumeric column that indicates if the associated Health Canada Product Name ([HC_PRODUCT_NAME](#)) is the primary name associated with the Canadian NHP Product Identifier ([HC_PRODUCT_ID](#)) as provided by Health Canada.

This example shows the primary name indicator associated to Health Canada NHP Product, *Greens+* ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_PRIMARY_NAME and associated columns

HC_PRODUCT_ID	HC_PRODUCT_NAME	HC_PRIMARY_NAME
1060	Greens+	Y

Related Tables

[Canadian Natural Health Products Product Name Table](#)

HC_PRODUCT_ID

Health Canada Canadian NHP Product Identifier

an eight-character numeric column that contains the product identifier for the Canadian Natural Health product as provided by Health Canada.

Example—HC_PRODUCT_ID and associated columns

HC_PRODUCT_ID	HC_PRODUCT_NAME
755	Sensodyne-F Brilliant Whitening Toothpaste
1046	Modu Prost
1060	Greens+

Related Tables

[Canadian Natural Health Products Company Table](#)

[Canadian Natural Health Products Medicinal Ingredient Table](#)

[Canadian Natural Health Products Non-Medicinal Ingredient Table](#)

[Canadian Natural Health Products Product File Table](#)

[Canadian Natural Health Products Product Name Table](#)

[Canadian Natural Health Products Purpose Table](#)

[Canadian Natural Health Products Recommended Dose Table](#)

[Canadian Natural Health Products Risk Table](#)

[Canadian Natural Health Products Route Table](#)

HC_PRODUCT_NAME

Health Canada NHP Product Name

a 200-character alphanumeric column that contains the product name for the Canadian Natural Health product as provided by Health Canada.

This example shows the product name associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_PRODUCT_NAME and associated columns

HC_PRODUCT_ID	HC_PRODUCT_NAME
1060	Greens+

Related Tables

[Canadian Natural Health Products Product File Table](#)

[Canadian Natural Health Products Product Name Table](#)

HC_PROPER_NAME

Health Canada Proper Name of Ingredient

a 200-character alphanumeric column that contains the proper name of an ingredient associated to Canadian Natural Health products as provided by Health Canada.

- i** According to Health Canada, "The *Natural Health Products Regulations* sets out rules for ingredient proper names. The proper names are as follows:

- For vitamins, use Biotin, Folate, Niacin, Pantothenic acid, Vitamin A, Thiamine, Riboflavin, Vitamin B 6, Vitamin B 12, and Vitamins C, D and E.
- For chemical substances (except vitamins) and protein substances, use any unambiguous chemical name provided by an authoritative reference such as the Merck Index, the United States Pharmacopeia Dictionary, etc.
- For an organism, a plant material, or a non-human animal material, use the scientific Latin names of the organism, that is "its genus, and its specific epithet" (For example, for Black currant seed oil, the proper name is the scientific name of the plant species, *Ribes nigrum*.)
- For homeopathic ingredients, the proper names are as provided in the pharmacopoeia."

This example shows the proper and common names of **non-medicinal** ingredients associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_PROPER_NAME and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Stevia	Sodium Chloride	Watermelon flavour
HC_PROPER_NAME_F	Stevia	Chlorure de sodium	Watermelon flavour
HC_COMMON_NAME			
HC_COMMON_NAME_F			

This example shows the proper and common names of **medicinal** ingredients associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_PROPER_NAME and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera

HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)[Canadian Natural Health Products Non-Medicinal Ingredient Table](#)

HC_PROPER_NAME_F

Health Canada Proper Name of Ingredient (French)

a 200-character alphanumeric column that contains the proper name of an ingredient associated to Canadian Natural Health products as provided by Health Canada.

- i** According to Health Canada, "The *Natural Health Products Regulations* sets out rules for ingredient proper names. The proper names are as follows:

- For vitamins, use Biotin, Folate, Niacin, Pantothenic acid, Vitamin A, Thiamine, Riboflavin, Vitamin B 6, Vitamin B 12, and Vitamins C, D and E.
- For chemical substances (except vitamins) and protein substances, use any unambiguous chemical name provided by an authoritative reference such as the Merck Index, the United States Pharmacopeia Dictionary, etc.
- For an organism, a plant material, or a non-human animal material, use the scientific Latin names of the organism, that is "its genus, and its specific epithet" (For example, for Black currant seed oil, the proper name is the scientific name of the plant species, *Ribes nigrum*.)
- For homeopathic ingredients, the proper names are as provided in the pharmacopoeia."

This example shows the proper and common names of **non-medicinal** ingredients associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_PROPER_NAME_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Stevia	Sodium Chloride	Watermelon flavour
HC_PROPER_NAME_F	Stevia	Chlorure de sodium	Watermelon flavour
HC_COMMON_NAME			
HC_COMMON_NAME_F			

This example shows the proper and common names of **medicinal** ingredients associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_PROPER_NAME_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera

HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)[Canadian Natural Health Products Non-Medicinal Ingredient Table](#)

HC_PROVINCE

Health Canada Province

a 40-character alphanumeric column that contains the manufacturer's company province for a Canadian Natural Health product as provided by Health Canada.

Example—HC_PROVINCE and associated columns

HC_PRODUCT_ID	580	580	580
HC_COMPANY_NAME	Red Bull GMBH	Jamieson Laboratories Ltd./Nutricorp International	Bioforce Canada Inc.
HC_COMPANY_ADDRESS	AM Brunnen 1	4025 Rhodes Drive	66 boul. Brunswick Bioforce Canada Inc.
HC_CITY	FUSCHL AM SE	Windsor	Montreal
HC_PROVINCE	Salzburg	Ontario	Quebec
HC_COUNTRY	Austria	Canada	Canada
HC_POSTAL_CODE	5330	N8W 5B5	H9B 2L3

Related Tables

[Canadian Natural Health Products Company Table](#)

HC_PURPOSE_E

Health Canada Product Purpose (English)

a 4000-character alphanumeric column that contains the recommended use/purpose associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the product purpose associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137) .

Example—HC_PURPOSE_E and associated columns

HC_PRODUCT_ID	HC_PURPOSE_E	HC_PURPOSE_F
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755	<p>24/7 Sensitivity Protection. Round the clock (sensitivity) protection.</p> <p>SENSODYNE provides 24/7 protection against sensitivity. Clinically proven sensitivity relief. 24/7 protection.</p> <p>Sensodyne is clinically proven to build on-going protection over time, working 24/7 to help relieve sensitivity pain, with twice daily brushing. Clinically proven to build relief and daily protection for sensitive teeth.</p> <p>Sensodyne builds 24/7 protection against sensitivity that won't wear off when you eat or drink. Sensodyne works deep inside the tooth to soothe painful sensitivity. SENSODYNE provides on-going sensitivity relief by building soothing protection around the nerve, deep inside the tooth. With twice daily brushing, Sensodyne gradually builds soothing protection around the nerve to provide sensitivity relief in as little as two weeks.</p> <p>Reduces the pain of sensitive teeth in as little as '2' weeks with twice daily brushing. Contains fluoride which prevents, fights or protects against caries/cavities. Helps prevent tooth decay. Penetrates tooth enamel to help rebuild weak spots or helps remineralize tooth enamel. To relieve or prevent tooth sensitivity pain. To prevent cavities. Anti-bacterial action - kills bacteria that can cause bad breath. With twice daily brushing, Sensodyne builds round the clock protection from sensitivity pain. It (Sensodyne) is proven to build on-going protection over time, working 24/7 to help relieve sensitivity pain.</p> <p>Sensodyne builds 24/7 sensitivity protection. Builds around the clock sensitivity protection.</p>	S.O.
1046	<p>Used in Herbal Medicine to support prostate health by helping to reduce difficulty in urination associated with the early stages of benign prostatic hyperplasia. Used in Herbal Medicine to help reduce difficulty in urination associated with early stages of benign prostatic hyperplasia.</p>	

1060

Phytochemical-rich blend of ingredients to increase your energy. Source of antioxidants to reduce oxidative stress/damage for the maintenance of good health. Helps to support liver function. Helps in development and maintenance of bones, cartilage, teeth and gums. Helps in connective tissue formation. Helps in wound healing. Helps the body to metabolize fats and proteins.

Related Tables[Canadian Natural Health Products Purpose Table](#)

HC_PURPOSE_F

Health Canada Product Purpose (French)

a 4000-character alphanumeric column that contains the recommended use/purpose associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the product purpose associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137) .

Example—HC_PURPOSE_F and associated columns

HC_PRODUCT_ID	HC_PURPOSE_E	HC_PURPOSE_F
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755	<p>24/7 Sensitivity Protection. Round the clock (sensitivity) protection.</p> <p>SENSODYNE provides 24/7 protection against sensitivity. Clinically proven sensitivity relief. 24/7 protection.</p> <p>Sensodyne is clinically proven to build on-going protection over time, working 24/7 to help relieve sensitivity pain, with twice daily brushing. Clinically proven to build relief and daily protection for sensitive teeth.</p> <p>Sensodyne builds 24/7 protection against sensitivity that won't wear off when you eat or drink. Sensodyne works deep inside the tooth to soothe painful sensitivity. SENSODYNE provides on-going sensitivity relief by building soothing protection around the nerve, deep inside the tooth. With twice daily brushing, Sensodyne gradually builds soothing protection around the nerve to provide sensitivity relief in as little as two weeks.</p> <p>Reduces the pain of sensitive teeth in as little as '2' weeks with twice daily brushing. Contains fluoride which prevents, fights or protects against caries/cavities. Helps prevent tooth decay. Penetrates tooth enamel to help rebuild weak spots or helps remineralize tooth enamel. To relieve or prevent tooth sensitivity pain. To prevent cavities. Anti-bacterial action - kills bacteria that can cause bad breath. With twice daily brushing, Sensodyne builds round the clock protection from sensitivity pain. It (Sensodyne) is proven to build on-going protection over time, working 24/7 to help relieve sensitivity pain.</p> <p>Sensodyne builds 24/7 sensitivity protection. Builds around the clock sensitivity protection.</p>	S.O.
1046	<p>Used in Herbal Medicine to support prostate health by helping to reduce difficulty in urination associated with the early stages of benign prostatic hyperplasia. Used in Herbal Medicine to help reduce difficulty in urination associated with early stages of benign prostatic hyperplasia.</p>	

1060	Phytochemical-rich blend of ingredients to increase your energy. Source of antioxidants to reduce oxidative stress/damage for the maintenance of good health. Helps to support liver function. Helps in development and maintenance of bones, cartilage, teeth and gums. Helps in connective tissue formation. Helps in wound healing. Helps the body to metabolize fats and proteins.	
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Related Tables[Canadian Natural Health Products Purpose Table](#)

HC_QUANTITY

Health Canada Quantity

a 255-character alphanumeric column that contains the quantity amount per dosage unit contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_QUANTITY and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_QUANTITY_DOSE

Health Canada Dose Quantity

a 255-character alphanumeric column that contains the quantity dose associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

- i** This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_QUANTITY_DOSE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1

HC_FREQUENCY_MINIMUM			
HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables

[Canadian Natural Health Products Recommended Dose Table](#)

HC_QUANTITY_MAXIMUM

Health Canada Maximum Quantity

a 255-character alphanumeric column that contains the maximum quantity amount per dosage unit contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

- i This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_QUANTITY_MAXIMUM and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			

HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			
HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_QUANTITY_MAXIMUM_DOSE

Health Canada Maximum Dose Quantity

a 255-character alphanumeric column that contains the quantity maximum dose associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

- i** This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_QUANTITY_MAXIMUM_DOSE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1

HC_FREQUENCY_MINIMUM			
HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_QUANTITY_MINIMUM

Health Canada Minimum Quantity

a 255-character alphanumeric column that contains the minimum quantity amount per dosage unit contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

- i This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_QUANTITY_MINIMUM and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			

HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			
HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_QUANTITY_MINIMUM_DOSE

Health Canada Minimum Dose Quantity

a 255-character alphanumeric column that contains the quantity minimum dose associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

- i** This data field may contain irregular, non-numerical representations (commas) instead of conventional numeric separators (periods). For example: 1,5 mg instead of 1.5 mg

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_QUANTITY_MINIMUM_DOSE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1

HC_FREQUENCY_MINIMUM			
HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables

[Canadian Natural Health Products Recommended Dose Table](#)

HC_QUANTITY_UNIT_OF_MEASURE

Health Canada Quantity Unit of Measure

a 120-character alphanumeric column that contains the quantity unit of measure amount per dosage unit contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_QUANTITY_UNIT_OF_MEASURE and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_QUANTITY_UNIT_OF_MEASURE_F

Health Canada Quantity Unit of Measure (French)

a 120-character alphanumeric column that contains the quantity unit of measure amount per dosage unit contained in medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (HC_PRODUCT_ID 1060, HC_LICENSE_NUMBER 80009137).

Example—HC_QUANTITY_UNIT_OF_MEASURE_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_RATIO_DENOMINATOR

Health Canada Ratio Denominator

a 10-character alphanumeric column that contains the extraction ratio denominator for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_RATIO_DENOMINATOR and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_RATIO_NUMERATOR

Health Canada Ratio Numerator

a 10-character alphanumeric column that contains the extraction ratio numerator for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_RATIO_NUMERATOR and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_Herb_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_RISK_TEXT_E

Health Canada Risk Description

a 4000-character alphanumeric column that contains the risk text associated to the HC_PRODUCT_ID for the Canadian Natural Health product as provided by Health Canada.

This example shows [Canadian Natural Health Products Risk Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (HC_PRODUCT_ID 755, HC_LICENSE_NUMBER 80000416), Modu Prost (HC_PRODUCT_ID 1046, HC_LICENSE_NUMBER 80008485), and Greens+ (HC_PRODUCT_ID 1060, HC_LICENSE_NUMBER 80009137).

Example—HC_RISK_TEXT_E and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_RISK_TYPE_DESC	Cautions and Warnings	Cautions and Warnings	Contra-Indications
HC_RISK_TYPE_DESC_F	Précautions et mises en garde	Précautions et mises en garde	Contre-indications
HC_SUB_RISK_TYPE_DESC			
HC_SUB_RISK_TYPE_DESC_F			

HC_RISK_TEXT_E	<p>Do not swallow. Keep out of reach of children under 6 years of age. If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away. As with other toothpastes, if irritation occurs, discontinue use. Always follow the label. Sensitive teeth may indicate an underlying problem that needs prompt care. If symptoms persist or worsen, see your Healthcare Professional. Do not use if allergic to any of the ingredients. Rare symptoms of an allergic reaction may include swelling of the mouth or face. If this occurs, stop use and talk to your Healthcare Professional. Not for use by children under 12 years.</p>	<p>Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner if you have heart and/or kidney disease. Do not use if you have hypotension or hypertension. Discontinue if you experience nausea, headache, dizziness or gastrointestinal discomfort. Consult a health care practitioner prior to use if you have a liver disorder or develop symptoms of liver trouble. Other urological conditions including prostate cancer may have similar symptoms. Consult a health care practitioner prior to use to exclude a diagnosis of prostate cancer. Consult a health care practitioner for regular examination as part of general prostate health or if you are taking prescription drugs.</p>	<p>Not to be taken by children, during pregnancy, while breastfeeding, by those on medication, or by those with chronic health problems unless under the recommendation of a health care practitioner. Do not use if you have gastrointestinal blockage. Discontinue use and consult a health care practitioner if symptoms of digestive upset occur, worsen or persist beyond 3 days. Use with caution if allergic to bee products.</p>
HC_RISK_TEXT_F	S.O.		

Related Tables

[Canadian Natural Health Products Risk Table](#)

HC_RISK_TEXT_F

Health Canada Risk Description (French)

a 4000-character alphanumeric column that contains the risk text associated to the HC_PRODUCT_ID for the Canadian Natural Health product as provided by Health Canada.

This example shows [Canadian Natural Health Products Risk Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (HC_PRODUCT_ID 755, HC_LICENSE_NUMBER 80000416), Modu Prost (HC_PRODUCT_ID 1046, HC_LICENSE_NUMBER 80008485), and Greens+ (HC_PRODUCT_ID 1060, HC_LICENSE_NUMBER 80009137).

Example—HC_RISK_TEXT_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_RISK_TYPE_DESC	Cautions and Warnings	Cautions and Warnings	Contra-Indications
HC_RISK_TYPE_DESC_F	Précautions et mises en garde	Précautions et mises en garde	Contre-indications
HC_SUB_RISK_TYPE_DESC			
HC_SUB_RISK_TYPE_DESC_F			

HC_RISK_TEXT_E	<p>Do not swallow. Keep out of reach of children under 6 years of age. If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away. As with other toothpastes, if irritation occurs, discontinue use. Always follow the label. Sensitive teeth may indicate an underlying problem that needs prompt care. If symptoms persist or worsen, see your Healthcare Professional. Do not use if allergic to any of the ingredients. Rare symptoms of an allergic reaction may include swelling of the mouth or face. If this occurs, stop use and talk to your Healthcare Professional. Not for use by children under 12 years.</p>	<p>Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner if you have heart and/or kidney disease. Do not use if you have hypotension or hypertension. Discontinue if you experience nausea, headache, dizziness or gastrointestinal discomfort. Consult a health care practitioner prior to use if you have a liver disorder or develop symptoms of liver trouble. Other urological conditions including prostate cancer may have similar symptoms. Consult a health care practitioner prior to use to exclude a diagnosis of prostate cancer. Consult a health care practitioner for regular examination as part of general prostate health or if you are taking prescription drugs.</p>	<p>Not to be taken by children, during pregnancy, while breastfeeding, by those on medication, or by those with chronic health problems unless under the recommendation of a health care practitioner. Do not use if you have gastrointestinal blockage. Discontinue use and consult a health care practitioner if symptoms of digestive upset occur, worsen or persist beyond 3 days. Use with caution if allergic to bee products.</p>
HC_RISK_TEXT_F	S.O.		

Related Tables

[Canadian Natural Health Products Risk Table](#)

HC_RISK_TYPE_DESC

Health Canada Risk Type Description

a 120-character alphanumeric column that contains the risk type description associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows [Canadian Natural Health Products Risk Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_RISK_TYPE_DESC and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_RISK_TYPE_DESC	Cautions and Warnings	Cautions and Warnings	Contra-Indications
HC_RISK_TYPE_DESC_F	Précautions et mises en garde	Précautions et mises en garde	Contre-indications
HC_SUB_RISK_TYPE_DESC			
HC_SUB_RISK_TYPE_DESC_F			

HC_RISK_TEXT_E	<p>Do not swallow. Keep out of reach of children under 6 years of age. If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away. As with other toothpastes, if irritation occurs, discontinue use. Always follow the label. Sensitive teeth may indicate an underlying problem that needs prompt care. If symptoms persist or worsen, see your Healthcare Professional. Do not use if allergic to any of the ingredients. Rare symptoms of an allergic reaction may include swelling of the mouth or face. If this occurs, stop use and talk to your Healthcare Professional. Not for use by children under 12 years.</p>	<p>Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner if you have heart and/or kidney disease. Do not use if you have hypotension or hypertension. Discontinue if you experience nausea, headache, dizziness or gastrointestinal discomfort. Consult a health care practitioner prior to use if you have a liver disorder or develop symptoms of liver trouble. Other urological conditions including prostate cancer may have similar symptoms. Consult a health care practitioner prior to use to exclude a diagnosis of prostate cancer. Consult a health care practitioner for regular examination as part of general prostate health or if you are taking prescription drugs.</p>	<p>Not to be taken by children, during pregnancy, while breastfeeding, by those on medication, or by those with chronic health problems unless under the recommendation of a health care practitioner. Do not use if you have gastrointestinal blockage. Discontinue use and consult a health care practitioner if symptoms of digestive upset occur, worsen or persist beyond 3 days. Use with caution if allergic to bee products.</p>
HC_RISK_TEXT_F	S.O.		

Related Tables

[Canadian Natural Health Products Risk Table](#)

HC_RISK_TYPE_DESC_F

Health Canada Risk Type Description (French)

a 120-character alphanumeric column that contains the risk type description associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows [Canadian Natural Health Products Risk Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_RISK_TYPE_DESC_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_RISK_TYPE_DESC	Cautions and Warnings	Cautions and Warnings	Contra-Indications
HC_RISK_TYPE_DESC_F	Précautions et mises en garde	Précautions et mises en garde	Contre-indications
HC_SUB_RISK_TYPE_DESC			
HC_SUB_RISK_TYPE_DESC_F			

HC_RISK_TEXT_E	<p>Do not swallow. Keep out of reach of children under 6 years of age. If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away. As with other toothpastes, if irritation occurs, discontinue use. Always follow the label. Sensitive teeth may indicate an underlying problem that needs prompt care. If symptoms persist or worsen, see your Healthcare Professional. Do not use if allergic to any of the ingredients. Rare symptoms of an allergic reaction may include swelling of the mouth or face. If this occurs, stop use and talk to your Healthcare Professional. Not for use by children under 12 years.</p>	<p>Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner if you have heart and/or kidney disease. Do not use if you have hypotension or hypertension. Discontinue if you experience nausea, headache, dizziness or gastrointestinal discomfort. Consult a health care practitioner prior to use if you have a liver disorder or develop symptoms of liver trouble. Other urological conditions including prostate cancer may have similar symptoms. Consult a health care practitioner prior to use to exclude a diagnosis of prostate cancer. Consult a health care practitioner for regular examination as part of general prostate health or if you are taking prescription drugs.</p>	<p>Not to be taken by children, during pregnancy, while breastfeeding, by those on medication, or by those with chronic health problems unless under the recommendation of a health care practitioner. Do not use if you have gastrointestinal blockage. Discontinue use and consult a health care practitioner if symptoms of digestive upset occur, worsen or persist beyond 3 days. Use with caution if allergic to bee products.</p>
HC_RISK_TEXT_F	S.O.		

Related Tables

[Canadian Natural Health Products Risk Table](#)

HC_ROUTE_TYPE_DESC

Health Canada Route Type Description

a 120-character alphanumeric column that contains the route type description associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the route type description associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_ROUTE_TYPE_DESC and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_ROUTE_TYPE_DESC	Dental	Oral	Oral
HC_ROUTE_TYPE_DESC_F	Dentaire	Orale	Orale

Sample Valid Values

HC_ROUTE_TYPE_DESC	HC_ROUTE_TYPE_DESC_F
Buccal	Buccale
Dental	Dentaire
Nasal	Nasale
Ophthalmic	Ophthalmique
Oral	Orale
Sublingual	Sublinguale
Topical	Topique
Transdermal	Transdermique

Related Tables

[Canadian Natural Health Products Route Table](#)

HC_ROUTE_TYPE_DESC_F

Health Canada Route Type Description (French)

a 120-character alphanumeric column that contains the route type description associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the route type description associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_ROUTE_TYPE_DESC_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_ROUTE_TYPE_DESC	Dental	Oral	Oral
HC_ROUTE_TYPE_DESC_F	Dentaire	Orale	Orale

Sample Valid Values

HC_ROUTE_TYPE_DESC	HC_ROUTE_TYPE_DESC_F
Buccal	Buccale
Dental	Dentaire
Nasal	Nasale
Ophthalmic	Ophthalmique
Oral	Orale
Sublingual	Sublinguale
Topical	Topique
Transdermal	Transdermique

Related Tables

[Canadian Natural Health Products Route Table](#)

HC_SOURCE_MATERIAL

Health Canada Source Material

a 120-character alphanumeric column that contains the source material (the substance from which the medicinal ingredient was derived) for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_SOURCE_MATERIAL and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_SOURCE_MATERIAL_F

Health Canada Source Material (French)

a 120-character alphanumeric column that contains the source material (the substance from which the medicinal ingredient was derived) for the medicinal ingredients associated to Canadian Natural Health products as provided by Health Canada.

This example shows the [Canadian Natural Health Products Medicinal Ingredient Table](#) information associated to Health Canada NHP Product, *Greens+* (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_SOURCE_MATERIAL_F and associated columns

HC_PRODUCT_ID	1060	1060	1060
HC_PRODUCT_NAME	Greens+	Greens+	Greens+
HC_PROPER_NAME	Oryza sativa	Royal jelly	Vitis vinifera
HC_PROPER_NAME_F	Oryza sativa	Gelée royale	Vitis vinifera
HC_COMMON_NAME	Whole brown rice		Grape
HC_COMMON_NAME_F	Whole brown rice		Raisin
HC_POTENCY_AMOUNT		5	200
HC_POTENCY_UNIT_OF_MEASURE		%	ppm
HC_POTENCY_UNIT_OF_MEASURE_F		%	ppm
HC_POTENCY_CONSTITUENT		10-HDA	Resveratrol
HC_QUANTITY	128	50	
HC_QUANTITY_MINIMUM			
HC_QUANTITY_MAXIMUM			
HC_QUANTITY_UNIT_OF_MEASURE	mg	mg	
HC_QUANTITY_UNIT_OF_MEASURE_F	mg	mg	
HC_RATIO_NUMERATOR			
HC_RATIO_DENOMINATOR			
HC_DRIED_HERB_EQUIVALENT			
HC_DHE_UNIT_OF_MEASURE			

HC_DHE_UNIT_OF_MEASURE_F			
HC_EXTRACT_TYPE_DESC			
HC_EXTRACT_TYPE_DESC_F			
HC_SOURCE_MATERIAL	Kernel	Bee saliva	Grape
HC_SOURCE_MATERIAL_F	Kernel	Bee saliva	Raisin

Related Tables[Canadian Natural Health Products Medicinal Ingredient Table](#)

HC_STATUS

Health Canada NHP Product Status

a 20-character alphanumeric column that contains the status associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

Example—HC_STATUS and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_LICENSE_NUMBER	80000416	80008485	80009137
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_DOSAGE_FORM	Toothpaste	Capsule	Powder
HC_DOSAGE_FORM_F	Pâte dentifrice	Capsule	Poudre
HC_LICENSE_DATE	25-05-05	19-12-08	21-01-09
HC_STATUS	Active	Active	Active
HC_STATUS_F	Actif	Actif	Actif

Related Tables

[Canadian Natural Health Products Product File Table](#)

HC_STATUS_F

Health Canada NHP Product Status (French)

a 20-character alphanumeric column that contains the status associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

Example—HC_STATUS_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_LICENSE_NUMBER	80000416	80008485	80009137
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_DOSAGE_FORM	Toothpaste	Capsule	Powder
HC_DOSAGE_FORM_F	Pâte dentifrice	Capsule	Poudre
HC_LICENSE_DATE	25-05-05	19-12-08	21-01-09
HC_STATUS	Active	Active	Active
HC_STATUS_F	Actif	Actif	Actif

Related Tables

[Canadian Natural Health Products Product File Table](#)

HC_SUB_RISK_TYPE_DESC

Health Canada Sub Risk Type Description

a 120-character alphanumeric column that contains the sub risk type description associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows [Canadian Natural Health Products Risk Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_SUB_RISK_TYPE_DESC and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_RISK_TYPE_DESC	Cautions and Warnings	Cautions and Warnings	Contra-Indications
HC_RISK_TYPE_DESC_F	Précautions et mises en garde	Précautions et mises en garde	Contre-indications
HC_SUB_RISK_TYPE_DESC			
HC_SUB_RISK_TYPE_DESC_F			

HC_RISK_TEXT_E	<p>Do not swallow. Keep out of reach of children under 6 years of age. If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away. As with other toothpastes, if irritation occurs, discontinue use. Always follow the label. Sensitive teeth may indicate an underlying problem that needs prompt care. If symptoms persist or worsen, see your Healthcare Professional. Do not use if allergic to any of the ingredients. Rare symptoms of an allergic reaction may include swelling of the mouth or face. If this occurs, stop use and talk to your Healthcare Professional. Not for use by children under 12 years.</p>	<p>Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner if you have heart and/or kidney disease. Do not use if you have hypotension or hypertension. Discontinue if you experience nausea, headache, dizziness or gastrointestinal discomfort. Consult a health care practitioner prior to use if you have a liver disorder or develop symptoms of liver trouble. Other urological conditions including prostate cancer may have similar symptoms. Consult a health care practitioner prior to use to exclude a diagnosis of prostate cancer. Consult a health care practitioner for regular examination as part of general prostate health or if you are taking prescription drugs.</p>	<p>Not to be taken by children, during pregnancy, while breastfeeding, by those on medication, or by those with chronic health problems unless under the recommendation of a health care practitioner. Do not use if you have gastrointestinal blockage. Discontinue use and consult a health care practitioner if symptoms of digestive upset occur, worsen or persist beyond 3 days. Use with caution if allergic to bee products.</p>
HC_RISK_TEXT_F	S.O.		

Related Tables

[Canadian Natural Health Products Risk Table](#)

HC_SUB_RISK_TYPE_DESC_F

Health Canada Sub Risk Type Description (French)

a 120-character alphanumeric column that contains the sub risk type description associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows [Canadian Natural Health Products Risk Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_SUB_RISK_TYPE_DESC_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_RISK_TYPE_DESC	Cautions and Warnings	Cautions and Warnings	Contra-Indications
HC_RISK_TYPE_DESC_F	Précautions et mises en garde	Précautions et mises en garde	Contre-indications
HC_SUB_RISK_TYPE_DESC			
HC_SUB_RISK_TYPE_DESC_F			

HC_RISK_TEXT_E	<p>Do not swallow. Keep out of reach of children under 6 years of age. If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away. As with other toothpastes, if irritation occurs, discontinue use. Always follow the label. Sensitive teeth may indicate an underlying problem that needs prompt care. If symptoms persist or worsen, see your Healthcare Professional. Do not use if allergic to any of the ingredients. Rare symptoms of an allergic reaction may include swelling of the mouth or face. If this occurs, stop use and talk to your Healthcare Professional. Not for use by children under 12 years.</p>	<p>Consult a health care practitioner if symptoms persist or worsen. Consult a health care practitioner if you have heart and/or kidney disease. Do not use if you have hypotension or hypertension. Discontinue if you experience nausea, headache, dizziness or gastrointestinal discomfort. Consult a health care practitioner prior to use if you have a liver disorder or develop symptoms of liver trouble. Other urological conditions including prostate cancer may have similar symptoms. Consult a health care practitioner prior to use to exclude a diagnosis of prostate cancer. Consult a health care practitioner for regular examination as part of general prostate health or if you are taking prescription drugs.</p>	<p>Not to be taken by children, during pregnancy, while breastfeeding, by those on medication, or by those with chronic health problems unless under the recommendation of a health care practitioner. Do not use if you have gastrointestinal blockage. Discontinue use and consult a health care practitioner if symptoms of digestive upset occur, worsen or persist beyond 3 days. Use with caution if allergic to bee products.</p>
HC_RISK_TEXT_F	S.O.		

Related Tables

[Canadian Natural Health Products Risk Table](#)

HC_UOM_TYPE_DESC_AGE

Health Canada Unit of Measure Type for Age

a 120-character alphanumeric column that contains the unit of measure type for age, such as year(s) or month(s), associated to the [HC_PRODUCT_ID](#) for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste ([HC_PRODUCT_ID](#) 755, [HC_LICENSE_NUMBER](#) 80000416), Modu Prost ([HC_PRODUCT_ID](#) 1046, [HC_LICENSE_NUMBER](#) 80008485), and Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_UOM_TYPE_DESC_AGE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_UOM_TYPE_DESC_AGE_F

Health Canada Unit of Measure Type for Age (French)

a 120-character alphanumeric column that contains the unit of measure type for age, such as year(s) or month(s), associated to the [HC_PRODUCT_ID](#) for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste ([HC_PRODUCT_ID](#) 755, [HC_LICENSE_NUMBER](#) 80000416), Modu Prost ([HC_PRODUCT_ID](#) 1046, [HC_LICENSE_NUMBER](#) 80008485), and Greens+ ([HC_PRODUCT_ID](#) 1060, [HC_LICENSE_NUMBER](#) 80009137).

Example—HC_UOM_TYPE_DESC_AGE_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_UOM_TYPE_DESC_FREQUENCY

Health Canada Dose Frequency Unit of Measure Type Description

a 120-character alphanumeric column that contains the dose frequency unit of measure type, such as daily or hour(s), associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_UOM_TYPE_DESC_FREQUENCY and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_UOM_TYPE_DESC_FREQUENCY_F

Health Canada Dose Frequency Unit of Measure Type Description (French)

a 120-character alphanumeric column that contains the dose frequency unit of measure type, such as Tous les jours or Heure(s), associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137) .

Example—HC_UOM_TYPE_DESC_FREQUENCY_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables[Canadian Natural Health Products Recommended Dose Table](#)

HC_UOM_TYPE_DESC_QTY_DOSE

Health Canada Dose Quantity Unit of Measure Type Description

a 120-character alphanumeric column that contains the dose quantity unit of measure type, such as capsule or teaspoon, associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137) .

Example—HC_UOM_TYPE_DESC_QTY_DOSE and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables

[Canadian Natural Health Products Recommended Dose Table](#)

HC_UOM_TYPE_DESC_QTY_DOSE_F

Health Canada Dose Quantity Unit of Measure Type Description (French)

a 120-character alphanumeric column that contains the dose quantity unit of measure type, such as Capsule or Cuillère à thé, associated to the **HC_PRODUCT_ID** for the Canadian Natural Health product as provided by Health Canada.

This example shows the [Canadian Natural Health Products Recommended Dose Table](#) information associated to Health Canada NHP Product, Sensodyne-F Brilliant Whitening Toothpaste (**HC_PRODUCT_ID** 755, **HC_LICENSE_NUMBER** 80000416), Modu Prost (**HC_PRODUCT_ID** 1046, **HC_LICENSE_NUMBER** 80008485), and Greens+ (**HC_PRODUCT_ID** 1060, **HC_LICENSE_NUMBER** 80009137).

Example—HC_UOM_TYPE_DESC_QTY_DOSE_F and associated columns

HC_PRODUCT_ID	755	1046	1060
HC_PRODUCT_NAME	Sensodyne-F Brilliant Whitening Toothpaste	Modu Prost	Greens+
HC_POPULATION_TYPE_DESC	Adults	Adult Males	Adults
HC_POPULATION_TYPE_DESC_F	Adultes	Adultes de sex	Adultes
HC_AGE			
HC_AGE_MINIMUM			
HC_AGE_MAXIMUM			
HC_UOM_TYPE_DESC_AGE			
HC_UOM_TYPE_DESC_AGE_F			
HC_QUANTITY_DOSE			3
HC_QUANTITY_MINIMUM_DOSE			
HC_QUANTITY_MAXIMUM_DOSE			
HC_UOM_TYPE_DESC_QTY_DOSE		capsule	teaspoon
HC_UOM_TYPE_DESC_QTY_DOSE_F		Capsule	Cuillère à thé
HC_FREQUENCY	2	2	1
HC_FREQUENCY_MINIMUM			

HC_FREQUENCY_MAXIMUM			
HC_UOM_TYPE_DESC_FREQUENCY	daily	daily	daily
HC_UOM_TYPE_DESC_FREQUENCY_F	Tous les jours	Tous les jours	Tous les jours

Related Tables

[Canadian Natural Health Products Recommended Dose Table](#)

HIC

Hierarchical Ingredient Code

a six-character alphanumeric column that represents the active ingredient and salt esters of a particular drug product. It also identifies the therapeutic class, pharmacological class, and organ system to which the drug is targeted. The HIC can only change for an ingredient if the ingredient is moved to a new therapeutic classification.

The HIC is attached to the Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**), which is a six-character numeric column that represents a distinct numeric ingredient within the database.

Sample Valid Values Table

HIC_SEQN	HIC	HIC_DESC
000602	A1BB	theophylline
000603	A1BBAN	theophylline anhydrous
000604	A1BBCS	theophylline cal sal
000605	A1BBOE	theophylline olamine
000606	A1BBPC	theophylline procaine
000607	A1BBSY	theophylline sod gly
000608	A1BC	aminophylline
000609	A1BD	dphylline
000610	A1BE	oxtriphylline
000611	A1BJ	theobromine
000612	A1BJCS	theobromine cal sal
000613	A1BJMO	theobromine magnesium oleate
000614	A1CA	dobutamine
000615	A1CAHC	dobutamine HCl
000616	A1CBLA	inamrinone lactate
000618	A2AA	quinidine
000619	A2AAGL	quinidine gluconate
000620	A2AAPG	quinidine polygalacturonate
000621	A2AASU	quinidine sulfate
000622	A2ABHC	procainamide HCl

Related Tables

HIC/Chemical Abstracts Service Registry Number Relation Table

HICL_SEQNO/HIC Relation Table

Hierarchical Ingredient Code Description Table

Hierarchical Ingredient Code Description Table--French

Hierarchical Ingredient Code Organ System Table--French

HIC1

Hierarchical Organ System Code

a one-character alphanumeric column that identifies the organ system upon which an active ingredient acts. It is the first position of the Hierarchical Ingredient Code (**HIC**).

Valid Values Table

HIC1_SEQN	HIC1	HIC1_DESC
000001	A	CARDIOVASCULAR SYSTEM
000002	B	RESPIRATORY SYSTEM
000003	C	ELECTROLYTE BALANCE/METABOLISM/NUTRITION
000004	D	BILIARY SYSTEM/GASTRO-INTESTINAL SYSTEM
000005	F	MALE GENITAL SYSTEM
000006	G	FEMALE GENITAL SYSTEM
000007	H	NERVOUS SYSTEM (EXCEPT AUTONOMIC)
000008	J	AUTONOMIC NERVOUS SYSTEM
000009	L	SKIN/SUBCUTANEOUS TISSUE
000010	M	BLOOD
000011	N	BONE MARROW
000012	P	ENDOCRINE SYSTEM
000013	Q	EAR/EYE/NOSE/RECTUM/TOPICAL/ VAGINA/OTHER
000014	R	KIDNEY/URINARY TRACT
000015	S	LOCOMOTOR SYSTEM
000016	U	MISCELL. DRUGS/ PHARMACEUTICAL ADJUVANTS
000017	V	NEOPLASMS
000018	W	ANTI-INFECTING AGENTS
000019	X	MEDICAL SUPPLIES AND DEVICES
000020	Y	DURABLE MEDICAL EQUIPMENT
000021	Z	BODY AS A WHOLE

Related Tables

[Hierarchical Ingredient Code Organ System Table](#)

[Hierarchical Ingredient Code Organ System Table--French](#)

HIC1_DESC

Hierarchical Organ System Code Description

a 50-character alphanumeric column that provides the text description for the Hierarchical Organ System Code Sequence Number ([HIC1_SEQN](#)).

Valid Values Table

HIC1_SEQN	HIC1_DESC
000001	CARDIOVASCULAR SYSTEM
000002	RESPIRATORY SYSTEM
000003	ELECTROLYTE BALANCE/METABOLISM/NUTRITION
000004	BILIARY SYSTEM/GASTRO-INTESTINAL SYSTEM
000005	MALE GENITAL SYSTEM
000006	FEMALE GENITAL SYSTEM
000007	NERVOUS SYSTEM (EXCEPT AUTONOMIC)
000008	AUTONOMIC NERVOUS SYSTEM
000009	SKIN/SUBCUTANEOUS TISSUE
000010	BLOOD
000011	BONE MARROW
000012	ENDOCRINE SYSTEM
000013	EAR/EYE/NOSE/RECTUM/TOPICAL/VAGINA/OTHER
000014	KIDNEY/URINARY TRACT
000015	LOCOMOTOR SYSTEM
000016	MISCELL. DRUGS/ PHARMACEUTICAL ADJUVANTS
000017	NEOPLASMS
000018	ANTI-INFECTING AGENTS
000019	MEDICAL SUPPLIES AND DEVICES
000020	DURABLE MEDICAL EQUIPMENT
000021	BODY AS A WHOLE

Related Tables

[Hierarchical Ingredient Code Organ System Table](#)

HIC1_DESC_T

Hierarchical Organ System Code Description (Translated)

a 75-character alphanumeric column that provides the text description for the Hierarchical Organ System Code Sequence Number ([HIC1_SEQN](#))

Related Tables

[Hierarchical Ingredient Code Organ System Table--French](#)

HIC1_SEQN

Hierarchical Organ System Code Sequence Number

a six-character numeric column that represents the active ingredient's Hierarchical Organ System Code ([HIC1](#)). This number is a stable identifier.

The HIC1_SEQN is a permanent numeric identifier that represents the organ system of a given active ingredient ([HIC1_SEQN](#)). The HIC1_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description of HIC1_SEQN 000002 is and will always be Respiratory System.

Valid Values Table

HIC1_SEQN	HIC1	HIC1_DESC
000001	A	CARDIOVASCULAR SYSTEM
000002	B	RESPIRATORY SYSTEM
000003	C	ELECTROLYTE BALANCE/METABOLISM/NUTRITION
000004	D	BILIARY SYSTEM/GASTRO-INTESTINAL SYSTEM
000005	F	MALE GENITAL SYSTEM
000006	G	FEMALE GENITAL SYSTEM
000007	H	NERVOUS SYSTEM (EXCEPT AUTONOMIC)
000008	J	AUTONOMIC NERVOUS SYSTEM
000009	L	SKIN/SUBCUTANEOUS TISSUE
000010	M	BLOOD
000011	N	BONE MARROW
000012	P	ENDOCRINE SYSTEM
000013	Q	EAR/EYE/NOSE/RECTUM/TOPICAL/ VAGINA/OTHER
000014	R	KIDNEY/URINARY TRACT
000015	S	LOCOMOTOR SYSTEM
000016	U	MISCELL. DRUGS/ PHARMACEUTICAL ADJUVANTS
000017	V	NEOPLASMS
000018	W	ANTI-INFECTING AGENTS

000019	X	MEDICAL SUPPLIES AND DEVICES
000020	Y	DURABLE MEDICAL EQUIPMENT
000021	Z	BODY AS A WHOLE

Related Tables[Hierarchical Ingredient Code Organ System Table](#)[Hierarchical Ingredient Code Organ System Table--French](#)

HIC2

Hierarchical Pharmacological Class Code

a two-character alphanumeric column that identifies the pharmacological class in which the active ingredient is classified. It is the second position of the Hierarchical Ingredient Code (**HIC**).

The HIC2 uses the active ingredient's HIC1 as its base value then adds a unique second character to complete the Pharmacological Class Code. For example, the HIC1 value of A represents the Cardiovascular System, where the HIC2 value A1 specifies the pharmacological class of Cardiac Stimulants.

Example—HIC2 and associated columns

HIC2_SEQN	HIC2	HIC2_DESC
000026	A7	VASOACTIVE DRUGS
000027	A8	DRUGS ACTING ON VEINS AND LYMPHATICS
000028	A9	CALCIUM ANTAGONISTS
000029	B0	EFFECT ENTIRE RESPIRATORY SYSTEM
000030	B3	AFFECT PRIMARILY TRACHEA/BRONCHI
000031	C0	AFFECT FLUID/ACID-BASE BALANCE/METABOLIC SYSTEMS
000032	C1	DRUGS AFFECTING ELECTROLYTE BALANCE
000033	C2	SUPPLYING ESSENTIAL SUBSTANCES, MISCELL.

Related Tables

[Hierarchical Ingredient Code Pharmacological Class Table](#)

[Hierarchical Ingredient Code Pharmacological Class Table--French](#)

HIC2_DESC

Hierarchical Pharmacological Class Code Description

a 50-character alphanumeric column that provides the text description for the Hierarchical Pharmacological Class Code Sequence Number ([HIC2_SEQN](#)).

Example—[HIC2_DESC](#) and associated columns

HIC2_SEQN	HIC2_DESC
000026	VASOACTIVE DRUGS
000027	DRUGS ACTING ON VEINS AND LYMPHATICS
000028	CALCIUM ANTAGONISTS
000029	EFFECT ENTIRE RESPIRATORY SYSTEM
000030	AFFECT PRIMARILY TRACHEA/BRONCHI
000031	AFFECT FLUID/ACID-BASE BALANCE/METABOLIC SYSTEMS
000032	DRUGS AFFECTING ELECTROLYTE BALANCE
000033	SUPPLYING ESSENTIAL SUBSTANCES, MISCELL.

Related Tables

[Hierarchical Ingredient Code Pharmacological Class Table](#)

HIC2_DESC_T

Hierarchical Pharmacological Class Code Description (Translated)

a 75-character alphanumeric column that provides the text description for the Hierarchical Pharmacological Class Code Sequence Number ([HIC2_SEQN](#)).

Related Tables

[Hierarchical Ingredient Code Pharmacological Class Table--French](#)

HIC2_ROOT

Hierarchical Pharmacological Class Code Parent HIC1 Sequence Number

a six-character numeric column that represents the HIC2's parent, the Hierarchical Organ System Code (**HIC1**).

The HIC2_ROOT is a synonym for the Hierarchical Organ System Code Sequence Number (**HIC1_SEQN**) in the Hierarchical Ingredient Code Organ System Code Table.

Example—HIC2_ROOT and associated columns

HIC2_SEQN	HIC1	HIC2	HIC2_DESC	HIC2_ROOT
000026	A	A7	VASOACTIVE DRUGS	000001
000027	A	A8	DRUGS ACTING ON VEINS AND LYMPHATICS	000001
000028	A	A9	CALCIUM ANTAGONISTS	000001
000029	B	B0	EFFECT ENTIRE RESPIRATORY SYSTEM	000002
000030	B	B3	AFFECT PRIMARILY TRACHEA/BRONCHI	000002
000031	C	C0	AFFECT FLUID/ACID-BASE BALANCE/METABOLIC SYSTEMS	000003
000032	C	C1	DRUGS AFFECTING ELECTROLYTE BALANCE	000003
000033	C	C2	SUPPLYING ESSENTIAL SUBSTANCES, MISCELL.	000003

Related Tables

[Hierarchical Ingredient Code Pharmacological Class Table](#)

[Hierarchical Ingredient Code Pharmacological Class Table--French](#)

HIC2_SEQN

Hierarchical Pharmacological Class Code Sequence Number

a six-character numeric column that represents a Hierarchical Pharmacological Class Code (**HIC2**). This number is a stable identifier.

The HIC2_SEQN is a permanent numeric identifier that represents the pharmacological classification of a given active ingredient (**HIC_SEQN**). The HIC2_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description for HIC2_SEQN 000030 is and will always be Affect Primarily Trachea/Bronchi.

Example—HIC2_SEQN and associated columns

HIC2_SEQN	HIC2	HIC2_DESC
000026	A7	VASOACTIVE DRUGS
000028	A9	DRUGS ACTING ON VEINS AND LYMPHATICS
000029	B0	CALCIUM ANTAGONISTS
000030	B3	EFFECT ENTIRE RESPIRATORY SYSTEM
000031	C0	AFFECT FLUID/ACID-BASE BALANCE/METABOLIC SYSTEMS
000032	C1	DRUGS AFFECTING ELECTROLYTE BALANCE
000033	C2	SUPPLYING ESSENTIAL SUBSTANCES, MISCELL.

Related Tables

[Hierarchical Ingredient Code Pharmacological Class Table](#)

[Hierarchical Ingredient Code Pharmacological Class Table--French](#)

HIC3

Hierarchical Specific Therapeutic Class Code

a three-character alphanumeric column that, depending on its context, identifies the specific therapeutic class of an ingredient (**HIC_SEQN**), a Clinical Formulation ID (**GCN_SEQNO**), or each ingredient in an Ingredient List (**HICL_SEQNO**). The HIC3 represents the first three characters of the Hierarchical Ingredient Code (**HIC**). The HIC3 serves as the primary identifier for FDB's Specific Therapeutic Classification system.

HIC3 in the context of an ingredient

In the context of an ingredient, the HIC3 uses the ingredient's HIC2 as a base value and adds a third character to complete the Specific Therapeutic Class Code. For example, the HIC2 value A1 represents the Pharmacological Class of Cardiac Stimulants, where the HIC3 value A1C represents the Specific Therapeutic Class of Inotropic Drugs.

You can find an ingredient's HIC3 using the navigation path pictured in the [Ingredient Classification Diagram](#).

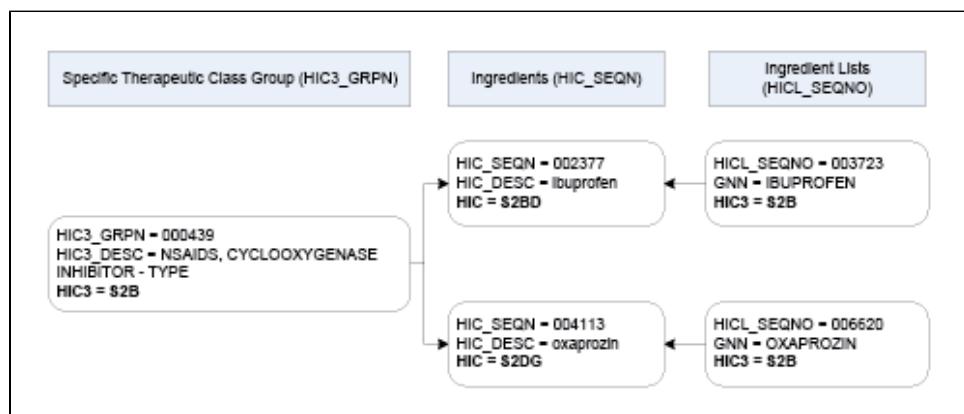
HIC3 in the context of a Clinical Formulation ID (GCN_SEQNO)

In the context of a Clinical Formulation ID (**GCN_SEQNO**), the specific therapeutic class is determined based on the formulation's ingredients taken into consideration as a whole. The Clinical Formulation ID's (**GCN_SEQNO**'s) HIC3 value depends on the therapeutic purpose of the entire formulation based on the judgment of FDB clinical staff. This field is not populated programmatically, and therefore no assumptions should be made about a formulation's HIC3 value based on the various HIC3 values of its ingredients.

You can find a clinical formulation's HIC3 by using the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR).

HIC3 in the context of a HICL_SEQNO

In the context of a HICL_SEQNO, the specific therapeutic class represents the "parent" HIC3 of each ingredient linked to the HICL_SEQNO. Multi-ingredient HICL_SEQNOs will have multiple HIC3 values. Additionally, the HIC3 value ignores any "continuation" HIC3s. See the illustrated example below and the discussion on the [HIC3_GRP](#) column for more information about continuation HIC3s.



The illustration above uses two ingredients, ibuprofen and oxaprozin, to show how HIC3 values in the context of a HICL_SEQNO represent the specific therapeutic classes of the ingredients in the HICL_SEQNO. Notice that oxaprozin has a HIC of **S2DG**. However, oxaprozin's HIC3 value of **S2B** (displayed on the left) and the HIC3 of HICL_SEQNO 006620 (displayed on the right) reflect its Specific Therapeutic Class of **S2B, “NSAIDS, CYCLOOXYGENASE INHIBITOR - TYPE”**. This example illustrates the fact that the HIC3 ignores “continuation” HIC3s; otherwise HICL_SEQNO 006620 might have a HIC3 of **S2D**, the first three characters of oxaprozin's HIC, and the data would incorrectly report that HICL_SEQNO 003723 and 006620 have ingredients that belong to different specific therapeutic classes.

You can find a HICL_SEQNO's HIC3 by using the [HICL_SEQNO/HIC3 Relation Table \(RHIC3L2_HIC3_HICLSEQNO_LINK\)](#).

Example - HIC3 and associated columns

HIC3_SEQN	HIC3	HIC3_DESC
000139	A1A	DIGITALIS GLYCOSIDES
000140	A1B	XANTHINES
000141	A1C	INOTROPIC DRUGS
000142	A1D	GENERAL BRONCHODILATOR AGENTS
000143	A2A	ANTIARRHYTHMICS
000144	A4A	HYPOTENSIVES,VASODILATORS
000145	A4B	HYPOTENSIVES,SYMPATHOLYTIC
000146	A4C	HYPOTENSIVES,GANGLIONIC BLOCKERS
000147	A4D	HYPOTENSIVES, ACE INHIBITORS
000148	A4E	HYPOTENSIVES,VERATRUM ALKALOIDS
000149	A4Y	HYPOTENSIVES,MISCELLANEOUS
000150	A6U	CARDIOVASCULAR DIAGNOSTICS-RADIOPAQUE
000151	A7A	VASOCONSTRICATORS,ARTERIOLAR
000152	A7B	VASODILATORS,CORONARY
000153	A7C	VASODILATORS,PERIPHERAL
000154	A7E	VASODILATORS,MISCELLANEOUS
000155	A8O	VENOSCLEROSING AGENTS

000156	A9A	CALCIUM CHANNEL BLOCKING AGENTS
000157	B0A	GENERAL INHALATION AGENTS
000158	B0P	INERT GASES

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[Hierarchical Ingredient Code Specific Therapeutic Class Table--French](#)

[Hierarchical Ingredient Code Specific Therapeutic Class Table](#)

[HICL_SEQNO/HIC3 Relation Table](#)

HIC3_DESC

Hierarchical Specific Therapeutic Class Code Description

a 50-character alphanumeric column that provides the text description for the Hierarchical Specific Therapeutic Class Code Sequence Number ([HIC3_SEQN](#)).

Example—HIC3_DESC and associated columns

HIC3_SEQN	HIC3_DESC
000139	DIGITALIS GLYCOSIDES
000140	XANTHINES
000141	INOTROPIC DRUGS
000142	GENERAL BRONCHODILATOR AGENTS
000143	ANTIARRHYTHMICS
000144	HYPOTENSIVES, VASODILATORS
000145	HYPOTENSIVES, SYMPATHOLYTIC
000146	HYPOTENSIVES, GANGLIONIC BLOCKERS
000147	HYPOTENSIVES, ACE INHIBITORS
000148	HYPOTENSIVES, VERATRUM ALKALOIDS
000149	HYPOTENSIVES, MISCELLANEOUS
000150	CARDIOVASCULAR DIAGNOSTICS-RADIOPAQUE
000151	VASOCONSTRICTORS, ARTERIOLAR
000152	VASODILATORS, CORONARY
000153	VASODILATORS, PERIPHERAL
000154	VASODILATORS, MISCELLANEOUS
000155	VENOSCLEROSING AGENTS
000156	CALCIUM CHANNEL BLOCKING AGENTS
000157	GENERAL INHALATION AGENTS
000158	INERT GASES

Related Tables

[Hierarchical Ingredient Code Specific Therapeutic Class Table](#)

HIC3_DESC_T

Hierarchical Specific Therapeutic Class Code Description (Translated)

a 75-character alphanumeric column that provides the text description for the Hierarchical Specific Therapeutic Class Code Sequence Number ([HIC3_SEQN](#)).

Related Tables

[Hierarchical Ingredient Code Specific Therapeutic Class Table--French](#)

HIC3_GRP

Hierarchical Specific Therapeutic Class Code Group ID

a six-character numeric column that identifies and groups continuation HIC3s. When the number of ingredients in a specific therapeutic class exceeds the available HIC4s (for example, P5AA...P5AZ), new HIC3s are assigned to continue the therapeutic class. These additional HIC3s are grouped together by the HIC3_GRP.

In the [Clinical Formulation ID Table](#) (RGCNSEQ4_GCNSEQNO_MSTR), the HIC3_GRP is the Hierarchical Specific Therapeutic Class Code Sequence Number ([HIC3_SEQN](#)), and all HIC4s are grouped together under the same parent HIC3.

Example—HIC3_GRP and associated columns

HIC3_SEQN	HIC3	HIC3_DESC	HIC3_GRP	HIC3_ROOT
000360	P5A	GLUCOCORTICOIDS	000360	000089
000361	P5B	GLUCOCORTICOIDS (CONTINUED 1)	000360	000089
000362	P5C	GLUCOCORTICOIDS (CONTINUED 2)	000360	000089
000439	S2B	NSAIDS, CYCLOOXYGENASE INHIBITOR - TYPE	000439	000104
003729	S2D	NSAIDS, CYCLOOXYGENASE INHIBITOR-TYPE (CONTINUED 1)	000439	000104
005829	S2E	NSAIDS, CYCLOOXYGENASE INHIBITOR-TYPE (CONTINUED 2)	000439	000104
009026	S2F	NSAIDS, CYCLOOXYGENASE INHIBITOR-TYPE (CONTINUED 3)	000439	000104

Related Tables

[Hierarchical Ingredient Code Specific Therapeutic Class Table](#)

[Hierarchical Ingredient Code Specific Therapeutic Class Table--French](#)

HIC3_RELNO

Hierarchical Specific Therapeutic Class Code Relative Number

a one-character numeric column that denotes the relative position of a Hierarchical Specific Therapeutic Class Code (HIC3) in the Ingredient List (HICL).

Example—HIC3_RELNO and associated columns

HICL_SEQNO	HIC3_SEQN	HIC3_RELNO	HIC3	HIC3_DESC
000016	000140	1	A1B	XANTHINES
000016	000291	2	J5A	ADRENERGIC AGENTS,CATECHOL AMINES
000016	000295	3	J5E	SYMPATHOMIMETIC AGENTS
000016	000175	4	C3H	IODINE CONTAINING AGENTS
000017	000140	1	A1B	XANTHINES
000017	000295	2	J5E	SYMPATHOMIMETIC AGENTS
000017	000175	3	C3H	IODINE CONTAINING AGENTS
000017	000256	4	H2D	BARBITURATES
000018	000140	1	A1B	XANTHINES
000018	000295	2	J5E	SYMPATHOMIMETIC AGENTS
000018	000256	3	H2D	BARBITURATES

Related Tables

[HICL_SEQNO/HIC3 Relation Table](#)

HIC3_ROOT

Hierarchical Specific Therapeutic Class Parent HIC2 Sequence Number

a six-character numeric column that represents the HIC3's parent, the Hierarchical Pharmacological Class Code ([HIC2](#)).

The HIC3_ROOT is a synonym for the Hierarchical Pharmacological Class Code Sequence Number ([HIC2_SEQN](#)) in the Hierarchical Ingredient Code Pharmacological Class Table.

Example—HIC3_ROOT and associated columns

HIC3_SEQN	HIC3	HIC3_DESC	HIC3_ROOT
009495	G8F	CONTRACEPTIVES, TRANSDERMAL	000054
009430	S2M	ANTI-FLAM. INTERLEUKIN-1 RECEPTOR ANTAGONIST	000104
009425	U5U	HERBAL DRUGS (CONTINUED 14)	000106
009493	V1S	INTRAPLEURAL SCLEROSING AGENTS, ANTINEOPLAST. ADJ.	000109
009360	W5K	ANTIVIRALS, HIV-SPECIFIC, NON-NUCLEOSIDE, RTI	000114
009528	Z2K	SEROTONIN (5HT-4) PARTIAL AGONIST AGENTS	000136
009515	B1C	PULMONARY ANTIHYPERTENSIVES, PROSTAGLANDIN-TYPE	004749
009499	W6A	DRUGS TO TREAT SEPSIS SYNDROME, NON-ANTIBIOTIC	009498

Related Tables

[Hierarchical Ingredient Code Specific Therapeutic Class Table](#)

[Hierarchical Ingredient Code Specific Therapeutic Class Table--French](#)

HIC3_SEQN

Hierarchical Specific Therapeutic Class Code Sequence Number

a six-character numeric column that represents a Hierarchical Specific Therapeutic Class Code ([HIC3](#)). This number is a stable identifier.

The HIC3_SEQN is a permanent numeric identifier that represents the specific therapeutic class of a given active ingredient ([HIC_SEQN](#)). The HIC3_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description for HIC3_SEQN 000140 is and will always be Xanthines.

Example—HIC3_SEQN and associated columns

HIC3_SEQN	HIC3	HIC3_DESC
000139	A1A	DIGITALIS GLYCOSIDES
000140	A1B	XANTHINES
000141	A1C	INOTROPIC DRUGS
000142	A1D	GENERAL BRONCHODILATOR AGENTS
000143	A2A	ANTIARRHYTHMICS
000144	A4A	HYPOTENSIVES,VASODILATORS
000145	A4B	HYPOTENSIVES,SYMPATHOLYTIC
000146	A4C	HYPOTENSIVES,GANGLIONIC BLOCKERS
000147	A4D	HYPOTENSIVES, ACE INHIBITORS
000148	A4E	HYPOTENSIVES,VERATRUM ALKALOIDS
000149	A4Y	HYPOTENSIVES,MISCELLANEOUS
000150	A6U	CARDIOVASCULAR DIAGNOSTICS-RADIOPAQUE
000151	A7A	VASOCONSTRICATORS,ARTERIOLAR
000152	A7B	VASODILATORS,CORONARY
000153	A7C	VASODILATORS,PERIPHERAL
000154	A7E	VASODILATORS,MISCELLANEOUS
000155	A8O	VENOSCLEROSING AGENTS
000156	A9A	CALCIUM CHANNEL BLOCKING AGENTS

000157	B0A	GENERAL INHALATION AGENTS
000158	B0P	INERT GASES

Related Tables[Clinical Formulation ID Table](#)[Clinical Formulation ID Table--French](#)[HICL_SEQNO/HIC3 Relation Table](#)[Hierarchical Ingredient Code Specific Therapeutic Class Table](#)[Hierarchical Ingredient Code Specific Therapeutic Class Table--French](#)

HIC4

Hierarchical Base Ingredient Code

a four-character alphanumeric column that represents the base active ingredient without salt ester. It is the fourth position of the Hierarchical Ingredient Code (**HIC**).

The HIC4 uses the active ingredient's HIC3 as its base value then adds a unique fourth character to complete the Base Ingredient Code. For example, the HIC3 value of A1C represents the Inotropic Drugs, where the HIC4 value A1CA specifies the Base Ingredient of Dobutamine.

Example—HIC4 and associated columns

HIC4_SEQN	HIC4	HIC4_DESC
000590	A1AA	digitalis leaf
000591	A1AB	gitalin
000592	A1AC	digitoxin
000593	A1AD	digoxin
000594	A1AE	lanatoside C

Related Tables

[Hierarchical Base Ingredient Code Table](#)

[Hierarchical Base Ingredient Code Table—French](#)

HIC4_DESC

Hierarchical Base Ingredient Code Description

a 50-character alphanumeric column that provides the text description for the Hierarchical Base Ingredient Code Sequence Number ([HIC4_SEQN](#)).

Example—HIC4_DESC and associated columns

HIC4_SEQN	HIC4_DESC
000590	digitalis leaf
000591	gitalin
000592	digitoxin
000593	digoxin
000594	lanatoside C

Related Tables

[Hierarchical Base Ingredient Code Table](#)

HIC4_DESC_T

Hierarchical Base Ingredient Code Description (Translated)

a 75-character alphanumeric column that provides the text description for the Hierarchical Base Ingredient Code Sequence Number ([HIC4_SEQN](#)).

Related Tables

[Hierarchical Base Ingredient Code Table--French](#)

HIC4_POTENTIALLY_INACTV_IND

Hierarchical Base Ingredient Code Sequence Number Potentially Inactive Indicator

a one-character numeric column that differentiates base ingredients that may require manual screening from those that never require manual screening. The values for this indicator are determined using U.S. products, and FDB cannot guarantee its validity for Canada Products.

Valid Values Table

HIC4_POTENTIALLY_INACTV_IND	Description
0	No manual screening necessary
1	Could contain inactive ingredients. If implicated in a patient's profile as an allergen, prescribed IDCs should be manually screened for this base ingredient.

Related Tables

[Hierarchical Base Ingredient Code Table](#)

[Hierarchical Base Ingredient Code Table—French](#)

HIC4_ROOT

Hierarchical Base Ingredient Parent HIC3 Sequence Number

a six-character numeric column that represents the HIC4's parent, the Hierarchical Specific Therapeutic Class Code ([HIC3](#)).

The HIC4_ROOT is a synonym for the Hierarchical Therapeutic Class Code Sequence Number ([HIC3_SEQN](#)) in the Hierarchical Ingredient Code Specific Therapeutic Class Table and Clinical Formulation ID Table.

Example—HIC4_ROOT and associated columns

HIC4	HIC4_DESC	HIC4_ROOT
A1AS	strophanthin	000139
A1AU	digitalis glycosides,mixed	000139
A1BA	caffeine	000140

Related Tables

[Hierarchical Base Ingredient Code Table](#)

[Hierarchical Base Ingredient Code Table—French](#)

HIC4_SEQN

Hierarchical Base Ingredient Code Sequence Number

a six-character numeric column that represents a Hierarchical Ingredient Base Code ([HIC4](#)). This number is a stable identifier.

The HIC4_SEQN is a permanent numeric identifier that represents the base ingredient code of a given active ingredient ([HIC_SEQN](#)). The HIC4_SEQN is a dumb number, assigned by FDB, that will never change. For example, the text description for HIC4_SEQN 000592 is and will always be Digitoxin.

Example—HIC4_SEQN and associated columns

HIC4_SEQN	HIC4	HIC4_DESC
000590	A1AA	digitalis leaf
000591	A1AB	gitalin
000592	A1AC	digitoxin
000593	A1AD	digoxin
000594	A1AE	lanatoside C

Related Tables

[Hierarchical Base Ingredient Code Table](#)

[Hierarchical Base Ingredient Code Table—French](#)

HIC_DESC

Hierarchical Ingredient Code Description

a 50-character alphanumeric column that provides the text description for a Hierarchical Ingredient Code Sequence Number ([HIC_SEQN](#)).

Sample Valid Values Table

HIC_SEQN	HIC_DESC
000602	theophylline
000603	theophylline anhydrous
000604	theophylline cal sal
000605	theophylline olamine
000606	theophylline procaine
000607	theophylline sod gly
000608	aminophylline
000609	dphylline
000610	oxtriphylline
000611	theobromine
000612	theobromine cal sal
000613	theobromine magnesium oleate
000614	dobutamine
000615	dobutamine HCl
000616	inamrinone lactate
000618	quinidine
000619	quinidine gluconate
000620	quinidine polygalacturonate
000621	quinidine sulfate
000622	procainamide HCl

Related Tables

[Hierarchical Ingredient Code Description Table](#)

HIC_DESC_T

Hierarchical Ingredient Code Description (Translated)

a 75-character alphanumeric column that provides the text description for a Hierarchical Ingredient Code Sequence Number ([HIC_SEQN](#)).

Related Tables

[Hierarchical Ingredient Code Description Table--French](#)

HIC_POTENTIALLY_INACTV_IND

Hierarchical Ingredient Code Sequence Number Potentially Inactive Indicator

a one-character numeric column that differentiates ingredients that may require manual screening from those that never require manual screening. The values for this indicator are determined using U.S. products, and FDB cannot guarantee its validity for Canada Products.

Valid Values Table

HIC_POTENTIALLY_INACTV_IND	Description
0	No manual screening necessary
1	Could contain inactive ingredients. If implicated in a patient's profile as an allergen, prescribed IDCs should be manually screened for this ingredient.

Related Tables

[Hierarchical Ingredient Code Description Table](#)

[Hierarchical Ingredient Code Description Table--French](#)

HIC_REL_NO

Hierarchical Ingredient Code Relative Number

a one-character numeric column that denotes the relative position an ingredient (HIC) occupies in the Ingredient List (HICL).

Example—HIC_REL_NO and associated columns

HICL_SEQNO	HIC_SEQN	HIC_REL_NO	HIC	HIC_DESC
000016	000602	1	A1BB	theophylline
000016	001778	2	J5AC	isoproterenol
000016	001820	3	J5EA	ephedrine
000016	000846	4	C3HB	potassium iodide
000017	000602	1	A1BB	theophylline
000017	001820	2	J5EA	ephedrine
000017	000846	3	C3HB	potassium iodide
000017	001406	4	H2DB	phenobarbital
000018	000602	1	A1BB	theophylline
000018	001821	2	J5EAHC	ephedrine HCl
000018	001406	3	H2DB	phenobarbital

Related Tables

[HICL_SEQNO/HIC Relation Table](#)

HIC REPL EFF DT

Hierarchical Ingredient Code Sequence Number Replacement Effective Date

an eight-character numeric column that identifies the date when the Hierarchical Ingredient Code Sequence Number (**HIC SEQN**) replacement became effective. The date format is YYYYMMDD.

Related Tables

[Ingredient Replacement History Table](#)

HIC_ROOT

Hierarchical Ingredient Parent HIC4 Sequence Number

a six-character numeric column that represents the ingredient without salt esters (the HIC4).

The HIC_ROOT is useful for purposes of grouping together ingredients with the same base, without regard to salt ester, or for duplicate therapy and allergy screening, when the salt esters are not known. The HIC_ROOT and the HIC_SEQN are the same for ingredients that do not have a salt ester.

Example—HIC_ROOT and associated columns

HIC_SEQN	HIC	HIC_DESC	HIC_ROOT
000600	A1BA	caffeine	000600
000601	A1BACI	caffeine citrated	000600
000602	A1BB	theophylline	000602
000603	A1BBAN	theophylline anhydrous	000602
000604	A1BBCS	theophylline cal sal	000602
000609	A1BD	dyphylline	000609
000610	A1BE	oxtriphylline	000610
000611	A1BJ	theobromine	000611
000612	A1BJCS	theobromine cal sal	000611

Related Tables

[Hierarchical Ingredient Code Description Table](#)

[Hierarchical Ingredient Code Description Table--French](#)

HIC_SEQN

Hierarchical Ingredient Code Sequence Number

a six-character numeric column that represents a distinct active or inactive ingredient within the database.

The HIC_SEQN is a dumb number attached to the Hierarchical Ingredient Code (**HIC**) and will never change for an ingredient.

Example—HIC_SEQN and associated columns

HIC_SEQN	HIC	HIC_DESC
005421	J5DO	formoterol
005426	Z9DI	Helicobacter pylori diag. test
005427	W1EACN	chloramphenicol cinnamate
005428	W1EAHI	chloramphenicol hemisuccinate
005435	H3DAIU	ammonium salicylate
005449	H6CS	zipeprol

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

[DAM Ingredient/Cross-Sensitivity Link Table](#)

[HIC_SEQN/HIC_SEQN Link Table](#)

[HIC/Chemical Abstracts Service Registry Number Relation Table](#)

[HICL_SEQNO/HIC Relation Table](#)

[Hierarchical Ingredient Code Description Table](#)

[Hierarchical Ingredient Code Description Table--French](#)

HICL_SEQNO

Ingredient List Identifier (formerly the Hierarchical Ingredient Code List Sequence Number)

a six-character numeric column that identifies a unique combination of active ingredients, irrespective of the manufacturer, package size, dosage form, route of administration, or strength. For example, **HICL_SEQNO 000222** identifies the following set of active ingredients:

- Guaifenesin
- Dextromethorphan HBr
- Pseudoephedrine HCl

The HICL_SEQNO is associated to one (or many) Clinical Formulation ID (**GCN_SEQNO**) to identify the active ingredients of the clinical formulation.

Example—HICL_SEQNO and associated columns

LN	GCN_SEQNO	HICL_SEQNO	HIC_SEQN	HIC_DESC
NEXIUM 40 MG CAPSULE	047526	021607	008919	esomeprazole mag
AUGMENTIN 400-57 SUSPENSION	025898	003962	002707 002809	amoxicillin trihydrate potassium clavulanate
TRIPLE ANTIBIOTIC OINTMENT	030026	003363	002777 002777 002777	neomycin sulfate bacitracin polymixin B

The HICL_SEQNO does not commonly contain inactive ingredients. See Ingredient List Identifier (**GCN_SEQNO**) for additional information.

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[HICL_SEQNO/HIC Relation Table](#)

[HICL_SEQNO/HIC3 Relation Table](#)

[Ingredient List Identifier \(formerly Hierarchical Ingredient Code List Sequence Number\) Description Table](#)

[Ingredient List Identifier Description Table--French](#)

[MED MED Concept/HICL_SEQNO Relation Table](#)

I

*IACIDENTN**IACTEXTN**IADDDE**IAMIDENTN**IAMREFCAT**IAMREFCATD**IAMREFCATD_T**IAMTEXTN**ICAAIG**ICABN**ICACOMP_CD**ICAFSCH**ICANMKDIN**ICAOTDTE**ICAPDIN**ICAPFSCH**ICAPROVCE**ICAREPDIN**ICD_BILLABLE_IND**ICD_BILLABLE_IND_DESC**ICD_CD**ICD_CD_TYPE**ICD_CD_TYPE_DESC**ICD_DESC**ICD_DESC_SOURCE_CD**ICD_DESC_SOURCE_DESC**ICD_FIRST_BILLABLE_DT**ICD_FIRST_DT*

ICD_LAST_BILLABLE_DT
ICD_LAST_DT
ICD_STATUS_CD
ICD_STATUS_DESC
IDC
ILBLRID
IMFGD
IMK_ADD_DATE
IMK_EXT_VOCAB_DESC
IMK_EXT_VOCAB_STATUS_CD
IMK_FDB_VOCAB_DESC
IMK_FDB_VOCAB_NO_ID
IMK_FDB_VOCAB_STATUS_CD
IMK_INACTIVE_DATE
IMK_PREFERRED_IND
IMK RELATED_IND
IMK_SCT_VALUE_SET_COMMENT
IMK_SCT_VALUE_SET_DESC
IMK_SCT_VALUE_SET_ID
INDCTS
INDCTS_DRUG_DESC
INDCTS_LBL
INDCTS_SN
INDLBLDESC
ING_STATUS_CD
ING_STATUS_CD_DESC
ING_STATUS_CD_DESC_T
IOBSDTE
IVMADCNT
IVMADMIX

IVMCCNT

IVMCOMP

IVMCOMPDSC

IVMMFG

IVMMFGD

IVMREMARK

IVMRMK

IVMRMKSEQ

IVMRMKSN

IVMRMKTYP

IVMRSLT

IVMSGRP

IVMSTR

IVMSTRU

IVMTESTSN

IVMTPNCNT

IVMTPNDSC

IVMTPNINGR

IVMTTYPE

IVMVOL

IVMVOLU

IACIDENTN

Drug-Drug Interaction Monograph Line Identifier (Consumer)

a one-character alphanumeric column that identifies the section of a consumer monograph.

Valid Values Table

IACIDENTN	IACTEXTN
A	How the Interaction Occurs
B	Blank Line
E	What Might Happen
L	Medical Warning
M	What You Should Do About This Interaction
R	References
T	Monograph Title
Z	Monograph Disclaimer

Related Tables

[Consumer Drug Interaction Monograph Text Table](#)

IACTEXTN

Drug-Drug Interaction Monograph Text (Consumer)

a 76-character alphanumeric column that provides the text for the section identified by the Consumer Drug-Drug Interaction Monograph Line Identifier (**IACIDENTN**).

Valid Values Table

IACIDENTN	IACTEXTN
A	How the Interaction Occurs
B	Blank Line
E	What Might Happen
L	Medical Warning
M	What You Should Do About This Interaction
R	References
T	Monograph Title
Z	Monograph Disclaimer

Related Tables

[Consumer Drug Interaction Monograph Text Table](#)

IADDTE

IDDF Add Date

an eight-character numeric column that provides the date on which a drug record was added to the IDDF Canada database by FDB. This field is never unspecified. The date format is CCYYMMDD.

Sample Valid Values Table

DIN	ICABN	IADDTE
00013285	VALIUM 5 TAB	19921216
02242925	APO-WARFARIN	20010108
02099233	GLUCOPHAGE - TAB 500MG	19950310

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

IAMIDENTN

Drug-Drug Interaction Monograph Line Identifier

a one-character alphanumeric column that identifies a section of the professional monograph.

Valid Values Table

IAMIDENTN	IAMTEXTN
A	Mechanism of Action
B	Blank Line
D	Discussion
E	Clinical Effects
L	Severity Level
M	Patient Management
P	Predisposing Factors
R	References
T	Monograph Title

Related Tables

[Drug-Drug Interaction Monograph Text Table](#)

IAMREFCAT

Drug-Drug Interaction Reference Category Line Identifier

a one-character alphanumeric column that identifies the type of reference that appears in a drug-drug monograph.

This information is provided to assist clinicians with evaluating the available documentation for a drug-drug interaction.

Valid Values Table

IAMREFCAT	IAMREFCATD
1	Manufacturer's Information
2	Human Clinical Trial
3	Case Report
4	Meeting Abstract
5	In vitro/Animal Study
6	Review

Related Tables

[Consumer Drug Interaction Monograph Text Table](#)

[Drug-Drug Interaction Monograph Text Table](#)

[Drug-Drug Reference Category Description Table](#)

[Drug-Drug Reference Category Description Table--French](#)

IAMREFCATD

Drug-Drug Interaction Reference Category Description

a 40-character alphanumeric column that provides the text description for the Drug-Drug Interaction Reference Category Line Identifier (**IAMREFCAT**). This information is provided to assist clinicians with evaluating the available documentation for a drug-drug interaction.

Valid Values Table

IAMREFCAT	IAMREFCATD
3	Case Report
2	Human Clinical Trial
5	In vitro/Animal Study
1	Manufacturer's Information
4	Meeting Abstract
6	Review

Related Tables

[Drug-Drug Reference Category Description Table](#)

IAMREFCATD_T

Drug-Drug Interaction Reference Category Description (Translated)

a 60-character alphanumeric column that provides the text description for the Drug-Drug Interaction Reference Category Line Identifier (IAMREFCAT).

This information is provided to assist clinicians with evaluating the available documentation for a drug-drug interaction.

Related Tables

[Drug-Drug Reference Category Description Table--French](#)

IAMTEXTN

Drug-Drug Interaction Monograph Text

a 76-character alphanumeric column that provides the text for the section identified by the Drug-Drug Interaction Monograph Line Identifier (**IAMIDENTN**).

Valid Values Table

IAMIDENTN	IAMTEXTN
B	Blank Line
E	Clinical Effects
D	Discussion
A	Mechanism of Action
T	Monograph Title
M	Patient Management
P	Predisposing Factors
R	References
L	Severity Level

Related Tables

[Drug-Drug Interaction Monograph Text Table](#)

ICAAIG

Canadian Active Ingredient Group

a 10-character alphanumeric column that provides Active Ingredient Group Code for a specified product.

The Active Ingredient Group identifies products that have the same ingredient(s) and ingredient strength(s).

The AIG number is assigned by the Therapeutic Products Programme through the Drug Product Database and groups products on the basis of active ingredients.

An AIG number is comprised of three portions:

- the number of active ingredients (2 digits)
- the active ingredient group (5 digits) identifies the unique groups of active ingredients
- the active ingredient group strength (3 digits), uniquely identifies active ingredient strengths for each active ingredient group. The strength group has a tolerance of -2% to +10%.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICABN

Canadian Product Name

a 64-character alphanumeric column that supplies the product name issued by the Therapeutic Products Directorate for a specified product. The column size is 64 characters, but most names are 43 characters or less.

The Canadian Product Name (ICABN) is not the same as the Brand Name (**BN**) or the Label Name (**LN**) of a drug product (**DIN**). The Canadian Product Name is issued by the Therapeutic Products Directorate, where Brand Names and Label Names are created and maintained by FDB.

Sample Valid Values Table

DIN	ICABN
00010332	ENTROPHEN 325MG TABLETS
00010340	ENTROPHEN ECT 650MG
00013285	VALIUM 5 TAB
00013668	ATASOL FORTE TAB 500MG
00013765	VIVOL 5MG
00016349	ELAVIL TAB 50MG
00018635	NADOPEN V 200
00021482	NOVO-HYDRAZIDE 50MG
00021695	NOVO-PREDNISONE 5MG
00026158	SENOKOT TABLETS
00030937	PROVERA 5MG TABLETS
00037427	NOVO-TRIPTYN TAB 50MG
00092703	HYDROCHLOROTHIAZIDE TABLETS 50MG
00092746	ASA TAB 325MG ENTERIC COATED
00092762	ASA ECT 650MG
00156604	HYDROCHLOROTHIAZIDE 50
00156876	PREDNISONE TAB 5MG
00216666	NOVASEN TAB 325MG
00229296	NOVASEN ECT 650MG
00232378	NOVO-PREDNISONE TAB 50MG

Related Tables

IDDF Canada Drug Product Table

IDDF Canada Drug Product Table--French

ICACOMP_CD

Company Code

a six-character numeric column that provides the six-digit Company Code assigned to the Manufacturer/Distributor by Health Canada.

ICACOMP_CD replaces MedKnowledge's previous manufacturer three digit alpha code, the Canadian Manufacturer Code (ICAMFG). Health Canada provides a six-digit format called COMPANY_CODE in Canada's Drug Product Database (DPD).

- i** In 2003 Health Canada stopped assigning new three digit Alpha codes, but still maintains the existing Alpha codes.

Zero (0) values occur in the ICACOMP_CD column for two reasons:

- The manufacturer (MFR) has not yet been added to the DPD.
- The MFR was entered into the FDB database before the capture of the ICACOMP_CD data began and once the capture of MFR data began, the MFR had since been removed from the DPD, making it inactive. The DPD, unlike FDB, does not keep a record of removed (inactive) MFRs. FDB started capturing the ICACOMP_CD data at the beginning of 2004.

- i** The DPD does not assign zero values to MFRs. If a MFR is on the DPD, a value is assigned to it.

Full text manufacturer descriptions are provided by the Manufacturer Description ([IMFGD](#)).

Sample valid values for this column appear in the table below:

Example—ICACOMP_CD and associated columns

ILBLRID	IMFGD	ICACOMP_CD
CA0753	AGSA DENTAL PRODUCTS	000000
CA0754	AIR GUARD CONTROL INC	000000
CA0755	AIR PRODUCTS CANADA LTD	003631
CA0756	AJAX MAINTENANCE SUPPLY CO LTD	000000
CA0757	AKORN PHARMS CANADA INC	003590
CA0758	AKPHARMA INC	000000
CA0759	ALBERT PHARMA INC	000000
CA0760	ALBI IMPORTS LTD	000000
CA0761	ALBION LABORATORIES INC	003537

CA0763	ALCON CANADA INC	003594
CA0766	GALDERMA CANADA INC	004225
CA0772	ALIMENTEX INC 004225	004225
CA0773	ALIVE VITAMINS	003603
CA0774	ALL STARS SALES AND SERVICE LTD	000000
CA0775	ALLEN & HANBURYS A GLAXO CANADA LTD CO	000000
CA0776	ALLEREX LABORATORY LTD	000000
CA0777	ALLERGAN INC	003574

Related Tables[IDDF Canada Labeler \(MFG\) Identifier Description Table](#)

ICAFSCH

Canadian Federal Regulatory Code

a one-character alphanumeric column that denotes the classification schedule for a specified drug.

ICAFSCH is based on the code created by the Canadian Federal Government and covers all products under the Therapeutic Products Directorate.

Valid Values Table

ICAFSCH	Description
A	Homeopathic drug products.
C	Controlled drugs (Controlled Drugs fall under Schedule G [all sections] in the Food and Drug Regulations).
D	Biologicals (Biologicals fall under Schedule G [all sections] in the Food and Drug Regulations).
E	Ethical.
N	Narcotic drugs (Narcotics are covered under the Narcotics Control Regulations).
O	Over the counter.
P	Prescription drugs (See Schedule F in the Food and Drug Regulations).
R	CDSA Recommended (See CDSA Recommended in the Food and Drug Regulations).
T	Targeted (Targeted drugs fall under the Benzodiazepines and Other Targeted Substances Regulations).
NULL	The product is listed as a Not Marketed Item. Note: Notice of Compliance (NOC) items are not listed in the DPD. NOC lists are a separate entity on the Health Canada website and do not include federal schedule codes. Since the NOC list does not include the federal schedule code, NOCs are added to the MedKnowledge database as Not Marketed products and usually without a federal schedule code.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICANMKDIN

Not Marketed DIN Indicator

a one-character alphanumeric column that identifies whether a product is available on the market.

A value of '0' indicates that the product is available or was available on the market. This flag only trips the first time the product appears on the DPD download and only if the product already exists in the data.

If the product is from the NOC, it is a "1" and changes to "0" when it appears on the DPD.

Valid Values Table

ICANMKDIN	Description
0	Product is or has been active on the market
1	Product is not available on the market at the time the product was added from the Notice of Compliance (NOC) from the Health Canada website

-  Since this flag has only been in effect since 1996, some older (pre-1996) DINs may still not be marketed even though the field value is '0'.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICAOTDTE

IDDF CA Ottawa Disc Date

an eight-character numeric column that provides the date on which a product is no longer active. The date format is CCYYMMDD.

This column contains obsolete dates supplied by the Drug Product Database (DPD), which is maintained by Health Canada. Health Canada marks products as discontinued when they receive notification from the manufacturer.

Originally, this field was used by FDB to record when a product no longer appeared on the CDIC tapes that came from Health Canada. However, starting in 1997, Health Canada added discontinued products with the discontinued date provided by the manufacturer to the DPD. This information is now placed in this field.

ICAOTDTE is initialized to 0 when unspecified.

Sample Valid Values Table

DIN	ICABN	ICAOTDTE
00364142	MOTRIN TABLETS 400MG	20020514
02043661	SERAX TABLETS 15MG	20020517
02180758	STCC-CEPHALEXIN -TAB 250MG	20020731

This date is NOT the same as the IDDF Obsolete Date ([IOBSDTE](#)).

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICAPDIN

Canadian Previous Drug Identification Number

an eight-character alphanumeric column that historically contained the Drug Identification Number previously used for a specified product.

ICAPDIN is a historical column that has zero values (00000000) only.

Example—ICAPDIN and associated columns

DIN	ICABN	ICAPDIN
01918338	COUMADIN TAB 2MG	00000000
01933558	ADVIL IBUPROFEN TAB 200MG	00000000
01949292	RIVA-SENNNA TAB 8.6MG	00000000
02025302	RISPERDAL TAB 3MG	00000000
02042487	MARVELON 21 TAB	00000000
02042479	MARVELON 28 TAB	00000000
02031094	LAMISIL CRM 1%	00000000
01917056	ARTHROTEC 50	00000000
01916866	CLAVULIN 250 TAB	00000000
01916858	CLAVULIN 500 F TAB	00000000
01916882	CLAVULIN 125 F ORAL SUS	00000000
01940481	PAXIL TAB 20MG	00000000
02031116	LAMISIL TAB 250MG	00000000
02010739	PROVERA PAK 5MG TABLETS	00000000
01918354	COUMADIN TAB 5MG	00000000
01916475	PERCOCET	00000000
01916548	ENDOCET	00000000
02042541	ORTHO-CEPT TABLETS (21 DAY)	00000000
02028700	TRI-CYCLEN TABLETS - 21-DAY	00000000
02029421	TRI-CYCLEN TABLETS - 28-DAY	00000000
02042533	ORTHO-CEPT TABLETS (28 DAY)	00000000

This column is no longer populated with active data.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICAPFSCH

Canadian Federal Regulatory Code-PREV

a one-character alphanumeric column that contains the previous Federal Regulatory Code for the drug, if the code has changed.

Valid Values Table

ICAPFSCH	Description
A	Homeopathic drug products
C	Controlled drugs (Controlled Drugs fall under Schedule G (all sections) in the Food and Drug Regulations.)
D	Biologicals (Biologicals fall under Schedule G (all sections) in the Food and Drug Regulations.)
E	Ethical
N	Narcotic drugs (Narcotics are covered under the Narcotics Control Regulations)
O	Over the counter
P	Prescription drugs (See Schedule F in the Food and Drug Regulations)
T	Targeted (Targeted drugs fall under the Benzodiazepines and Other Targeted Substances Regulations)
NULL	The product is listed as a Not Marketed Item. Note: Notice of Compliance (NOC) items are not listed in the DPD. NOC lists are a separate entity on the Health Canada website and do not include federal schedule codes. Since the NOC list does not include the federal schedule code, NOCs are added to the MedKnowledge database as Not Marketed products and usually without a federal schedule code.

In the following example, Humulin N Cartridge was previously classified as E (Ethical) and is now classified as D (Biologicals).

Example—ICAPFSCH and associated columns

DIN	ICABN	ICAFSCH	ICAPFSCH
01959239	HUMULIN N CARTRIDGE	D	E

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICAPROVCE

Province Abbreviation

This column remains blank. The identifier is no longer relevant due to the removal of all Provincial Identification Numbers (PINs) from the Canadian database.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICAREPDIN

Replacement DIN

an eight-character alphanumeric column that historically tied a pre-existing DIN to the new DIN replacing it.

ICAREPDIN is a historical column that has zero values (00000000) only.

Example—ICAREPDIN and associated columns

DIN	ICABN	ICAREPDIN
01968440	CYCLEN TABLETS (21 DAY)	00000000

 This column is no longer populated with active data.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

ICD_BILLABLE_IND

FML ICD Billable Indicator

a one-character numeric column that indicates whether an ICD code is billable.

Valid Values Table

ICD_BILLABLE_IND	ICD_BILLABLE_IND_DESC
0	Not billable
1	Billable
9	No Value

Related Tables

[FML ICD Billable Description Table](#)

[FML ICD Code Description Table](#)

ICD_BILLABLE_IND_DESC

FML ICD Billable Indicator Description

a 50-character alphanumeric column that provides the text description of an ICD Billable Indicator ([ICD_BILLABLE_IND](#)).

Valid Values Table

ICD_BILLABLE_IND	ICD_BILLABLE_IND_DESC
0	Not billable
1	Billable
9	No Value

Related Tables

[FML ICD Billable Description Table](#)

ICD_CD

International Classification of Diseases (ICD) Code

a ten-character alphanumeric column that contains the specific code that is assigned to a health-related condition or procedure.

Sample Valid Values Table

ICD_CD	ICD_CD_TYPE	ICD_DESC	ICD_DESC_SOURE_CD	ICD_STATUS_CD	ICD_ADD_DT
668.2	01	Central Nervous System Complications of Anesthesia in Delivery	02	0	20100901
668.20	01	CNS COMPL LABOR/DEL-UNSP	01	0	20100901

Related Tables

[FML ICD All Descriptions Table](#)

[FML ICD Billable History Table](#)

[FML ICD Code Description Table](#)

ICD_CD_TYPE

FML ICD Code Type

a two-character alphanumeric column that provides the type of ICD code.

Valid Values Table

ICD_CD_TYPE	ICD_CD_TYPE_DESC
01	ICD-9-CM Diseases and Injuries (001-999)
02	ICD-9-CM Procedures (01-99)
03	ICD-9-CM V-Codes
04	ICD-9-CM E-Codes
05	ICD-10-CM
06	ICD-10-PCS
07	ICD10AM 6th Edition

Related Tables

[FML ICD All Descriptions Table](#)

[FML ICD Billable History Table](#)

[FML ICD Code Description Table](#)

[FML ICD Code Type Description Table](#)

[FML ICD Search Exclusion Table](#)

[FML ICD Search Table](#)

ICD_CD_TYPE_DESC

FML ICD Code Type Description

a 50-character alphanumeric column that provides the text description for the FML ICD Code Type ([ICD_CD_TYPE](#)).

Valid Values Table

ICD_CD_TYPE	ICD_CD_TYPE_DESC
01	ICD-9-CM Diseases and Injuries (001-999)
02	ICD-9-CM Procedures (01-99)
03	ICD-9-CM V-Codes
04	ICD-9-CM E-Codes
05	ICD-10-CM
06	ICD-10-PCS
07	ICD10AM 6th Edition

Related Tables

[FML ICD Code Type Description Table](#)

ICD_DESC

International Classification of Diseases (ICD) Code Description

a 500-character alphanumeric column that contains the text description of the ICD Code ([ICD_CD](#)).

Sample Valid Values Table

ICD_CD	ICD_CD_TYPE	ICD_DESC	ICD_DESC_SOURCE_CD	ICD_STATUS_CD	ICD_ADD_DT
671.3	01	Antepartum Deep Vein Thrombosis	02	0	20100901
671.30	01	DEEP THROMB ANTEPAR-UNSP	01	0	20100901

Related Tables

[FML ICD All Descriptions Table](#)

[FML ICD Code Description Table](#)

ICD_DESC_SOURCE_CD

FML ICD Description Source Code

a two-character alphanumeric column that identifies the source of the ICD code.

Valid Values Table

ICD_DESC_SOURCE_CD	ICD_DESC_SOURCE_DESC
01	Centers for Medicare & Medicaid Services (CMS)
02	First Databank
03	National Center for Health Statistics (NCHS) Long
04	National Center for Health Statistics (NCHS) Short
05	Kingdom of Saudi Arabia - Ministry of Health

Related Tables

[FML ICD All Descriptions Table](#)

[FML ICD Code Description Table](#)

[FML ICD Description Source Description Table](#)

ICD_DESC_SOURCE_DESC

FML ICD Source Code Description

a 50-character alphanumeric column that provides the description for an FML ICD Description Source Code ([ICD_DESC_SOURCE_DESC](#)).

Valid Values Table

ICD_DESC_SOURCE_CD	ICD_DESC_SOURCE_DESC
01	Centers for Medicare & Medicaid Services (CMS)
02	First Databank
03	National Center for Health Statistics (NCHS) Long
04	National Center for Health Statistics (NCHS) Short
05	Kingdom of Saudi Arabia - Ministry of Health

Related Tables

[FML ICD Description Source Description Table](#)

ICD_FIRST_BILLABLE_DT

FML ICD First Billable Date

an eight-character numeric column that provides the date that the ICD-10 code is first accepted for billing by the Centers for Medicare & Medicaid Services. The date format is YYYYMMDD.

Sample Valid Values Table

ICD_CD	ICD_CD_TYPE	ICD_FIRST_BILLABLE_DT	ICD_LAST_BILLABLE_DT
275.0	01	20100901	20101001

Related Tables

[FML ICD Billable History Table](#)

ICD_FIRST_DT

FML ICD First Date

an eight-character numeric column that provides the Valid for use from date established by the Centers for Medicare & Medicaid Services (CMS). It is the date on which the ICD-10 code is first available for use in medical coding. The date format is YYYYMMDD.

Sample Valid Values Table

ICD_CD	ICD_CD_TYPE	ICD_DESC	ICD_DESC_SOURE_CD	ICD_FIRST_DT	ICD_LAST_DT
665.0	01	Rupture of Uterus Before Labor	02	20100901	
665.00	01	PRELABOR RUPT UTER-USNP	01	20100901	
665.01	01	PRELABOR RUPT UTERUS-DEL	01	20100901	

Related Tables

[FML ICD Code Description Table](#)

ICD_LAST_BILLABLE_DT

FML ICD Last Billable Date

an eight-character numeric column that provides the date when the ICD is last accepted for billing by the Centers for Medicare & Medicaid Services. The date format is YYYYMMDD.

Sample Valid Values Table

ICD_CD	ICD_CD_TYPE	ICD_FIRST_BILLABLE_DT	ICD_LAST_BILLABLE_DT
275.0	01	20100901	20101001

Related Tables

[FML ICD Billable History Table](#)

ICD_LAST_DT

FML ICD Last Date

an eight-character numeric column that provides the date on which the ICD code was last valid for use in medical coding. This date is established by the Centers for Medicare & Medicaid Services (CMS). Date format is YYYYMMDD.

Sample Valid Values Table

ICD_CD	ICD_CD_TYPE	ICD_DESC	ICD_DESC_SOURE_CD	ICD_FIRST_DT	ICD_LAST_DT
665.0	01	Rupture of Uterus Before Labor	02	20100901	
665.00	01	PRELABOR RUPT UTER-USNP	01	20100901	
665.01	01	PRELABOR RUPT UTERUS-DEL	01	20100901	

Related Tables

[FML ICD Code Description Table](#)

ICD_STATUS_CD

FML ICD Status Code

a one-character alphanumeric column that provides the status of an ICD Code.

Valid Values Table

ICD_STATUS_CD	ICD_STATUS_DESC
0	Live
2	Retired

Related Tables

[FML ICD Code Description Table](#)

[FML ICD Status Description Table](#)

ICD_STATUS_DESC

FML ICD Status Code Description

a 50-character alphanumeric column that provides the text description of an FML ICD Status Code ([ICD_STATUS_CD](#)).

Valid Values Table

ICD_STATUS_CD	ICD_STATUS_DESC
0	Live
2	Retired

Related Tables

[FML ICD Status Description Table](#)

IDC

FDB International Drug Code

an 11-character alphanumeric column that provides a record number created and maintained by FDB.

The first two characters identify the country and the remaining nine characters identify the record, using zeros as place holders.

The two-character country identifier for Canada is 03.

The following table shows sample IDCs and their corresponding DINs and Canadian Brand Names

Example—IDC and associated columns

IDC	DIN	ICABN
03000000221	00010332	ENTROPHEN 325MG TABLETS
03000000222	00010340	ENTROPHEN ECT 650MG
03000000294	00013285	VALIUM 5 TAB
03000000319	00013668	ATASOL FORTE TAB 500MG
03000000323	00013765	VIVOL 5MG
03000000421	00016349	ELAVIL TAB 50MG
03000000448	00018635	NADOPEN V 200
03000000488	00021482	NOVO-HYDRAZIDE 50MG
03000000499	00021695	NOVO-PREDNISONE 5MG
03000000646	00026158	SENOKOT TABLETS
03000000833	00030937	PROVERA 5MG TABLETS
03000000928	00037427	NOVO-TRIPTYN TAB 50MG
03000001321	00092703	HYDROCHLOROTHIAZIDE TABLETS 50MG
03000001324	00092746	ASA TAB 325MG ENTERIC COATED
03000001326	00092762	ASA ECT 650MG
03000001845	00156604	HYDROCHLOROTHIAZIDE 50
03000001853	00156876	PREDNISONE TAB 5MG

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

IDDF Canada Packaged Product Master Table

MED IDC to Generic Medication ID Cross-Reference Table

MED IDC to Medication ID Cross-Reference Table

MED IDC/Generic MEDID Move History Reason Table

MED IDC/Generic MEDID Relation History Table

MED IDC/MEDID Move History Reason Table

MED IDC/MEDID Relation History Table

Routed Generic IDC Link Table

ILBLRID

IDDF MFG/Labeler Unique Identifier

a six-character alphanumeric column that identifies a manufacturer for a specified product.

The ILBLRID is created and maintained by FDB. The first 2 bytes are the ISO code for the country and the remaining 4 bytes are the number for the manufacturer. The ISO code for Canada is CA.

The full text name for the manufacturer is provided by the Manufacturer Description (IDDF) column (**IMFGD**); a brief name is provided by Manufacturer/Distributor Name column (MFG); the Canadian Manufacturer code is provided by the Comprehensive Canadian Manufacturer Code column (**ICACOMP**) or, if the product has not been active between August 2003 and the present, the Canadian Manufacturer Code column (**ICAMFG**).

Sample Valid Values Table

ILBLRID	MFG	IMFGD	ICAMFG	ICACOMP
CA0743	ACO PRODUCTS	ACO PRODUCTS DIV DAWSON TRADERS LTD	ACR	0
CA0766	GALDERMA CANADA	GALDERMA CANADA INC	GAC	0
CA0832	ARROW INT'L INC	ARROW INTERNATIONAL INC	AIX	0
CA0836	ASSEJA LABS INC	ASSEJA LABS INC	ASJ	0
CA0837	ASSOC. DENTAL	ASSOCIATED DENTAL PRODUCTS LTD	ADP	0
CA0838	ASTA MEDICA	ASTA MEDICA LTD.	ATM	0
CA0839	ASTRA PHARMA	ASTRA PHARMA INC	AST	0
CA0860	BAKER CUMMINS	BAKER CUMMINS DIV OF SCHERING CANADA I	BAK	0
CA0861	BAKER NORTON	BAKER NORTON PHARMACEUTICALS INC.	BNL	0
CA0863	BALLARD MEDICAL	BALLARD MEDICAL PRODUCTS	BAL	0
CA0864	BARKER & DOBSON	BARKER & DOBSON (M)	BDX	0
CA0865	BARNES HIND CA	BARNES HIND CANADA	BHI	0
CA0866	BARRY LABS.	BARRY LABORATORIES	BAR	0

CA0891	BEIERSDORF CA	BEIERSDORF CANADA INC	BEI	0
CA0893	BEL ART PRODUCT	BEL ART PRODUCTS	BAP	0
CA0957	BOEHRINGER MANN	BOEHRINGER MANNHEIM CANADA LTD	BOM	0
CA0960	BOEHRINGER ING.	BOEHRINGER INGELHEIM (CANADA) LTD	BOE	0
CA0991	BRITISH COD LIV	BRITISH COD LIVER OILS LIMITED	BCB	0
CA1017	CANADIAN CUSTOM	CANADIAN CUSTOM PACKAGING	CCP	0
CA1021	CANADIAN OXYGEN	CANADIAN OXYGEN LIMITED	CXG	0
CA1022	CANAPHARM INC	CANAPHARM INC	CPG	0
CA1023	CANDERM PHARM	CANDERM PHARMACAL LTD	CDX	0
CA1044	JAMIESON LAB	JAMIESON LABORATORIES	JAM	0
CA1127	COOPERVISION	COOPERVISION INC	CEV	0
CA1160	CYANAMID CANADA	CYANAMID CANADA INC	CYM	0
CA1294	ERNO LASZLO	ERNO LASZLO (CANADA) INC	ELZ	0
CA1500	HUNTINGTON LABS	HUNTINGTON LABORATORIES CANADA LTD	HUN	0

The following example table shows the manufacturer information for drug products specified by DIN.

DIN	ICABN	ILBRID	IMFG
00013285	VALIUM 5 TAB	CA1487	HOFFMANN-LAROCHE LTD
01916866	CLAVULIN 250 TAB	CA6158	GLAXO SMITHKLINE
02242925	APO-WARFARIN	CA0820	APOTEX INC

Related Tables

[IDDF Canada Drug Product Table](#)

IDDF Canada Drug Product Table--French

IDDF Canada Labeler (MFG) Identifier Description Table

IMFGD

Manufacturer Description (IDDF)

a 50-character alphanumeric column that provides the full text of the manufacturer name for a specified IDDF MFG/Labeler Unique Identifier (**ILBLRID**).

Sample Valid Values Table

ILBLRID	IMFGD
CA0743	ACO PRODUCTS DIV DAWSON TRADERS LTD
CA0766	GALDERMA CANADA INC
CA0832	ARROW INTERNATIONAL INC
CA0836	ASSEJA LABS INC
CA0837	ASSOCIATED DENTAL PRODUCTS LTD
CA0838	ASTA MEDICA LTD.
CA0839	ASTRA PHARMA INC
CA0860	BAKER CUMMINS DIV OF SCHERING CANADA I
CA0861	BAKER NORTON PHARMACEUTICALS INC.
CA0863	BALLARD MEDICAL PRODUCTS
CA0864	BARKER & DOBSON (M)
CA0865	BARNES HIND CANADA
CA0866	BARRY LABORATORIES
CA0891	BEIERSDORF CANADA INC
CA0893	BEL ART PRODUCTS
CA0957	BOEHRINGER MANNHEIM CANADA LTD
CA0960	BOEHRINGER INGELHEIM (CANADA) LTD
CA0991	BRITISH COD LIVER OILS LIMITED
CA1017	CANADIAN CUSTOM PACKAGING
CA1021	CANADIAN OXYGEN LIMITED
CA1022	CANAPHARM INC
CA1023	CANDERM PHARMACAL LTD
CA1044	JAMIESON LABORATORIES
CA1127	COOPERVISION INC

CA1160	CYANAMID CANADA INC
CA1294	ERNO LASZLO (CANADA) INC
CA1500	HUNTINGTON LABORATORIES CANADA LTD

Related Tables

IDDF Canada Labeler (MFG) Identifier Description Table

IMK_ADD_DATE

IMK Add Date

an eight-character alphanumeric column that provides the date on which the value set was added to the SNOMED CT Module. The date format is YYYYMMDD.

Related Tables

[SNOMED CT Value Set Description Table](#)

[SNOMED CT Value Set Table](#)

IMK_EXT_VOCAB_DESC

IMK External Vocabulary Description

a 255-character alphanumeric column that provides the text description for a given IMK External Vocabulary Identifier.

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_EXT_VOCAB_STATUS_CD

IMK External Vocabulary Status Code

a one-character numeric column that provides the status of a given IMK External Vocabulary Identifier (IMK_EXT_VOCAB_ID).

Valid Values Table

IMK_EXT_VOCAB_STATUS_CD	Description
0	Live
2	Retired

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_FDB_VOCAB_DESC

IMK FDB Vocabulary Description

a 255-character alphanumeric column that provides the text description for the IMK FDB Vocabulary Identifier ([IMK_FDB_VOCAB_NO_ID](#)).

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_FDB_VOCAB_NO_ID

IMK FDB Vocabulary Identifier

an eight-character numeric column that identifies a given FDB vocabulary concept.

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_FDB_VOCAB_STATUS_CD

IMK FDB Vocabulary Status Code

a one-character numeric column that provides the status of a given IMK FDB Vocabulary Identifier ([IMK_FDB_VOCAB_NO_ID](#)).

Valid Values Table

IMK_FDB_VOCAB_STATUS_CD	Description
0	Live
1	Replaced
2	Retired

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_INACTIVE_DATE

IMK Inactive Date

an eight-character alphanumeric column that provides the date on which the value set became inactive in the SNOMED CT Module. The date format is YYYYMMDD.

Related Tables

[SNOMED CT Value Set Description Table](#)

[SNOMED CT Value Set Table](#)

IMK_PREFERRED_IND

IMK Preferred Indicator

a one-character alphanumeric column that indicates a preferred link.

Valid Values Table

IMK_PREFERRED_IND	Description
0	Not Preferred
1	Preferred

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_Related_Ind

IMK Related Indicator

a one-character alphanumeric column that indicates whether related ingredients are used to create the link.

Valid Values Table

IMK_Related_Ind	Description
0	Linked using actual Ingredients
1	Linked using related Ingredients

Related Tables

[SNOMED CT to FDB Link Table](#)

IMK_SCT_VALUE_SET_COMMENT

IMK SNOMED CT Value Set Comment

a 255-character alphanumeric column that provides narrative information related to the intended purpose of the value set and authoritative sources of the subset definition when available (such as HL7, National Quality Forum, Joint Commission).

Related Tables

[SNOMED CT Value Set Description Table](#)

IMK_SCT_VALUE_SET_DESC

IMK SNOMED CT Value Set Description

a 255-character alphanumeric column that provides a text description for the IMK SNOMED CT Value Set Identifier ([IMK_SCT_VALUE_SET_ID](#)).

Valid Values Table

IMK_SCT_VALUE_SET_ID	IMK_SCT_VALUE_SET_DESC
1	Problem Severity
2	Allergy/Adverse Event Types
3	Reactions
4	Foods
5	Environmental Agents
6	Indication Precursors
7	Dose Delivery Method Code

Related Tables

[SNOMED CT Value Set Description Table](#)

IMK_SCT_VALUE_SET_ID

IMK SNOMED CT Value Set Identifier

a four-character alphanumeric column that identifies a SNOMED CT value set.

Valid Values Table

IMK_SCT_VALUE_SET_ID	IMK_SCT_VALUE_SET_DESC
1	Problem Severity
2	Allergy/Adverse Event Types
3	Reactions
4	Foods
5	Environmental Agents
6	Indication Precursors
7	Dose Delivery Method Code

Related Tables

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT Value Set Description Table](#)

[SNOMED CT Value Set Table](#)

INDCTS

INDM Indication Code

a five-character numeric column that contains a code assigned to a given drug product and represents a list of indications (both FDA-approved and unlabeled uses). The list of indications is encoded using the FDB proprietary Disease Identifiers ([DXIDs](#)) and their descriptions. Each INDm Indications Code ([INDCTS](#)) is also linked to FDB Clinical Formulation IDs ([GCN_SEQNOs](#)). The text description for INDCTS is provided by [INDCTS_DRUG_DESC](#).

Sample Valid Values Table

INDCTS	INDCTS_DRUG_DESC
00001	ACEBUTOLOL
00002	ANTHRALIN(TOP)
00003	ACETAZOLAMIDE
00004	ACE INHIB,HCTZ
00005	ALBUTEROL
00006	ALSEROXYLON
00007	LEVOCARNITINE
00008	ETIDRONATE
00009	ETOMIDATE
00010	ETOPOSIDE
00011	ETRETINATE
00012	FAT EMULSIONS
00013	ALFENTANIL
00014	FENTANYL
00015	SUFENTANIL
00016	ACETAMINOPHEN
00017	FLAVOXATE
00018	FLECAINIDE
00019	FLUCONAZOLE(IV)
00020	FLUCYTOSINE

The following example shows the INDm Indication Code and related disease data for DIGOXIN 0.5MG TABLET (Clinical Formulation ID [[GCN_SEQNO](#)]: 20):

Example—INDCTS and associated data for Digoxin 0.5 mg tablet

INDCTS_DRUG_DE SC	INDCTS	INDCTS_SN	DXID	DXID_DESC100
DIGITALIS GLYCOSIDES	00380	00	00001539	Paroxysmal Atrial Tachycardia
DIGITALIS GLYCOSIDES	00380	01	00001542	Supraventricular Tachycardia
DIGITALIS GLYCOSIDES	00380	02	00001550	Atrial Fibrillation
DIGITALIS GLYCOSIDES	00380	03	00001553	Atrial Flutter
DIGITALIS GLYCOSIDES	00380	04	00001578	Congestive Heart Failure
DIGITALIS GLYCOSIDES	00380	05	00001594	Cardiovascular Disease
DIGITALIS GLYCOSIDES	00380	06	00004755	Twin Reversal Arterial Perfusion Syndrome
DIGITALIS GLYCOSIDES	00380	07	00003184	Cardiogenic Shock

Related Tables

[INDM Drug Description Table](#)

[INDM GCN_SEQNO/Indications Code Relation Table](#)

[INDM Master Table](#)

[INDM Routed Medication Table](#)

INDCTS_DRUG_DESC

INDM Indications Drug Description

a 100-character alphanumeric column that provides the text description for the drug associated with an INDM Indications Code (**INDCTS**) in the Indications Module (INDM).

Sample Valid Values Table

INDCTS	INDCTS_DRUG_DESC
00001	ACEBUTOLOL
00002	ANTHRALIN(TOP)
00003	ACETAZOLAMIDE
00004	ACE INHIB,HCTZ
00005	ALBUTEROL
00006	ALSEROXYLON
00007	LEVOCARNITINE
00008	ETIDRONATE
00009	ETOMIDATE
00010	ETOPOSIDE
00011	ETRETINATE
00012	FAT EMULSIONS
00013	ALFENTANIL
00014	FENTANYL
00015	SUFENTANIL
00016	ACETAMINOPHEN
00017	FLAVOXATE
00018	FLECAINIDE
00019	FLUCONAZOLE(IV)
00020	FLUCYTOSINE

Related Tables

[INDM Drug Description Table](#)

INDCTS_LBL

INDM Labeled Code

a one-character alphanumeric column that identifies the indication of a specific drug. The text description for INDCTS_LBL is provided by [INDLBLDESC](#).

Valid Values Table

INDCTS_LBL	INDLBLDESC
L	Drug indication has been approved by the FDA
P	Grouper Indication for Proxy only
U	Non-FDA Approved Drug Indications

Related Tables

[INDM Labeled Code Description Table](#)

[INDM Master Table](#)

INDCTS_SN

INDM Sequence Number

a two-character numeric column that contains a code for each Indications Code (**INDCTS**) entry in the Indications Module (INDM). When added to the INDCTS, it forms a unique code that is specific to each drug/indicated disease pair. The sequence number begins at 00 and increments by one for each additional indication.

The following example shows the INDIM Indication Code, Sequence number and related disease data for DIGOXIN 0.5MG TABLET (Clinical Formulation ID [**GCN_SEQNO**]: 20)

Example—INDCTS_SN and associated data for Digoxin 0.5 mg tablet

INDCTS	INDCTS_SN	DXID	DXID_DESC100
00380	00	00001539	Paroxysmal Atrial Tachycardia
00380	01	00001542	Supraventricular Tachycardia
00380	02	00001550	Atrial Fibrillation
00380	03	00001553	Atrial Flutter
00380	04	00001578	Congestive Heart Failure
00380	05	00001594	Cardiovascular Disease
00380	06	00004755	Twin Reversal Arterial Perfusion Syndrome
00380	07	00003184	Cardiogenic Shock

Related Tables

[INDM Master Table](#)

INDLBLDESC

INDM Labeled Code Description

a 90-character alphanumeric column that provides the text description associated with an INDM Labeled Code (**INDCTS_LBL**) in the Indications Module (INDM).

Valid Values Table

INDCTS_LBL	INDLBLDESC
L	Drug indication has been approved by the FDA
P	Grouper Indication for Proxy only
U	Non-FDA Approved Drug Indications

Related Tables

[INDM Labeled Code Description Table](#)

ING_STATUS_CD

Ingredient Status Code

a one-character numeric column that indicates whether the ingredient is currently live, replaced, or retired. Text description for ING_STATUS_CD is provided by the Ingredient Status Code Description ([ING_STATUS_CD_DESC](#)).

[HIC_SEQN](#) and [HIC4_SEQN](#) ingredient codes are never deleted from the database. Codes may be retired or replaced with a newer code if FDB determines they are no longer valid. The [Ingredient Replacement History Table](#) (RHICRH0_ING_HIST) provides ingredient tracking information.

Valid Values Table

ING_STATUS_CD	ING_STATUS_CD_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[Hierarchical Base Ingredient Code Table](#)

[Hierarchical Base Ingredient Code Table—French](#)

[Hierarchical Ingredient Code Description Table](#)

[Hierarchical Ingredient Code Description Table--French](#)

[Ingredient Status Code Description Table](#)

[Ingredient Status Code Description Table--French](#)

ING_STATUS_CD_DESC

Ingredient Status Code Description

a 50-character alphanumeric column that provides the description for the Ingredient Status Code ([ING_STATUS_CD](#)).

Valid Values Table

ING_STATUS_CD	ING_STATUS_CD_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[Ingredient Status Code Description Table](#)

ING_STATUS_CD_DESC_T

Ingredient Status Code Description (Translated)

a 75-character alphanumeric column that provides the description for the Ingredient Status Code (
ING_STATUS_CD).

Related Tables

[Ingredient Status Code Description Table--French](#)

IOBSDTE

IDDF Obsolete Date

an eight-character numeric column containing the date or estimated date (as provided by the manufacturer or Health Canada) on which a product's obsolete status begins. The date format is CCYYMMDD.

FDB applies an obsolete date to those products that are no longer maintained on MedKnowledge because they are discontinued, no longer marketed, no longer produced, or otherwise made unavailable to the marketplace. FDB also applies an obsolete date to products that provide an insufficient basis for an assessment of their safety and efficacy or otherwise present regulatory compliance issues.

The IOBSDTE is initialized to 0 when unspecified.

Sample Valid Values Table

DIN	LN	ICAOTDTE
00818674	HYTRIN 10 MG TABLET	20160219
02063697	SOLU-MEDROL 1,000 MG/8 ML VIAL	20150915
02019671	BENADRYL 50 MG CAPSULE	20160122

i This date is not the same as the IDDF CA Ottawa Disc Date (**IOBSDTE**). See Data Change Identifiers in the Packaged Product Editorial Policies section for more information.

i Products that are no longer produced or have been discontinued by a manufacturer may still be available for sale.

Related Tables

[IDDF Canada Drug Product Table](#)

[IDDF Canada Drug Product Table--French](#)

IVMADCNT

IVM Study Group Admixture Count

a two-character numeric column that identifies the number of admixtures in a study.

IVMSGRP	IVMADCNT
015843	2
015844	2
015845	3
015846	3
015847	3

Related Tables

[Intravenous Module Study Group Master Table](#)

IVMADMIX

IVM Admixture Code

a six-character alphanumeric column that identifies an IVM component in an IVM Study Group.

IVMSGRP	IVMTESTSN	IVMADMIX	IVMCOMP	IVMSTR	IVMSTRU	IVMVOL	IVMVOLU
000742	1	000154	582092	1000	u	1	L
000743	1	000052	250023	0		0	
000744	1	000276	582092	1000	u	1	L

Related Tables

[Intravenous Module Admixture Master Table](#)

[Intravenous Module Admixture/Component Code Relation Table](#)

[Intravenous Module Study Group/Admixture Relation Table](#)

[Intravenous Module Study Group Test/Component Relation Table](#)

IVMCCNT

IVM Admixture Non-TPN Component Count

a one-character numeric column that identifies the number of non-TPN components in an admixture.

IVMADMIX	IVMCCNT	IVMTPNCNT
502011	1	0
000398	2	0
900203	0	1

Related Tables

[Intravenous Module Admixture Master Table](#)

IVMCOMP

IVM Component Code

a six-character alphanumeric column that identifies a particular drug, solution, or TPN (total parenteral nutrition) solution and links to admixture information for that product through the IVM Admixture Code (**IVMADMIX**) attribute.

Example—IVMCOMP and associated columns

GCN_SEQNO	LN	IVMCOMP	IVMADMIX
001189	SODIUM LACT 1/6 MOLAR SOLN	582187	582187
003724	HYDROXYZINE 50 MG/ML VIAL	582098	000055
000110	AMINOPHYLLINE 250 MG/10ML	582006	000159

The following table shows the Non-TPN Component Descriptions for specified IVMCOMP values. Example - **IVMCOMP, IVMCOMPDSC, and associated columns**

Example—IVMCOMP, IVMCOMPDSC, and associated columns

GCN_SEQNO	LN	IVMCOMP	IVMCOMPDSC
001189	SODIUM LACT 1/6 MOLAR SOLN	582187	Sodium Lactate
003724	HYZINE 50MG/ML VIAL	582098	Hydroxyzine Hydrochloride
000110	AMINOPHYLLINE 250 MG/10ML	582006	Aminophylline

Related Tables

[GCN_SEQNO/Intravenous Module Component Code Relation Table](#)

[Intravenous Module Admixture/Component Code Relation Table](#)

[Intravenous Module Component Description Table](#)

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module TPN Description Table](#)

[Intravenous Module TPN Ingredient Description Table](#)

IVMCOMPDSC

IVM Non-TPN Component Description

a 50-character alphanumeric mixed-case column that provides a text description of its non-TPN component.

Sample Valid Values Table

IVMCOMP	IVMCOMPDSC
250001	Amino acids (percentage specified)
250002	Dextrose solution (percentage unspecified)
250003	Dextrose 5% in Ringer's injection lactated
250004	Dextrose 5% in Ringer's injection
250005	Dextrose-saline combinations
250006	Dextrose 2.5% in sodium chloride 0.45%
250007	Dextrose 2.5% in sodium chloride 0.9%
250008	Dextrose 5% in sodium chloride 0.225%
250009	Dextrose 5% in sodium chloride 0.45%
250010	Dextrose 5% in sodium chloride 0.9%
250011	Dextrose 10% in sodium chloride 0.9%
250012	Dextrose 5%
250013	Dextrose 10%
250014	Dextran 6% in sodium chloride 0.9%
250015	Ionosol D-CM

Related Tables

[Intravenous Module Component Description Table](#)

IVMMFG

IVM Manufacturer Code

a three-character alphanumeric mixed-case column that identifies the component manufacturer.

Sample Valid Values Table

IVMMFG	IVMMFGD
AB	Abbott
ABX	Abraxis
ACC	American Critical Care
AD	Adria
AGT	Aguettant
AH	Allen & Hanburys
AHP	Ascot Hospital Pharmaceuticals
ALP	Alpharma
ALT	Altana Pharma
ALZ	Alza
AM	ASTA Medica
AMG	Amgen
AMR	American Regent
AND	Andromaco
ANT	Antigen
AP	Asta-Pharma
APC	Apothecon
APO	Apotex
APP	American Pharmaceutical Partners
AQ	American Quinine

Related Tables

[Intravenous Module Manufacturer Description Table](#)

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module TPN Ingredient Description Table](#)

IVMMFGD

IVM Manufacturer Code Description

a 50-character alphanumeric mixed-case column that provides the text description of the IVM Manufacturer Code (**IVMMFG**).

Sample Valid Values Table

IVMMFG	IVMMFGD
AB	Abbott
ABX	Abraxis
ACC	American Critical Care
AD	Adria
AGT	Aguettant
AH	Allen & Hanburys
AHP	Ascot Hospital Pharmaceuticals
ALP	Alpharma
ALT	Altana Pharma
ALZ	Alza
AM	ASTA Medica
AMG	Amgen
AMR	American Regent
AND	Andromaco
ANT	Antigen
AP	Asta-Pharma
APC	Apothecon
APO	Apotex
APP	American Pharmaceutical Partners
AQ	American Quinine

Related Tables

[Intravenous Module Manufacturer Description Table](#)

IVMREMARK

IVM Remarks Text

a 70-character alphanumeric column that provides the text for the section identified by the IVM Remarks Code (**IVMRMK**).

Sample Valid Values Table

IVMRMK	IVMREMARK
000001	Sodium carbonate-containing formulation tested.
000002	Powder fill formulation tested.
000003	Physically compatible with no change in measured turbidity or
000003	increase in particle content in 4 hr at 22 DGC

Related Tables

[Intravenous Module Remarks Table](#)

IVMRMK

IVM Remarks Code

a six-character alphanumeric column that identifies the remarks associated with a test within a study group

Sample Valid Values Table

IVMRMK	IVMREMARK
000001	Sodium carbonate-containing formulation tested.
000002	Powder fill formulation tested.
000003	Physically compatible with no change in measured turbidity or
000003	increase in particle content in 4 hr at 22 DGC

Related Tables

[Intravenous Module Remarks Table](#)

[Intravenous Module Study Group Test/Remarks Relation Table](#)

IVMRMKSEQ

IVM Remarks Continuation Sequence Number

a three-character numeric column that identifies the sequence number for each line of text associated with a Remarks Code.

IVMRMK	IVMRMKSEQ	IVMREMARK
004376	1	Physically compatible with little or no trimethoprim loss and about
004377	2	4% sulfamethoxazole loss in 24 hr at 23 to 25 DGC
004378	1	Admixture clear and colorless for 4 hr at 22 DGC. Turbidity and
004378	2	precipitation appear after this time. 1% trimethoprim loss in 4 hr
004378	3	and 36% in 24 hr. No sulfamethoxazole loss in 24 hr

Related Tables

[Intravenous Module Remarks Table](#)

IVMRMKSN

IVM Study Group Test Remarks Sequence Number

a two-character numeric column that identifies the sequence of each remark within a study group.

Example—IVMRMKSN and associated columns

IVMSGRP	IVMTESTSN	IVMRMKSN	IVMRMK	IVMREMARK
001850	1	1	000216	Tested in polyolefin containers.
	1	2	000759	Physically compatible with little or no amiodarone loss in 24 hr at
	1	2	000759	24 DGC under fluorescent light
	2	1	000114	Tested in glass containers.
	2	2	000764	Physically incompatible in 24 hr at room temperature
	3	1	000754	Tested in amber glass containers.
	3	2	000762	Visually compatible with no loss at 5 DGC and 3% loss at 25 DGC in 32
	3	2	000762	days
	4	1	000114	Tested in glass containers.
	4	2	000765	5% drug loss in 6 hr at room temperature under fluorescent light

Related Tables

[Intravenous Module Study Group Test/Remarks Relation Table](#)

IVMRMKTYP

IVM Remarks Type Code

This column is not currently being used.

Related Tables

Intravenous Module Remarks Table

IVMRSLT

IVM Study Group Test Result Code

a one-character alphanumeric column that identifies the results for a study group.

Valid Values Table

IVMRSLT	Description
C	Compatible
I	Incompatible
?	Equivocal

Related Tables

[Intravenous Module Study Group Test Master Table](#)

IVMSGRP

IVM Study Group Code

a six-character alphanumeric column that identifies a study group.

Example—IVMSGRP and associated columns

IVMSGRP	IVMRMK	IVMRMKSEQ	IVMREMARK
000332	000105	1	Visually apparent emulsion disruption with creaming and free oil
	018187	2	formation in as little as 4 hr at room temperature. Increased
	018187	3	disruption attributed to the added effect of calcium and magnesium
	018187	4	ions

Related Tables

[Intravenous Module Study Group Master Table](#)

[Intravenous Module Study Group/Admixture Relation Table](#)

[Intravenous Module Study Group Test Master Table](#)

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module Study Group Test/Remarks Relation Table](#)

IVMSTR

IVM Strength Number

a 12-character numeric column that identifies the strength of either a component within an admixture in a study group test or a TPN ingredient within an IVM component

IVMSGP	IVMTESTSN	IVMADMIX	IVMCOMP	IVMSTR	IVMSTRU	IVMVOL	IVMVOLU
000006	1	000001	250023	0		0	
000006	1	000001	500001	3	mg	1	mL
000006	1	000007	250023	0		0	
000006	1	000007	587001	40	mg	1	mL

Related Tables

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module TPN Ingredient Description Table](#)

IVMSTRU

IVM Strength Units Code

a three-character alphanumeric column that identifies the strength units of a component.

Sample Valid Values Table

IVMSTRU	Description
g	Gram
%	Percent
mcg	Microgram
meq	Milliequivalent
mg	Milligram
mL	Milliliter
MU	Million Units

- i** The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the **UNIT_DESC_EXPANDED** column instead of this column for ordering and patient records.

Related Tables

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module TPN Ingredient Description Table](#)

IVMTESTSN

IVM Study Group Test Number

a three-character numeric column that identifies the sequence number for each test within a study group.

IVMSGRP	IVMTESTSN
000099	1
000099	2
000099	2

Related Tables

[Intravenous Module Study Group Test Master Table](#)

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module Study Group Test/Remarks Relation Table](#)

IVMTPNCNT

IVM Admixture TPN Component Count

a one-character numeric column that identifies the number of TPN (total parenteral nutrition) components in an admixture.

IVMADMIX	IVMCCNT	IVMTPNCNT
599003	1	0
599005	1	0
900001	0	1

Related Tables

[Intravenous Module Admixture Master Table](#)

IVMTPNDSC

IVM TPN Component Description

a 50-character alphanumeric column that provides a text description for the TPN Component Code of a specified IVM Component Code (**IVMCOMP**).

Sample Valid Values Table

IVMCOMP	IVNTPNDSC
900001	TPN #1
900002	TPN #2
900003	TPN #3
900004	TPN #4
900005	TPN #5
900006	TPN #6
900007	TPN #7
900008	TPN #8
900009	TPN #9
900010	TPN #10
900011	TPN #11
900012	TPN #12
900013	TPN #13
900014	TPN #14
900015	TPN #15
900020	TPN #20
900021	TPN #21

Related Tables

[Intravenous Module TPN Description Table](#)

IVMTPNINGR

IVM TPN Ingredient Description

a 50-character alphanumeric column that provides the text description of a TPN ingredient within an IVM component.

IVMCOMP	IVMTPNINGR
900001	Amino acids
900001	Calcium gluconate
900001	Dextrose
900001	Potassium phosphate

Related Tables

[Intravenous Module TPN Ingredient Description Table](#)

IVMTTYPE

IVM Study Group Test Type Code

a one-character alphanumeric column that identifies the test type for a study group.

Valid Values Table

IVMTTYPE	Description
1	Drug in Solution
2	Drug / Drug in Solution (Additive)
3	Drug / Drug in Syringe
4	Y-Site

Related Tables

[Intravenous Module Study Group Test Master Table](#)

IVMVOL

IVM Volume Number

a 12-character numeric column identifies the volume of either a component within an admixture in a study group test or a TPN ingredient within an IVM component.

IVMCOMP	IVMCOMPDSC	IVMVOL	IVMVOLU
500001	Allopurinol Sodium	1	mL
250023	Sodium chloride 0.9%	0	
595008	Fluphenazine Hydrochloride	2	mL

Related Tables

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module TPN Ingredient Description Table](#)

IVMVOLU

IVM Volume Units Code

a three-character alphanumeric column that identifies volume units for an ingredient or component.

Sample Valid Values Table

IVMVOLU	Description
g	Gram
L	Liter
mg	Milligram
mL	Mililiter

-  The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the **UNIT_DESC_EXPANDED** column instead of this column for ordering and patient records.

Related Tables

[Intravenous Module Study Group Test/Component Relation Table](#)

[Intravenous Module TPN Ingredient Description Table](#)

L

LAB_ID

LABELER_DESC

LABELER_DESC_SHORT

LABELER_ID

LACT_CODE

LACT_DESC

LACT_EXCRT

LACT_EXCRT_DESC

LACT_EXCRTSN

LACT_LCTN

LACT_LCTN_DESC

LACT_LCTNSN

LACT_PRCTN

LACT_SL

LACT_SL_DESC

LACT_SLSN

LBL_DESC

LBL_DESCF

LBL_PRTY

LBL_TEXTSN

LBL_TXTSNF

LBL_WARN

LBLAGE

LBLGNDR

LBLINFO

LBLMSG1

LBLMSG2

LBLPREG

LBLW_VCODE

LBLW_VDESC

LBLW_VTYPE

LINK_ADD_DATE

LINK_FIRST_ACTIVE_DT

LINK_INACTIVE_DATE

LINK_IND

LINK_LAST_ACTIVE_DT

LN

LN_T

LAB_ID

MTL Laboratory Test Identifier

an eight-character numeric column that represents a commonly ordered laboratory test. It includes the analyte and specimen (such as Serum Potassium or Urine pH). This number is a stable identifier.

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Table](#)

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Identifier Table](#)

[MTL Panel to LAB_ID Association Table](#)

[MTL Specific Laboratory Test Identifier Table](#)

LABELER_DESC

Labeler Description

a 100-character alphanumeric column that provides the full text description for the Labeler Identifier ([LABELER_ID](#)).

Sample Valid Values Table

LABELER_ID	LABELER_DESC
7520	ADAMS LABS LTD
7535	ALCON CANADA INC
7584	AMWAY OF CANADA LTD
7594	APOTEX INC
7643	BAUSCH & LOMB CANADA INC

Related Tables

[Product Labeler Table](#)

LABELER_DESC_SHORT

Labeler Description Short

a 15-character alphanumeric column that provides a short text description for a product labeler.

Related Tables

[Product Labeler Table](#)

LABELER_ID

Labeler Identifier

an eight-character numeric column that identifies the labeler associated with a packaged product. The full text description is provided by the Labeler Description (**LABELER_DESC**) column.

-  FDB associates only original labeler information for products with an NPN.

Sample Valid Values Table

LABELER_ID	LABELER_DESC
7520	ADAMS LABS LTD
7535	ALCON CANADA INC
7584	AMWAY OF CANADA LTD
7594	APOTEX INC
7643	BAUSCH & LOMB CANADA INC

Related Tables

[Product Labeler Table](#)

[Product Master Table](#)

LACT_CODE

Lactation Precaution Code

a six-character numeric column that identifies drugs and drug classes that are contraindicated or require special consideration for use in lactating patients.

Sample Valid Values Table

LACT_CODE	LACT_DESC
000001	DIGITALIS GLYCOSIDES
000002	CAFFEINE
000003	THEOPHYLLINE
000004	AMINOPHYLLINE
000005	DOBUTAMINE
000006	INAMRINONE
000007	QUINIDINE
000008	PROCAINAMIDE HYDROCHLORIDE
000009	DISOPYRAMIDE PHOSPHATE
000010	TOCAINIDE HYDROCHLORIDE
000012	FLECAINIDE
000013	AMIODARONE
000014	MEXILITENE
000016	HYDRALAZINE
000017	PRAZOSIN
000018	DIAZOXIDE
000019	MINOXIDIL
000020	TERAZOSIN

Related Tables

[LACT GCN_SEQNO Link Table](#)

[LACT ROUTED_MED_ID Link Table](#)

[Lactation Precautions Master Table](#)

LACT_DESC

Lactation Precaution Description

a 40-character alphanumeric column that provides a description of the drug or drug class to which the precaution applies.

Sample Valid Values Table

LACT_CODE	LACT_DESC
001327	ABACAVIR
001099	ACARBOSE
000424	ACEBUTOLOL HYDROCHLORIDE
000314	ACETAMINOPHEN
000534	ACETAZOLAMIDE(SODIUM)
000073	ACETOHEXAMIDE
000152	ACETOHYDROXAMIC ACID
000058	ACETYLCYSTEINE (INHAL, ORAL)
001242	ACITRETIN
000102	ACTIVATED CHARCOAL
000913	ACYCLOVIR (ORAL, INJ)
000914	ACYCLOVIR (TOPICAL, BUCCAL)
001674	ADALIMUMAB
001098	ADAPALENE
001650	ADEFOVIR
000567	ADENOSINE
001330	ANTIHEMOPHILIC FACTOR,HUMAN RECOMBINANT
001531	ALBENDAZOLE
001443	ALBUMIN HUMAN

Related Tables

[Lactation Precautions Master Table](#)

LACT_EXCRT

Lactation Precaution Excretion Potential Code

a one-character alphanumeric column that indicates whether a drug or drug class is excreted in breast milk.

Valid Values Table

LACT_EXCRT	LACT_EXCRT_DESC
1	Excreted. This drug is known to be excreted in human breast milk.
2	Unknown. It is unknown whether the drug is excreted in human breast milk.
3	Not excreted. This drug is known NOT to be excreted in human breast milk.

Related Tables

[LACT Excretion Potential Code Description Table](#)

[Lactation Precautions Master Table](#)

LACT_EXCRT_DESC

Lactation Precaution Excretion Potential Code Description

a 60-character alphanumeric column that provides the text description for the Lactation Precaution Excretion Potential Code (**LACT_EXCRT**).

Valid Values Table

LACT_EXCRT	LACT_EXCRT_DESC
1	Excreted. This drug is known to be excreted in human breast milk.
2	Unknown. It is unknown whether the drug is excreted in human breast milk.
3	Not excreted. This drug is known NOT to be excreted in human breast milk.

Related Tables

[LACT Excretion Potential Code Description Table](#)

LACT_EXCRTSN

Lactation Precaution Excretion Potential Description Text Sequence Number

a two-character numeric column that indicates the sequence to display the lines of a description.

Example—LACT_EXCRTSN and associated columns

LACT_EXCRT	LACT_EXCRTSN	LACT_EXCRT_DESC
1	01	Excreted. This drug is known to be excreted in human
1	02	breast milk.
2	01	Unknown. It is unknown whether the drug is excreted in
2	02	human breast milk.
3	01	Not excreted. This drug is known NOT to be excreted in
3	02	human breast milk.

Related Tables

[LACT Excretion Potential Code Description Table](#)

LACT_LCTN

Lactation Precaution Effects on Infant Code

a one-character alphanumeric column that indicates whether a drug affects the nursing infant of a lactating patient using the drug.

Valid Values Table

LACT_LCTN	LACT_LCTN_DESC
1	This drug has been shown to have an adverse effect on the nursing infant.
2	It is not known whether this drug has an adverse effect on the nursing infant. (No data or inconclusive human data)
3	This drug has been shown not to have an adverse effect on the nursing infant.

Related Tables

[LACT Effects on Infant Code Description Table](#)

[Lactation Precautions Master Table](#)

LACT_LCTN_DESC

Lactation Precaution Effects on Infant Code Description

a 60-character alphanumeric column that provides the text description for the Lactation Precaution Effects on Infant Code ([LACT_LCTN](#)).

Valid Values Table

LACT_LCTN	LACT_LCTN_DESC
1	This drug has been shown to have an adverse effect on the nursing infant.
2	It is not known whether this drug has an adverse effect on the nursing infant. (No data or inconclusive human data)
3	This drug has been shown not to have an adverse effect on the nursing infant.

Related Tables

[LACT Effects on Infant Code Description Table](#)

LACT_LCTNSN

Lactation Precaution Effects on Infant Description Text Sequence Number

a two-character numeric column that indicates the sequence to display the lines of a description.

Example—LACT_LCTNSN and associated columns

LACT_LCTN	LACT_LCTNSN	LACT_LCTN_DESC
1	01	This drug has been shown to have an adverse effect on the
1	02	nursing infant.
2	01	It is not known whether this drug has an adverse effect
2	02	on the nursing infant. (no data or inconclusive human
2	03	data)
3	01	This drug has been shown not to have an adverse effect on
3	02	the nursing infant

Related Tables

[LACT Effects on Infant Code Description Table](#)

LACT_PRCTN

Lactation Precaution Narrative

a 77-character alphanumeric column that describes the precaution.

Example—LACT_PRCTN and associated columns

LACT_CODE	LACT_DESC	LACT_PRCTN
000002	CAFFEINE	HIGH DOSES MAY CAUSE HYPERACTIVITY AND WAKEFULNESS IN INFANT.
000004	AMINOPHYLLINE	LIMITED DATA REPORT INFANT IRRITABILITY AFTER MATERNAL ORAL DOSES
000005	DOBUTAMINE	INSUFFICIENT DATA AVAILABLE

Related Tables

[Lactation Precautions Master Table](#)

LACT_SL

Lactation Precaution Severity Level

a one-character alphanumeric column that indicates whether a drug or drug class is contraindicated or requires special consideration for use in lactating patients.

Valid Values Table

LACT_SL	LACT_SL_DESC
1	Absolute contraindication. (Human data usually available to support recommendations.) This drug should not be given to breast feeding mothers.
2	Precaution exists. (No data or inconclusive human data.) Use of this drug by breast feeding mothers should be evaluated carefully.
3	No known risk. This drug has no known risks to nursing infants and does not adversely affect lactation.

Related Tables

[LACT Severity Level Description Table](#)

[Lactation Precautions Master Table](#)

LACT_SL_DESC

Lactation Precaution Severity Level Description

a 60-character alphanumeric column that provides the text description for Lactation Precaution Severity Level ([LACT_SL](#)).

Valid Values Table

LACT_SL	LACT_SL_DESC
1	Absolute contraindication. (Human data usually available to support recommendations.) This drug should not be given to breast feeding mothers.
2	Precaution exists. (No data or inconclusive human data.) Use of this drug by breast feeding mothers should be evaluated carefully.
3	No known risk. This drug has no known risks to nursing infants and does not adversely affect lactation.

Related Tables

[LACT Severity Level Description Table](#)

LACT_SLSN

Lactation Precaution Severity Level Description Text Sequence Number

a two-character numeric column that indicates the sequence to display the lines of a description.

Example—LACT_SLSN and associated columns

LACT_SL	LACT_SLSN	LACT_SL_DESC
1	01	Absolute contraindication (human data usually available)
1	02	to support recommendations). This drug should not be
1	03	given to breast feeding mothers.
2	01	Precaution exists (no data or inconclusive human data).
2	02	Use of this drug by breast feeding mothers should be
2	03	evaluated carefully.
3	01	No known risk. This drug has no known risks for nursing
3	02	infants and does not adversely affect lactation.

Related Tables

[LACT Severity Level Description Table](#)

LBL_DESC

Prioritized Label Warning Code Description

a 55-character alphanumeric column that provides the text description of the Prioritized Label Warning Code ([LBL_WARN](#)).

Example—LBL_DESC and associated columns

LBL_WARN	LBL_TEXTSN	LBL_DESC
0000	01	None
0001	01	May cause drowsiness. Alcohol may intensify this
0001	02	effect. Use care when operating a car or dangerous
0001	03	machines.
0002	01	Important: Finish all this medication unless
0002	02	otherwise directed by prescriber.

Text descriptions exceeding 55 characters appear across multiple lines (up to four), ordered by the Prioritized Label Warning Text Sequence Number ([LBL_TEXTSN](#)).

LBL_WARN 0230 has the description “Read the Medication Guide that comes with this medicine,” indicating that a FDA Med Guide is available for a drug. This information only applies to U.S. drug products and is not relevant for Canadian drug products.

Related Tables

[Prioritized Label Warning Code Description Table](#)

LBL_DESCF

Prioritized Label Warning Code Description (French)

a 55-character alphanumeric column that provides the text description, in French, of the Prioritized Label Warning Code (**LBL_WARN**). Sequencing of the message is maintained by (**LBL_TXTSNF**).

Example—**LBL_DESC** and associated columns

LBL_WARN	LBL_TXTSNF	LBL_DESCF
0001	01	Peut causer une somnolence. L'alcool peut intensifier
0001	02	cet effet. Soyez prudent lorsque vous conduisez ou
0001	03	faites fonctionner des machines dangereuses.
0046	01	Ne le partagez pas avec d'autres. Une telle quantité
0046	02	peut avoir des effets toxiques/néfastes graves si prise
0046	03	par quelqu'un non habitué à autant de médicament.
0050	01	Limitez la consommation d'alcool pendant le traitement.
0050	02	La consommation journalière d'alcool peut augmenter le
0050	03	risque de saignements gastriques.
0062	01	Peut provoquer des vertiges.
0075	01	Agitez doucement.
0077	01	Avertissement: N'utilisez pas pendant l'allaitement.
0077	02	Consultez votre médecin ou pharmacien.
0082	01	Avertissement: N'utilisez pas si vous êtes enceinte,
0082	02	pensez être enceinte ou si vous allaitez. Consultez
0082	03	votre médecin ou pharmacien.
0094	01	Les produits à base de plantes/diététiques peuvent

0094	02	interagir avec ce médicament. Discutez de ces produits
0094	03	avec votre médecin ou pharmacien avant de les prendre.
0108	01	Il est important de RETIRER les timbres usés chaque
0108	02	fois AVANT d'en appliquer un nouveau. Suivez les
0108	03	instructions d'utilisation.

Related Tables[French Prioritized Label Warning Code Description Table](#)

LBL_PRTY

Prioritized Label Warning Relative Priority

a two-character numeric column that represents the relative priority order in which labels should be printed or displayed for a specific **GCN_SEQNO**.

Example—LBL_PRTY and associated columns

GCN_SEQNO	LBL_WARN	LBL_PRTY
7789	0022	01
7771	0022	01
7772	0022	01
7775	0022	01
7777	0022	01
7779	0031	01
7731	0020	01

Related Tables

[GCN_SEQNO/Prioritized Label Warning Code Relation Table](#)

LBL_TEXTSN

Prioritized Label Warning Text Sequence Number

a two-character numeric column that is used to maintain the proper order of the label warning text ([LBL_DESC](#)) for printing or display.

Example—LBL_TEXTSN and associated columns

LBL_WARN	LBL_TEXTSN	LBL_DESC
0000	01	None
0001	01	May cause drowsiness. Alcohol may intensify this
0001	02	effect. Use care when operating a car or dangerous
0001	03	machines.
0002	01	Important: Finish all this medication unless
0002	02	otherwise directed by prescriber.

Related Tables

[Prioritized Label Warning Code Description Table](#)

LBL_TXTSNF

Prioritized Label Warning Text Sequence Number (French)

a two-character numeric column that is used to maintain the proper order of the French label warning text ([LBL_DESCF](#)) for printing or display.

Example—LBL_TXTSNF and associated columns

LBL_WARN	LBL_TXTSNF	LBL_DESCF
0001	01	Peut causer une somnolence. L'alcool peut intensifier
0001	02	cet effet. Soyez prudent lorsque vous conduisez ou
0001	03	faites fonctionner des machines dangereuses.
0046	01	Ne le partagez pas avec d'autres. Une telle quantité
0046	02	peut avoir des effets toxiques/néfastes graves si prise
0046	03	par quelqu'un non habitué à autant de médicament.
0050	01	Limitez la consommation d'alcool pendant le traitement.
0050	02	La consommation journalière d'alcool peut augmenter le
0050	03	risque de saignements gastriques.
0062	01	Peut provoquer des vertiges.
0075	01	Agitez doucement.
0077	01	Avertissement: N'utilisez pas pendant l'allaitement.
0077	02	Consultez votre médecin ou pharmacien.
0082	01	Avertissement: N'utilisez pas si vous êtes enceinte,
0082	02	pensez être enceinte ou si vous allaitez. Consultez
0082	03	votre médecin ou pharmacien.
0094	01	Les produits à base de plantes/diététiques peuvent

0094	02	interagir avec ce médicament. Discutez de ces produits
0094	03	avec votre médecin ou pharmacien avant de les prendre.
0108	01	Il est important de RETIRER les timbres usés chaque
0108	02	fois AVANT d'en appliquer un nouveau. Suivez les
0108	03	instructions d'utilisation.

Related Tables[French Prioritized Label Warning Code Description Table](#)

LBL_WARN

Prioritized Label Warning Code

a four-character alphanumeric column that is used to identify and create warnings associated with the use of certain drugs in a specific “label order” or “prioritization.” The use of warning labels on prescription containers helps ensure greater patient compliance while reducing the risk of adverse drug problems. Prioritization of these labels allows the most critical labels to be applied or printed on the prescription container first with the intention of bringing them to the patient’s attention in the order of importance.

Customers may request the optional Label Warning description tables in either English or French.

The label warnings codes are always in priority order, not numerical order.

Example—**LBL_WARN** and associated columns

LBL_WARN	LBL_TEXTSN	LBL_DESC
0000	01	None
0001	01	May cause drowsiness. Alcohol may intensify this
0001	02	effect. Use care when operating a car or dangerous
0001	03	machines.
0002	01	Important: Finish all this medication unless
0002	02	otherwise directed by prescriber.
0003	01	Take medication on an empty stomach one hour before
0003	02	or two to three hours after a meal unless otherwise
0003	03	directed by your doctor.

LBL_WARN 0230 has the description, “Read the Medication Guide that comes with this medicine,” indicating that a FDA Med Guide is available for a drug. This information only applies to U.S. drug products and is not relevant for Canadian drug products.

Related Tables

[French Prioritized Label Warning Code Description Table](#)

[GCN_SEQNO/Prioritized Label Warning Code Relation Table](#)

[Prioritized Label Warning Code Description Table](#)

Prioritized Label Warning Vendor Type Relation Table

LBLAGE

Prioritized Label Warning Stage of Life-Specific Text Indicator

This column is not currently being used.

Related Tables

[Prioritized Label Warning Code Description Table](#)

[French Prioritized Label Warning Code Description Table](#)

LBLGNDR

Prioritized Label Warning Gender-Specific Text Indicator

This column is not currently being used.

-  FDB does not recommend restricting labels that would be printed or displayed based on this indicator due to the risks associated with patients sharing prescriptions.

Related Tables

[Prioritized Label Warning Code Description Table](#)

[French Prioritized Label Warning Code Description Table](#)

LBLINFO

Prioritized Label Warning Informational Text-Only Indicator

This column is not currently being used.

Related Tables

[Prioritized Label Warning Code Description Table](#)

[French Prioritized Label Warning Code Description Table](#)

LBLMSG1

Patient Education Message Line #1

a 27-character alphanumeric column that contains the first 27 characters of a standard patient label message. The patient label message has a 54-character maximum. **LBLMSG2** contains the remaining 27 characters of the patient label message. The patient label message is the same for all drugs. Refer to the **Counseling Messages Module™ (CMM™) 1.0**, **Patient Education Module™ (PEM™) 2.0**, and **Prioritized Label Warnings Module™ (LBLW) 1.0** for full patient information.

Example—LBLMSG1 and associated columns

LBLMSG1	LBLMSG2
CAREFULLY READ THIS DRUG'S	PATIENT EDUCATION LEAFLET.

Related Tables

[Patient Education Master Table](#)

LBLMSG2

Patient Education Message Line #2

a 27-character alphanumeric column that contains the second 27 characters of a standard patient label message. The patient label message has a 54-character maximum. **LBLMSG1** contains the first 27 characters of the patient label message. The patient label message is the same for all drugs. Refer to the [Counseling Messages Module™ \(CMM™\) 1.0](#), [Patient Education Module™ \(PEM™\) 2.0](#), and [Prioritized Label Warnings Module™ \(LBLW\) 1.0](#) for full patient information.

Example—LBLMSG1 and associated columns

LBLMSG1	LBLMSG2
CAREFULLY READ THIS DRUG'S	PATIENT EDUCATION LEAFLET.

Related Tables

[Patient Education Master Table](#)

LBLPREG

Prioritized Label Warning Pregnancy-Specific Text Indicator

This column is not currently being used.

Related Tables

[Prioritized Label Warning Code Description Table](#)

[French Prioritized Label Warning Code Description Table](#)

LBLW_VCODE

Prioritized Label Warning Vendor Code

a ten-character alphanumeric column that specifies a particular vendor's label description or graphic codes ([LBLW_VDESC](#)) relative to a specific FDB Label Warning code.

Example—LBLW_VCODE and associated columns

LBL_WARN	LBLW_VTYPE	LBLW_VCODE	LBLW_VDESC
0001	5	1X	PHARMEX LABEL CODE

Related Tables

[Prioritized Label Warning Vendor Type Relation Table](#)

LBLW_VDESC

Prioritized Label Warning Vendor Description

a 50-character alphanumeric column that provides a text description of the Prioritized Label Warning Vendor Type ([LBLW_VTYPE](#)).

Valid Values Table

LBLW_VTYPE	LBLW_VDESC
016	ARCHITEXT YEAR2000 DECIMAL GRAPHIC/LABEL NUMBER
018	ARCHITEXT YEAR2000 GROUP IDENTIFICATION NUMBER
017	ARCHITEXT YEAR2000 HEXADECIMAL GRAPHIC/LABEL NUM
031	INTERCON E-SCRIPT DECIMAL LABEL NUMBER
030	INTERCON E-SCRIPT GROUP NUMBER
020	INTERCON PRESCRIPT2001 DECIMAL GRAPHIC NUMBER
019	INTERCON PRESCRIPT2001 DECIMAL GRAPHIC SET BYTE NO
024	INTERCON PRESCRIPT2001 DECIMAL LABEL NUMBER
023	INTERCON PRESCRIPT2001 DECIMAL LABEL SET BYTE NUM
021	INTERCON PRESCRIPT2001 HEXADEC GRAPHIC SET BYTE NO
025	INTERCON PRESCRIPT2001 HEXADEC LABEL SET BYTE NUM
022	INTERCON PRESCRIPT2001 HEXADECIMAL GRAPHIC NUMBER
026	INTERCON PRESCRIPT2001 HEXADECIMAL LABEL NUMBER
005	PHARMEX LABEL CODE
028	PHARMEX SOFT FONT(PSF) DECIMAL TEXT CODE NUMBER
029	PHARMEX SOFT FONT(PSF) HEXADEC TEXT CODE NUMBER
027	PHARMEX SOFT FONT(PSF) SYMBOL SET GROUP NUMBER

032	PRINTED SOLUTIONS GRAPHIC LABEL FONT ID
033	PRINTED SOLUTIONS GRAPHIC LABEL CHAR CODE (DEC)
034	PRINTED SOLUTIONS TEXT LABEL FONT ID
035	PRINTED SOLUTIONS TEXT LABEL CHAR CODE (DEC)
006	RX SYSTEM LABEL CODE
007	SAMUELS LABEL CODE

Related Tables

Prioritized Label Warning Vendor Type Relation Table

LBLW_VTYPE

Prioritized Label Warning Vendor Type

a three-character numeric column that identifies the specific vendor and the version specific to that vendor (for example, Year 2000 Standard) and the numerical data type (Decimal, Hexadecimal, etc.).

Valid Values Table

LBLW_VTYPE	LBLW_VDESC
005	PHARMEX LABEL CODE
006	RX SYSTEM LABEL CODE
007	SAMUELS LABEL CODE
016	ARCHITEXT YEAR2000 DECIMAL GRAPHIC/LABEL NUMBER
017	ARCHITEXT YEAR2000 HEXADECIMAL GRAPHIC/LABEL NUM
018	ARCHITEXT YEAR2000 GROUP IDENTIFICATION NUMBER
019	INTERCON PRESCRIPT2001 DECIMAL GRAPHIC SET BYTE NO
020	INTERCON PRESCRIPT2001 DECIMAL GRAPHIC NUMBER
021	INTERCON PRESCRIPT2001 HEXADEC GRAPHIC SET BYTE NO
022	INTERCON PRESCRIPT2001 HEXADECIMAL GRAPHIC NUMBER
023	INTERCON PRESCRIPT2001 DECIMAL LABEL SET BYTE NUM
024	INTERCON PRESCRIPT2001 DECIMAL LABEL NUMBER
025	INTERCON PRESCRIPT2001 HEXADEC LABEL SET BYTE NUM
026	INTERCON PRESCRIPT2001 HEXADECIMAL LABEL NUMBER
027	PHARMEX SOFT FONT(PSF) SYMBOL SET GROUP NUMBER
028	PHARMEX SOFT FONT(PSF) DECIMAL TEXT CODE NUMBER
029	PHARMEX SOFT FONT(PSF) HEXADEC TEXT CODE NUMBER

030	INTERCON E-SCRIPT GROUP NUMBER
031	INTERCON E-SCRIPT DECIMAL LABEL NUMBER
032	PRINTED SOLUTIONS GRAPHIC LABEL FONT ID
033	PRINTED SOLUTIONS GRAPHIC LABEL CHAR CODE (DEC)
034	PRINTED SOLUTIONS TEXT LABEL FONT ID
035	PRINTED SOLUTIONS TEXT LABEL CHAR CODE (DEC)

Related Tables

[Prioritized Label Warning Vendor Type Relation Table](#)

[Prioritized Label Warning Vendor Description Table](#)

LINK_ADD_DATE

Link Add Date

an eight-character numeric column that provides the date on which a given link was added. The date format is YYYYMMDD.

Related Tables

[SNOMED CT to FDB Link Table](#)

LINK_FIRST_ACTIVE_DT

Link First Active Date

an eight-character numeric column that provides the date on which a given link first became active. The date format is YYYYMMDD.

Example—LINK_FIRST_ACTIVE_DT and associated columns

SEARCH_SCT_CONCEPT_ID	SEARCH_CONCEPT_ID	REVISED_RXID	LINK_FIRST_ACTIVE_DATE	LINK_LAST_ACTIVE_DATE
999999999	10	88888888	20130701	20130731

Related Tables

[DXID to SNOMED CT Best Fit History Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT to DXID Search History Table](#)

LINK_INACTIVE_DATE

Link Inactive Date

an eight-character numeric column that provides the date on which a given link was made inactive. The date format is YYYYMMDD. This field is populated only if all NDCs that have a particular NDC Attribute have been made obsolete.

Related Tables

[SNOMED CT to FDB Link Table](#)

LINK_IND

DXID to SNOMED CT Concept ID Link Indicator

a one-character alphanumeric column that indicates whether there is a link between a DXID and a SNOMED CT Concept ID.

Valid Values Table

LINK_IND	Description
0	DXID is not linked to a SNOMED CT Concept ID
1	DXID is linked to a SNOMED CT Concept ID

Related Tables

[DXID to SNOMED CT Best Fit Table](#)

[DXID to SNOMED CT Best Fit History Table](#)

LINK_LAST_ACTIVE_DT

Link Last Active Date

an eight-character numeric column that provides the last date on which a given link became active. The date format is YYYYMMDD.

Example—LINK_LAST_ACTIVE_DT and associated columns

SEARCH_SCT_CONCEPT_ID	SEARCH_CONCEPT_ID	REVISED_RXID	LINK_FIRST_ACTIVE_DATE	LINK_LAST_ACTIVE_DATE
999999999	10	88888888	20130701	20130731

Related Tables

[DXID to SNOMED CT Best Fit History Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT to DXID Search History Table](#)

LN

Label Name

a 30-character alphanumeric column that contains a combination of the drug name appearing on the package label, the strength description, and the dosage form description for a specified product.

Example—LN and associated columns

DIN	LN
00010332	ENTROPHEN 325MG TAB EC
00010340	ENTROPHEN 10 650MG TAB EC
00013285	VALIUM 5MG TABLET
00013668	ATASOL FORTE 500MG TABLET
00013765	VIVOL 5MG TABLET
00016349	ELAVIL 50MG TABLET
00018635	NADOPEN-V 200 125MG/5ML SUS
00021482	NOVO-HYDRAZIDE 50MG TABLET
00021695	NOVO-PREDNISONE 5MG TABLET
00026158	SENOKOT 8.6MG TABLET
00030937	PROVERA 5MG TABLET
00037427	NOVO-TRIPTYN 50MG TABLET
00092703	HYDROCHLOROTHIAZIDE 50MG TB
00092746	ASA 325MG TABLET EC
00092762	ASA 650MG TABLET
00156604	HYDROCHLOROTHIAZIDE 50MG TB
00156876	PREDNISONE 5MG TABLET
00216666	NOVASEN 325MG TABLET EC
00229296	NOVASEN 650MG TABLET EC

Related Tables

[IDDF Canada Drug Product Table](#)

LN_T

Label Name (Translated)

a 30-character alphanumeric column that contains a combination of the drug name appearing on the package label, the strength description, and the dosage form description for a specified product.

Related Tables

[IDDF Canada Drug Product Table--French](#)

M

MED_CONCEPT_HICL_SRC_CD

MED_CONCEPT_ID

MED_CONCEPT_ID_TYP

MED_CONCEPT_ID_TYP_DESC

MED_CONCEPT_OBSDATEC

MED_DOSAGE_FORM_ABBR

MED_DOSAGE_FORM_DESC

MED_DOSAGE_FORM_DESC_T

MED_DOSAGE_FORM_ID

MED_GCNSEQNO_ASSIGN_CD

MED_GCNSEQNO_ASSIGN_CD_DESC

MED_GCNSEQNO_ASSIGN_CD_DESC_T

MED_MEDID_DESC

MED_MEDID_DESC_T

MED_MEDID REPL_EFF_DT

MED_NAME

MED_NAME_ID

MED_NAME_ID REPL_EFF_DT

MED_NAME_SOURCE_CD

MED_NAME_SOURCE_CD_DESC

MED_NAME_SOURCE_CD_DESC_T

MED_NAME_T

MED_NAME_TYPE_CD

MED_NAME_TYPE_CD_DESC

MED_NAME_TYPE_CD_DESC_T

MED_PREV_MEDID

MED_PREV_NAME_ID

MED_PREV_ROUTED_DF_MED_ID

MED_PREV_ROUTED_MED_ID
MED_REF_DEA_CD
MED_REF_DEA_CD_DESC
MED_REF_DESI2_IND
MED_REF_DESI2_IND_DESC
MED_REF_DESI_IND
MED_REF_DESI_IND_DESC
MED_REF_FED_LEGEND_IND
MED_REF_FED_LEGEND_IND_DESC
MED_REF_GEN_COMP_PRICE_CD
MED_REF_GEN_COMP_PRICE_CD_DESC
MED_REF_GEN_DRUG_NAME_CD
MED_REF_GEN_DRUG_NAME_CD_DESC
MED_REF_GEN_SPREAD_CD
MED_REF_GEN_SPREAD_CD_DESC
MED_REF_GEN_THERA_EQU_CD
MED_REF_GEN_THERA_EQU_CD_DESC
MED_REF_INNOV_IND
MED_REF_INNOV_IND_DESC
MED_REF_MULTI_SOURCE_CD
MED_REF_MULTI_SOURCE_CD_DESC
MED REPL_MEDID
MED REPL_NAME_ID
MED REPL_ROUTED_DF_MED_ID
MED REPL_ROUTED_MED_ID
MED_ROUTE_ABBR
MED_ROUTE_DESC
MED_ROUTE_DESC_T
MED_ROUTE_ID
MED_ROUTED_DF_MED_ID_DESC

MED_ROUTE_DF_MED_ID_DESC_T
MED_ROUTE_DF_MED_ID_REP_EFF_DT
MED_ROUTE_MED_ID_DESC
MED_ROUTE_MED_ID_DESC_T
MED_ROUTE_MED_ID_REPLACE_EFFECT_DATE
MED_STATUS_CD
MED_STATUS_CD_DESC
MED_STATUS_CD_DESC_T
MED_STRENGTH
MED_STRENGTH_T
MED_STRENGTH_UOM
MED_STRENGTH_UOM_T
MEDID
MFG
MMA_MND
MMA_MNDU
MMA_MNU
MMA_MNUF
MMA_MXD
MMA_MXDU
MMA_MXU
MMA_MXUF
MMAR_MND
MMAR_MNDU
MMAR_MNU
MMAR_MNUF
MMAR_MXD
MMAR_MXDU
MMAR_MXU

MMAR_MXUF
MMG_MND
MMG_MNDU
MMG_MNU
MMG_MNUF
MMG_MXD
MMG_MXDU
MMG_MXU
MMG_MXUF
MMGR_MND
MMGR_MNDU
MMGR_MNU
MMGR_MNUF
MMGR_MXD
MMGR_MXDU
MMGR_MXU
MMGR_MXUF
MONOX_END_DT
MONOX_TITLE
MOVE_REASON_CD
MOVE_REASON_CD_DESC
MOVE_REASON_CD_DESC_T
MTL_ANALYTE_ID
MTL_ANALYTE_ID_DESC
MTL_EXTRN_VOCAB_CODE
MTL_EXTRN_VOCAB_TYP_CODE
MTL_EXTRN_VOCAB_TYP_CODE_DESC
MTL_FDB_ID
MTL_FDB_ID_TYP_CODE
MTL_FDB_ID_TYP_CODE_DESC

MTL_LAB_ID_DESC
MTL_LAB_ID_REPL_EFF_DT
MTL_LAB_ID_STATUS
MTL_LAB_ID_STATUS_DESC
MTL_LAB_ID_SYN_CODE_DESC
MTL_LAB_ID_SYN_NMTYP_CODE
MTL_LAB_ID_SYN_NMTYP_CODE_DESC
MTL_LAB_ID_SYN_STATUS
MTL_LAB_ID_SYN_STATUS_DESC
MTL_LAB_ID_SYNID
MTL_METHOD_ID
MTL_METHOD_ID_DESC
MTL_PANEL_ID
MTL_PANEL_ID_DESC
MTL_PANEL_ID_REPL_EFF_DT
MTL_PANEL_ID_STATUS
MTL_PANEL_ID_STATUS_DESC
MTL_PREV_LAB_ID
MTL_PREV_PANEL_ID
MTL_PREV_SPEC_LAB_ID
MTL REPL_LAB_ID
MTL REPL_PANEL_ID
MTL REPL_SPEC_LAB_ID
MTL_SPEC_LAB_ID
MTL_SPEC_LAB_ID_DESC
MTL_SPEC_LAB_ID_REPL_EFF_DT
MTL_SPEC_LAB_ID_STATUS
MTL_SPEC_LAB_ID_STATUS_DESC
MTL_SPECIMEN_ID

MTL_SPECIMEN_ID_DESC

MED_CONCEPT_HICL_SRC_CD

MED Concept HICL_SEQNO Source Code

a one-character numeric column that specifies the origin of the related MED concept's HICL_SEQNO. The MED Concept ID ([MED_CONCEPT_ID](#)) column in the [MED MED Concept/HICL_SEQNO Relation Table](#) (RMEDMHL0_MED_HICLSEQNO_LINK) represents one of the four MED concepts. The MED_CONCEPT_HICL_SRC_CD column identifies the source of the associated HICL_SEQNO.

Valid Values Table

MED_CONCEPT_HICL_SRC_CD	Description
0	The HICL_SEQNO is based on the Med Concept's GCN_SEQNOs
1	The HICL_SEQNO is based on the Med Concept's IDC

Related Tables

[MED MED Concept/HICL_SEQNO Relation Table](#)

MED_CONCEPT_ID

MED Concept ID

an eight-character numeric column that represents one of the following four MED concepts:

- MED Medication Name ID ([MED_NAME_ID](#))
- MED Routed Medication ID ([ROUTED_MED_ID](#))
- MED Routed Dosage Form Medication ID ([ROUTED_DOSAGE_FORM_MED_ID](#))
- MED Medication ID ([MEDID](#))

The MED Concept ID Type ([MED_CONCEPT_ID_TYP](#)) column identifies which of these four concepts the MED_CONCEPT_ID represents.

Related Tables

[MED MED Concept/Generic MED Relation Table](#)

[MED MED Concept/HICL_SEQNO Relation Table](#)

MED_CONCEPT_ID_TYP

MED Concept ID Type

a one-character numeric column that identifies the type of the MED Concept ID ([MED_CONCEPT_ID](#)) column.

Text description for MED_CONCEPT_ID_TYP is provided by the [MED_CONCEPT_ID_TYP_DESC](#) column.

Valid Values Table

MED_CONCEPT_ID_TYP	MED_CONCEPT_ID_TYP_DESC
1	Medication Name
2	Routed Medication
3	Medication
7	Routed Dosage Form Medication

Related Tables

[MED MED Concept/Generic MED Relation Table](#)

[MED MED Concept/HICL_SEQNO Relation Table](#)

[MED MED Concept ID Type Description Table](#)

MED_CONCEPT_ID_TYP_DESC

MED Concept ID Type Description

a 50-character alphanumeric column that provides the description for the MED Concept ID Type (**MED_CONCEPT_ID_TYP**).

Valid Values Table

MED_CONCEPT_ID_TYP	MED_CONCEPT_ID_TYP_DESC
1	Medication Name
2	Routed Medication
3	Medication
7	Routed Dosage Form Medication

Related Tables

[MED MED Concept ID Type Description Table](#)

MED_CONCEPT_OBSDATEC

MED Concept Obsolete Date

an eight-character numeric column that represents the most recent IDC Obsolete Date of all IDCs in the MED Concept ID (MED_CONCEPT_ID). This field will be zero unless all IDCs in the MED_CONCEPT_ID are obsolete. The date format is YYYYMMDD.

Related Tables

[MED MED Concept/Generic MED Relation Table](#)

[MED MED Concept/HICL_SEQNO Relation Table](#)

MED_DOSAGE_FORM_ABBR

MED Dosage Form Abbreviation

a four-character alphanumeric column that provides an abbreviated description of the dosage form.

Sample Valid Values Table

MED_DOSAGE_FORM_ID	MED_DOSAGE_FORM_ABBR	MED_DOSAGE_FORM_DESC
00044	Leav	Leaves
00045	Liqd	Liquid
00046	Lotn	Lotion
00047	Lozg	Lozenge
00048	LozH	Lozenge on a Handle
00049	LqER	Liquid Extended Release
00050	Misc	Misc
00051	Nebu	Nebu Soln
00052	OcSy	Ocular System (Obsolete)
00053	Oil	Oil
00054	Oint	Ointment
00055	Pack	Packet
00056	Pads	Pad
00057	PdEf	Powder Effer
00058	Pllt	Pellet
00059	Powd	Powder
00060	Pste	Paste
00061	PT24	Patch 24HR
00062	PT72	Patch 72HR
00063	PTTW	Patch Biweekly
00064	PTWK	Patch Weekly
00065	Pudg	Pudding
00066	Ring	Ring
00067	Sham	Shampoo

Related Tables

MED Dosage Forms Table

MED Dosage Forms Table--French

MED_DOSAGE_FORM_DESC

MED Dosage Form Description

a 30-character alphanumeric column that provides the text description for a MED Dosage Form ID ([MED_DOSAGE_FORM_ID](#)).

Sample Valid Values Table

MED_DOSAGE_FORM_ID	MED_DOSAGE_FORM_ABBR	MED_DOSAGE_FORM_DESC
00044	Leav	Leaves
00045	Liqd	Liquid
00046	Lotn	Lotion
00047	Lozg	Lozenge
00048	LozH	Lozenge on a Handle
00049	LqER	Liquid Extended Release
00050	Misc	Misc
00051	Nebu	Nebu Soln
00052	OcSy	Ocular System (Obsolete)
00053	Oil	Oil
00054	Oint	Ointment
00055	Pack	Packet
00056	Pads	Pad
00057	PdEf	Powder Effer
00058	PlIt	Pellet
00059	Powd	Powder
00060	Pste	Paste
00061	PT24	Patch 24HR
00062	PT72	Patch 72HR
00063	PTTW	Patch Biweekly
00064	PTWK	Patch Weekly
00065	Pudg	Pudding
00066	Ring	Ring
00067	Sham	Shampoo

Related Tables

MED Dosage Forms Table

MED_DOSAGE_FORM_DESC_T

MED Dosage Form Description (Translated)

a 45-character alphanumeric column that provides the text description for a MED Dosage Form ID.

Related Tables

[MED Dosage Forms Table--French](#)

MED_DOSAGE_FORM_ID

MED Dosage Form ID

a five-character numeric column that identifies a distinct dosage form and associates the MED Routed Dosage Form Medication ID to the dosage form information.

Sample Valid Values Table

MED_DOSAGE_FORM_ID	MED_DOSAGE_FORM_ABBR	MED_DOSAGE_FORM_DESC
00044	Leav	Leaves
00045	Liqd	Liquid
00046	Lotn	Lotion
00047	Lozg	Lozenge
00048	LozH	Lozenge on a Handle
00049	LqER	Liquid Extended Release
00050	Misc	Misc
00051	Nebu	Nebu Soln
00052	OcSy	Ocular System (Obsolete)
00053	Oil	Oil
00054	Oint	Ointment
00055	Pack	Packet
00056	Pads	Pad
00057	PdEf	Powder Effer
00058	PlIt	Pellet
00059	Powd	Powder
00060	Pste	Paste
00061	PT24	Patch 24HR
00062	PT72	Patch 72HR
00063	PTTW	Patch Biweekly
00064	PTWK	Patch Weekly
00065	Pudg	Pudding
00066	Ring	Ring
00067	Sham	Shampoo

Related Tables

[MED Dosage Forms Table](#)

[MED Dosage Forms Table--French](#)

[MED Routed Dosage Form Medication Table](#)

[MED Routed Dosage Form Medication Table--French](#)

MED_GCNSEQNO_ASSIGN_CD

MED GCN_SEQNO Assignment Code

a one-character alphanumeric column that describes the level of editorial manipulation that has occurred in the assignment of a Clinical Formulation ID (**GCN_SEQNO**) to the MED Medication ID (**MEDID**).

One MEDID can be related to zero-to-many Clinical Formulation IDs (GCN_SEQNO).

Valid Values Table

MED_GCNSEQNO_ASSIGN_CD	MED_GCNSEQNO_ASSIGN_CD_DESC
0	No GCN_SEQNO assigned; refer to related Packaged Product IDs GCN_SEQNO assignments
1	Distinct GCN_SEQNO assigned
2	Representative GCN_SEQNO assigned
9	No Value

Related Tables

[MED GCN_SEQNO Assignment Code Description Table](#)

[MED GCN_SEQNO Assignment Code Description Table--French](#)

[MED Medication Table](#)

[MED Medication Table--French](#)

MED_GCNSEQNO_ASSIGN_CD_DESC

MED GCN_SEQNO Assignment Code Description

a 60-character alphanumeric column that provides the text description for a GCN_SEQNO Assignment Code ([MED_GCNSEQNO_ASSIGN_CD](#)).

Valid Values Table

MED_GCNSEQNO_ASSIGN_CD	MED_GCNSEQNO_ASSIGN_CD_DESC
0	No GCN_SEQNO assigned; refer to related Packaged Product IDs GCN_SEQNO assignments
1	Distinct GCN_SEQNO assigned
2	Representative GCN_SEQNO assigned
9	No value

Related Tables

[MED GCN_SEQNO Assignment Code Description Table](#)

MED_GCNSEQNO_ASSIGN_CD_DESC_T

MED GCN_SEQNO Assignment Code Description (Translated)

a 90-character alphanumeric column that provides the text description for a GCN_SEQNO Assignment Code (

MED_GCNSEQNO_ASSIGN_CD).

Related Tables

[MED GCN_SEQNO Assignment Code Description Table--French](#)

MED_MEDID_DESC

MED Medication Description

a 70-character alphanumeric column that provides the text description for a MED Medication ID (**MEDID**), which includes the defining components of the MEDID.

Sample Valid Values Table

MEDID	MED_MEDID_DESC
00501054	acetic acid-aluminum acetate Ear Drops
00501154	allopurinol 300 mg Tab
00501254	amino acid - branched chain 4 % IV
00501354	amsacrine 50 mg/mL IV
00501473	ascorbic acid 500 mg/mL Injection
00501554	B complex-vitamin C-folic acid 100 mg-1 mg Tab
00501654	benzocaine 6 % Topical Pads
00501756	biperiden 2 mg Tab
00501854	bupropion SR 100 mg Tab
00501892	calamine Ointment
00501954	calcium carbonate-mag hydroxid 270 mg-56 mg Chewable Tab
00502154	cascara sagrada-senna 0.1 g-0.17 g Tab
00502254	cetrimide 1 % Topical Liquid
00502354	cholestyramine 4 g/9 g Oral Packet
00502454	clindamycin-benzoyl peroxide 1 %-5 % Topical Gel
00502554	codeine-acetaminophen-caffeine 15 mg-300 mg-30 mg Tab
00502654	cromolyn 20 mg Capsules for Inhalation
00502754	darbepoetin alfa-polysorbat 150 mcg/0.3 mL Syringe
00502854	dextrose 25 % in water (D25W) IV Syringe
00502954	diltiazem 240 mg Continuous Release Cap

Salts do not appear in the medication name concept descriptions when only one salt form of the medication name exists. For example, acebutolol HCl is the only available form of acebutolol, so the medication name description becomes acebutolol. Alternately, both albuterol and albuterol sulfate forms exist, so those medication name descriptions exist.

Additionally, medication name concept descriptions have the following guidelines:

- Route is not described when the dosage form is available in only one route
- Dosage Form description is "clinically" familiar
- Abbreviations that are unclear, misleading, or redundant are clarified, repositioned, or removed
- Salt descriptions are not present when a combination of the name, route, and dosage form uniquely identify the medication concept

Related Tables

MED Medication Table

MED_MEDID_DESC_T

MED Medication Description (Translated)

a 110-character alphanumeric column that provides the text description for a MED Medication ID (**MEDID**), which includes the defining components of the MEDID.

Salts do not appear in the medication name concept descriptions when only one salt form of the medication name exists. For example, acebutolol HCl is the only available form of acebutolol, so the medication name description becomes acebutolol. Alternately, both albuterol and albuterol sulfate forms exist, so those medication name descriptions exist.

Additionally, medication name concept descriptions have the following guidelines:

- Route is not described when the dosage form is available in only one route.
- Dosage Form description is "clinically" familiar.
- Abbreviations that are unclear, misleading, or redundant are clarified, repositioned, or removed.
- Salt descriptions are not present when a combination of the name, route, and dosage form uniquely identify the medication concept.

Related Tables

[MED Medication Name Table--French](#)

MED_MEDID_REPL_EFF_DT

MED Replacement Effective Date

an eight-character numeric column that identifies the date on which the MEDID replacement became effective.
The date format is YYYYMMDD.

Related Tables

[MED Medication Name Replacement History Table](#)

MED_NAME

MED Medication Name

a 30-character alphanumeric column that contains the unique drug name associated to a MED Medication Name ID (**MED_NAME_ID**).

Sample Valid Values Table

MED_NAME_ID	MED_NAME
0085390	bosentan
0085654	chloramphenicol
0085870	dexamethasone
0086230	fluvoxamine
0087261	propafenone
0087288	pseudoephedrine-DM-guaifenesin
0087306	pyridoxine
0087847	verapamil
0087786	vitamin A & D
0087869	warfarin
0088924	Children's Advil
0089192	Decongestant Nasal Spray
0089615	Fortolin
0089626	Frova
0090082	Levate
0090190	Maalox
0090606	Norvir
0091774	Tracleer
0092046	Viracept
0092126	Xigris

Related Tables

[MED Medication Name Table](#)

MED_NAME_ID

MED Medication Name ID

an eight-character numeric column that identifies a unique product or generic name, primarily used for navigational purposes when presenting name concepts to the end user. This number is a stable identifier.

One MED_NAME_ID is linked to zero-to-many MED Routed Medication IDs ([ROUTED_MED_ID](#)).

Sample Valid Values Table

MED_NAME_ID	MED_NAME
0085390	bosentan
0085654	chloramphenicol
0085870	dexamethasone
0086230	fluvoxamine
0087261	propafenone
0087288	pseudoephedrine-DM-guaifenesin
0087306	pyridoxine
0087847	verapamil
0087786	vitamin A & D
0087869	warfarin
0088924	Children's Advil
0089192	Decongestant Nasal Spray
0089615	Fortolin
0089626	Frova
0090082	Levate
0090190	Maalox
0090606	Norvir
0091774	Tracleer
0092046	Viracept
0092126	Xigris

Related Tables

[MED Medication Name Table](#)

[MED Medication Name Table--French](#)

MED Routed Medication Table

MED Routed Medication Table--French

MED_NAME_ID_REPL_EFF_DT

MED Medication Name Replacement Effective Date

an eight-character numeric column that identifies the date on which the replacement medication name became effective. The date format is YYYYMMDD.

Related Tables

MED Medication Name Replacement History Table

MED_NAME_SOURCE_CD

MED Medication Name Source Code

a one-character alphanumeric column that provides information about the origin of the MED Medication ID (**MEDID**). It designates that the name concept was created to represent a Clinical Formulation ID (**GCN_SEQNO**), a product (**IDC**), or both. The value is programmatically determined based upon the relationship between the MEDID and the GCN_SEQNO and/or the MEDID and the IDC.

Valid Values Table

MED_NAME_SOURCE_CD	MED_NAME_SOURCE_CD_DESC
0	Generic Name
1	Packaged Product Name
2	Generically Named Packaged Product
9	Unassociated

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Medication Name Source Code Description Table](#)

[MED Medication Name Source Code Description Table--French](#)

MED_NAME_SOURCE_CD_DESC

MED Medication Name Source Code Description

a 90-character alphanumeric column that provides the text description for a MED Medication Name Source Code (**MED_NAME_SOURCE_CD**).

Valid Values Table

MED_NAME_SOURCE_CD	MED_NAME_SOURCE_CD_DESC
0	Generic Name
1	Packaged Product Name
2	Generically Named Packaged Product
9	Unassociated

Related Tables

[MED Medication Name Source Code Description Table](#)

MED_NAME_SOURCE_CD_DESC_T

MED Medication Name Source Code Description (Translated)

a 140-character alphanumeric column that provides the text description for a MED Medication Name Source Code (**MED_NAME_SOURCE_CD**).

Related Tables

[MED Medication Name Source Code Description Table--French](#)

MED_NAME_T

MED Medication Name (Translated)

a 45-character alphanumeric column that contains the unique drug name associated to a MED Medication Name ID ([MED_NAME_ID](#)).

Related Tables

[MED Medication Name Table--French](#)

MED_NAME_TYPE_CD

MED Medication Name Type Code

a one-character alphanumeric column that indicates the type of drug name.

Valid Values Table

MED_NAME_TYPE_CD	MED_NAME_TYPE_CD_DESC
1	Brand Name
2	Generic Name

Related Tables

[MED Medication Name Table](#)

[MED Medication Name Table--French](#)

[MED Medication Name Type Code Description Table](#)

[MED Medication Name Type Code Description Table--French](#)

MED_NAME_TYPE_CD_DESC

MED Medication Name Type Code Description

a 30-character alphanumeric column that provides the text description for a MED Medication Name Type Code (MED_NAME_TYPE_CD).

Valid Values Table

MED_NAME_TYPE_CD	MED_NAME_TYPE_CD_DESC
1	Brand Name
2	Generic Name

Related Tables

[MED Medication Name Type Code Description Table](#)

MED_NAME_TYPE_CD_DESC_T

MED Medication Name Type Code Description (Translated)

a 45-character alphanumeric column that provides the text description for a MED Medication Name Type Code (**MED_NAME_TYPE_CD**).

Related Tables

[MED Medication Name Type Code Description Table--French](#)

MED_PREV_MEDID

MED Previous Medication ID

an eight-character numeric column that identifies the previous value for a MED Medication ID (**MEDID**) that has been replaced.

Example—MED_PREV_MEDID and associated columns

MED_REPL_MEDID	MED_MEDID_DESC	MED_PREV_MEDID
00548340	Entrophen 650 mg Tab	00511085
00501029	acetaminophen 650 mg Rectal Suppository	00548822
00501023	acetaminophen 325 mg Tab	00509424
00506879	valproic acid 250 mg Cap	00510716
00506881	valproic acid 500 mg Cap, Delayed Release	00510718
00505050	naproxen 250 mg Tab, Delayed Release	00513061
00505051	naproxen 375 mg Tab	00513062

Related Tables

[MED Medication Replacement History Table](#)

MED_PREV_NAME_ID

MED Previous Medication Name ID

an eight-character numeric column that identifies the previous value for a MED Medication Name ID (**MEDID**) that has been replaced.

Example—MED_PREV_NAME_ID and associated columns

MED_PREV_NAME_ID	MED_REPL_NAME_ID	MED_NAME
00123180	00090505	Estragyn
00085009	00088392	acetaminophen
00121382	00113773	Prismasol O
00120920	00093094	Acne Vanishing Treatment

Related Tables

[MED Medication Replacement History Table](#)

MED_PREV_ROUTED_DF_MED_ID

MED Previous Routed Dosage Form Medication ID

an eight-character numeric column that identifies the previous value for a MED Routed Dosage Form Medication ID ([ROUTED_DOSAGE_FORM_MED_ID](#)) that has been replaced.

Example—MED_PREV_ROUTED_DF_MED_ID and associated columns

MED_REPL_ROUTED_DF_MED_ID	MED_PREV_ROUTED_DF_MED_ID	ROUTED_DOSAGE_FORM_MED_ID
00176012	00126857	Estragyn Tab
00125576	00125575	Entrophen Tab
00119018	00124261	acetaminophen Tab
00119020	00166431	acetaminophen Rectal Suppository

Related Tables

[MED Routed Dosage Form Medication Replacement History Table](#)

MED_PREV_ROUTED_MED_ID

MED Previous Routed Medication ID

an eight-character numeric column that identifies the previous value for a MED Routed Medication ID ([ROUTED_MED_ID](#)) that has been replaced.

Example—MED_PREV_ROUTED_MED_ID and associated columns

MED_REPL_ROUTED_MED_ID	MED_PREV_ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00154698	00106099	Estragyn Oral
00104974	00104973	Entrophen Oral
00100009	00146875	acetaminophen Rect
00100008	00103852	acetaminophen Oral

Related Tables

[MED Routed Medication Replacement History Table](#)

MED_REF_DEA_CD

MED Reference Federal DEA Class Code

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Federal DEA Class Code Description Table](#)

MED_REF_DEA_CD_DESC

MED Reference Federal DEA Class Code Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Federal DEA Class Code Description Table](#)

MED_REF_DESI2_IND

MED Reference DESI2 Indicator

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference DESI2 Indicator Description Table](#)

MED_REF_DESI2_IND_DESC

MED Reference DESI2 Indicator Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

MED_REF_DESI_IND

MED Reference DESI Indicator

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference DESI Indicator Description Table](#)

MED_REF_DESI_IND_DESC

MED Reference DESI Indicator Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference DESI Indicator Description Table](#)

MED_REF_FED_LEGEND_IND

MED Reference Federal Legend Indicator

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Federal Legend Indicator Description Table](#)

MED_REF_FED_LEGEND_IND_DESC

MED Reference Federal Legend Indicator Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Federal Legend Indicator Description Table](#)

MED_REF_GEN_COMP_PRICE_CD

MED Reference Generic Comparative Price Code

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Generic Comparative Price Code Description Table](#)

MED_REF_GEN_COMP_PRICE_CD_DESC

MED Reference Generic Comparative Price Code Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Generic Comparative Price Code Description Table](#)

MED_REF_GEN_DRUG_NAME_CD

MED Reference Generic Medication Name Code

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Generic Medication Name Code Description Table](#)

MED_REF_GEN_DRUG_NAME_CD_DESC

MED Reference Generic Medication Name Code Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Generic Medication Name Code Description Table](#)

MED_REF_GEN_SPREAD_CD

MED Reference Generic Price Spread Code

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Generic Price Spread Code Description Table](#)

MED_REF_GEN_SPREAD_CD_DESC

MED Reference Generic Price Spread Code Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Generic Price Spread Code Description Table](#)

MED_REF_GEN_THERA_EQU_CD

MED Reference Generic Therapeutic Equivalence Code

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Generic Therapeutic Equivalence Code Description Table](#)

MED_REF_GEN_THERA_EQU_CD_DESC

MED Reference Generic Therapeutic Equivalence Code Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Generic Therapeutic Equivalence Code Description Table](#)

MED_REF_INNOV_IND

MED Reference Innovator Indicator

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Innovator Indicator Description Table](#)

MED_REF_INNOV_IND_DESC

MED Reference Innovator Indicator Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Innovator Indicator Description Table](#)

MED_REF_MULTI_SOURCE_CD

MED Reference Multi-Source Code

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

[MED Reference Multi-Source Code Description Table](#)

MED_REF_MULTI_SOURCE_CD_DESC

MED Reference Multi-Source Code Description

Data is only available for the U.S. market and is not relevant to the Canadian market.

Related Tables

[MED Reference Multi-Source Code Description Table](#)

MED_REPLACE_MEDID

MED Replacement Medication ID

an eight-character numeric column that identifies the Medication ID (**MEDID**) that supersedes the previous MEDID.

Example—MED_REPLACE_MEDID and associated columns

MED_REPLACE_MEDID	MED_MEDID_DESC	MED_PREV_MEDID
00548340	Entrophen 650 mg Tab	00511085
00501029	acetaminophen 650 mg Rectal Suppository	00548822
00501023	acetaminophen 325 mg Tab	00509424
00506879	valproic acid 250 mg Cap	00510716
00506881	valproic acid 500 mg Cap, Delayed Release	00510718
00505050	naproxen 250 mg Tab, Delayed Release	00513061
00505051	naproxen 375 mg Tab	00513062

Related Tables

[MED Medication Replacement History Table](#)

MED_REPLACE_NAME_ID

MED Replacement Medication Name ID

an eight-character numeric column that identifies the MED Medication Name ID (**MED_NAME_ID**) that supersedes the MED Previous Medication Name ID (**MED_PREV_NAME_ID**).

Example—MED_REPLACE_NAME_ID and associated columns

MED_PREV_NAME_ID	MED_REPLACE_NAME_ID	MED_NAME
00123180	00090505	Estragyn
00085009	00088392	acetaminophen
00121382	00113773	Prismasol O
00120920	00093094	Acne Vanishing Treatment

Related Tables

[MED Medication Name Replacement History Table](#)

MED_REPL_ROUTED_DF_MED_ID

MED Replacement Routed Dosage Form Medication ID

an eight-character numeric column that identifies the MED Routed Dosage Form Medication ID (**ROUTED_DOSAGE_FORM_MED_ID**) that supersedes the MED Previous Routed Dosage Form Medication ID (**MED_PREV_ROUTED_DF_MED_ID**).

Example—MED_REPL_ROUTED_DF_MED_ID and associated columns

MED_REPL_ROUTED_DF_MED_ID	MED_PREV_ROUTED_DF_MED_ID	ROUTED_DOSAGE_FORM_MED_ID
00176012	00126857	Estragyn Tab
00125576	00125575	Entrophen Tab
00119018	00124261	acetaminophen Tab
00119020	00166431	acetaminophen Rectal Suppository

Related Tables

[MED Routed Dosage Form Medication Replacement History Table](#)

MED_REPL_ROUTED_MED_ID

MED Replacement Routed Medication ID

an eight-character numeric column that identifies the MED Routed Medication ID (**ROUTED_MED_ID**) that supersedes the MED Previous Routed Medication ID (**MED_PREV_ROUTED_MED_ID**).

Example—MED_REPL_ROUTED_MED_ID and associated columns

MED_REPL_ROUTED_MED_ID	MED_PREV_ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00154698	00106099	Estragyn Oral
00104974	00104973	Entrophen Oral
00100009	00146875	acetaminophen Rect
00100008	00103852	acetaminophen Oral

Related Tables

[MED Routed Medication Replacement History Table](#)

MED_ROUTE_ABBR

MED Route Abbreviation

a four-character alphanumeric column that provides an abbreviated route of administration description.

Sample Valid Values Table

MED_ROUTE_ID	MED_ROUTE_ABBR	MED_ROUTE_DESC
1	Bucl	Buccal
2	Comb	Combination
3	Dent	Dental
4	Epid	Epidural
6	IArt	Intra-arterial
20	IAtc	Intra-articular
7	ICav	Intracavernosal
8	IDrm	Intradermal
11	IM	Intramuscular
10	Impl	Implant
12	Inhl	Inhalation
9	Inj	Injection
36	InPl	Intrapleural
34	InVt	In Vitro
13	IO	Intraocular
14	IP	Intraperitoneal
15	IR	Irrigation
17	IT	Intrathecal
18	IU	Intrauterine
19	IV	Intravenous
16	IVes	Intravesical
35	Misc	Miscell. (Med.Supl.;Non-Drugs)
21	MM	Mucous Membrane
22	Nasl	Nasal

23	Opht	Ophthalmic
24	Oral	Oral
25	Otic	Otic
26	Perf	Perfusion
27	Rect	Rectal
28	subQ	Subcutaneous
29	SL	Sublingual
30	TD	Transdermal
31	TL	Translingual
5	Top	Topical
32	Urth	Urethral
33	Vagl	Vaginal

Related Tables[MED Route Table](#)[MED Route Table--French](#)

MED_ROUTE_DESC

MED Route Description

a 30-character alphanumeric column that provides the text description for a MED Route ID (**MED_ROUTE_ID**).

Sample Valid Values Table

MED_ROUTE_ID	MED_ROUTE_ABBR	MED_ROUTE_DESC
1	Bucl	Buccal
2	Comb	Combination
3	Dent	Dental
4	Epid	Epidural
5	Top	Topical
6	IArt	Intra-arterial
7	ICav	Intracavernosal
8	IDrm	Intradermal
9	Inj	Injection
10	Impl	Implant
11	IM	Intramuscular
12	Inhl	Inhalation
13	IO	Intraocular
14	IP	Intraperitoneal
15	IR	Irrigation
16	IVes	Intravesical
17	IT	Intrathecal
18	IU	Intrauterine
19	IV	Intravenous
20	IAtc	Intra-articular
21	MM	Mucous Membrane
22	Nasl	Nasal
23	Opht	Ophthalmic
24	Oral	Oral

25	Otic	Otic
26	Perf	Perfusion
27	Rect	Rectal
28	subQ	Subcutaneous
29	SL	Sublingual
30	TD	Transdermal
31	TL	Translingual
32	Urth	Urethral
33	Vagl	Vaginal
34	InVt	In Vitro
35	Misc	Miscell. (Med.Supl.;Non-Drugs)
36	InPl	Intrapleural

Related Tables**MED Route Table**

MED_ROUTE_DESC_T

MED Route Description (Translated)

a 45-character alphanumeric column that provides the text description for a MED Route ID (**MED_ROUTE_ID**).

Related Tables

MED Route Table--French

MED_ROUTE_ID

MED Route ID

a five-character numeric column that identifies a distinct route of administration and associates the routed drug to the route information.

Sample Valid Values Table

MED_ROUTE_ID	MED_ROUTE_ABBR	MED_ROUTE_DESC
1	Bucl	Buccal
2	Comb	Combination
3	Dent	Dental
4	Epid	Epidural
5	Top	Topical
6	IArt	Intra-arterial
7	ICav	Intracavernosal
8	IDrm	Intradermal
9	Inj	Injection
10	Impl	Implant
11	IM	Intramuscular
12	Inhl	Inhalation
13	IO	Intraocular
14	IP	Intraperitoneal
15	IR	Irrigation
16	IVes	Intravesical
17	IT	Intrathecal
18	IU	Intrauterine
19	IV	Intravenous
20	IAtc	Intra-articular
21	MM	Mucous Membrane
22	Nasl	Nasal
23	Opht	Ophthalmic
24	Oral	Oral

25	Otic	Otic
26	Perf	Perfusion
27	Rect	Rectal
28	subQ	Subcutaneous
29	SL	Sublingual
30	TD	Transdermal
31	TL	Translingual
32	Urth	Urethral
33	Vagl	Vaginal
34	InVt	In Vitro
35	Misc	Miscell. (Med.Supl.;Non-Drugs)
36	InPl	Intrapleural

Related Tables

[MED Routed Medication Table](#)

[MED Routed Medication Table--French](#)

[MED Route Table](#)

[MED Route Table--French](#)

MED_ROUTED_DF_MED_ID_DESC

MED Routed Dosage Form Medication Description

a 60-character alphanumeric column that provides the text description for a MED Routed Dosage Form Medication ID ([ROUTED_DOSAGE_FORM_MED_ID](#)).

Sample Valid Values Table

ROUTED_DOSAGE_FORM_MED_ID	MED_ROUTED_DF_MED_ID_DESC
00119001	abacavir Tab
00119004	abciximab IV
00119008	acenocoumarol Tab
00119009	acetaminophen Cap
00119020	acetaminophen Rectal Suppository
00119027	acetaminophen-DM Oral Liquid
00119028	acetaminophen-pamabrom Tab
00119030	acetaminophen-pamabrom-pyrilamine Tab
00120890	hydroxyzine HCl Cap
00121166	lidocaine-carbon dioxide Injection
00122572	trimeprazine tartrate Syrup
00122708	vitamin E-vitamins A & D Topical Cream
00124164	Amcort Topical Cream
00124166	Amerge Tab
00124173	Amikin Injection
00124174	Aminosyn 8.5% with Electrolyte IV
00124175	Aminosyn II 10% IV

Related Tables

[MED Routed Dosage Form Medication Table](#)

MED_ROUTED_DF_MED_ID_DESC_T

MED Routed Dosage Form Medication Description (Translated)

a 90-character alphanumeric column that provides the text description for a MED Routed Dosage Form Medication ID ([ROUTED_DOSAGE_FORM_MED_ID](#)).

Related Tables

[MED Routed Dosage Form Medication Table--French](#)

MED_ROUTED_DF_MED_ID REP_EF_DT

MED Routed Dosage Form Medication ID Replacement Effective Date

an eight-character numeric column that provides the date on which a MED Replacement Routed Dosage Form Medication ID (**MED_REPL_ROUTED_DF_MED_ID**) became effective. The date format is YYYYMMDD.

Related Tables

[MED Routed Dosage Form Medication Replacement History Table](#)

MED_ROUTED_MED_ID_DESC

MED Routed Medication Description

a 60-character alphanumeric column that provides the text description for a MED Routed Medication ID ([ROUTED_MED_ID](#)).

Sample Valid Values Table

ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00100000	abacavir Tab
00100003	abciximab IV
00100007	acenocoumarol Tab
00100008	acetaminophen Cap
00100009	acetaminophen Rectal Suppository
00100013	acetaminophen-DM Oral Liquid
00100014	acetaminophen-pamabrom Tab
00100015	acetaminophen-parabrom-pyridam Tab
00101318	hydroxyzine HCl Cap
00101519	lidocaine-carbon dioxide Injection
00102527	trimeprazine tartrate Syrup
00102628	Vitamins A & D Tab
00103771	Amcort Topical Cream
00103772	Amerge Tab
00103779	Amikin Injection
00103780	Aminosyn 8.5% with Electrolyte IV
00103781	Aminosyn II 10% IV

Related Tables

[MED Routed Medication Table](#)

MED_ROUTED_MED_ID_DESC_T

MED Routed Medication Description (Translated)

a 90-character alphanumeric column that provides the text description for a MED Routed Medication ID (**ROUTED_MED_ID**).

Related Tables

[MED Routed Medication Table--French](#)

MED_ROUTED_MED_ID REPL EFF DT

MED Routed Medication ID Replacement Effective Date

an eight-character numeric column that identifies the date on which the MED Replacement Routed Medication ID (**MED_REPL_ROUTED_MED_ID**) became effective. The date format is YYYYMMDD.

Related Tables

[MED Routed Medication Replacement History Table](#)

MED_STATUS_CD

MED Medication Status Code

a one-character alphanumeric column that indicates whether a medication name identifier has been superseded by another MEDID.

Valid Values Table

MED_STATUS_CD	MED_STATUS_CD_DESC	Definition
0	Active	<p>Indicates that a medication concept represents active IDCs available on the Canadian market.</p> <ul style="list-style-type: none"> • A Medication ID (MEDID) is Active when it represents any active IDCs or DINs available on the Canadian market or when it represents a Clinical Formulation ID (GCN_SE QNO) with any active IDCs or DINs. • A Routed Dosage Form Medication ID is Active when it is associated to any active Medication IDs. • A Routed Medication ID is Active when it is associated to any active Routed Dosage Form Medication IDs. • A Medication Name ID is Active when it is associated to any Active Routed Medication IDs.
1	Replaced	<p>Indicates that a medication name concept identifier has been replaced. In the event that a medication concept identifier is replaced, a link will be provided from the "old" identifier to its replacement identifier.</p>
2	Retired	<p>Indicates that a medication name concept identifier has been retired. This may occur when judged by FDB editorial staff as no longer having validity.</p>

3	Inactive	<p>Indicates that a medication concept represents no active IDCs.</p> <ul style="list-style-type: none">• A Medication ID is Inactive when it represents only obsolete IDCs (Brand MEDID), or when it represents Clinical Formulation IDs (GCN_SEQNOs) associated only to obsolete IDCs (Generic MEDID).• A Routed Dosage Form Medication ID is Inactive when it is associated to only Inactive Medication IDs, or when it is associated to a combination of Inactive Medication IDs and Unassociated Medication IDs.• A Routed Medication ID is Inactive when it is associated to only Inactive Routed Dosage Form Medication IDs, or when it is associated to a combination of Inactive Routed Dosage Form Medication IDs and Unassociated Routed Dosage Form Medication IDs.• A Medication Name ID is Inactive when it is associated to only Inactive Routed Medication IDs, or when it is associated to a combination of Inactive Routed Medication IDs and Unassociated Routed Medication IDs.
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9	Unassociated	<p>Indicates that a medication concept represents no IDCs, although it may represent Clinical Formulation IDs (GCN_SEQNOs). These concepts are not currently retired or replaced, but are candidates for retirement, replacement, or future assignment to drug concepts.</p> <ul style="list-style-type: none"> • A Medication ID is Unassociated when: <ul style="list-style-type: none"> • it represents IDCs or DINs that are no longer available on the Canadian market (ICANMKDI N = 1); or • it represents a Clinical Formulation ID (GCN_SEQNO) that is not associated to IDCs; or • it represents Clinical Formulation IDs (GCN_SEQNOs) associated to IDCs linked to DINs no longer available on the Canadian market (ICANMKDIN = 1). • A Routed Dosage Form Medication ID is Unassociated when it is associated to only unassociated Medication IDs or if it is not associated to a Medication ID at all. • A Routed Medication ID is Unassociated when it is associated to only Unassociated Routed Dosage Form Medication IDs or if it is not associated to a Routed Dosage Form Medication ID at all. • A Medication Name ID is Unassociated when it is associated to only Unassociated Routed Medication IDs or if it is not associated to a Routed Medication ID at all.
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Related Tables

[MED Medication Name Table](#)

[MED Medication Name Table--French](#)

[MED Medication Table](#)

[MED Routed Dosage Form Medication Table](#)

MED Routed Dosage Form Medication Table--French

MED Routed Medication Table

MED Routed Medication Table--French

MED Status Code Description Table

MED Status Code Description Table--French

MED_STATUS_CD_DESC

MED Medication Status Code Description

a 30-character alphanumeric column that provides the text description for a MED Status Code (**MED_STATUS_CD**). It indicates whether a MEDID has been superseded by another MEDID.

Valid Values Table

MED_STATUS_CD	MED_STATUS_CD_DESC	Definition
0	Active	<p>Indicates that a medication concept represents active IDCs available on the Canadian market.</p> <ul style="list-style-type: none"> • A Medication ID (MEDID) is Active when it represents any active IDCs or DINs available on the Canadian market or when it represents a Clinical Formulation ID (GCN_SE QNO) with any active IDCs or DINs. • A Routed Dosage Form Medication ID is Active when it is associated to any active Medication IDs. • A Routed Medication ID is Active when it is associated to any active Routed Dosage Form Medication IDs. • A Medication Name ID is Active when it is associated to any Active Routed Medication IDs.
1	Replaced	<p>Indicates that a medication name concept identifier has been replaced. In the event that a medication concept identifier is replaced, a link will be provided from the "old" identifier to its replacement identifier.</p>
2	Retired	<p>Indicates that a medication name concept identifier has been retired. This may occur when judged by FDB editorial staff as no longer having validity.</p>

3	Inactive	<p>Indicates that a medication concept represents no active IDCs.</p> <ul style="list-style-type: none">• A Medication ID is Inactive when it represents only obsolete IDCs (Brand MEDID), or when it represents Clinical Formulation IDs (GCN_SEQNOs) associated only to obsolete IDCs (Generic MEDID).• A Routed Dosage Form Medication ID is Inactive when it is associated to only Inactive Medication IDs, or when it is associated to a combination of Inactive Medication IDs and Unassociated Medication IDs.• A Routed Medication ID is Inactive when it is associated to only Inactive Routed Dosage Form Medication IDs, or when it is associated to a combination of Inactive Routed Dosage Form Medication IDs and Unassociated Routed Dosage Form Medication IDs.• A Medication Name ID is Inactive when it is associated to only Inactive Routed Medication IDs, or when it is associated to a combination of Inactive Routed Medication IDs and Unassociated Routed Medication IDs.
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9	Unassociated	<p>Indicates that a medication concept represents no IDCs, although it may represent Clinical Formulation IDs (GCN_SEQNOs). These concepts are not currently retired or replaced, but are candidates for retirement, replacement, or future assignment to drug concepts.</p> <ul style="list-style-type: none"> • A Medication ID is Unassociated when: <ul style="list-style-type: none"> • it represents IDCs or DINs that are no longer available on the Canadian market (ICANMKDI N = 1); or • it represents a Clinical Formulation ID (GCN_SEQNO) that is not associated to IDCs; or • it represents Clinical Formulation IDs (GCN_SEQNOs) associated to IDCs linked to DINs no longer available on the Canadian market (ICANMKDIN = 1). • A Routed Dosage Form Medication ID is Unassociated when it is associated to only unassociated Medication IDs or if it is not associated to a Medication ID at all. • A Routed Medication ID is Unassociated when it is associated to only Unassociated Routed Dosage Form Medication IDs or if it is not associated to a Routed Dosage Form Medication ID at all. • A Medication Name ID is Unassociated when it is associated to only Unassociated Routed Medication IDs or if it is not associated to a Routed Medication ID at all.
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Related Tables

[MED Status Code Description Table](#)

MED_STATUS_CD_DESC_T

MED Medication Status Code Description (Translated)

a 45-character alphanumeric column that provides the text description for a MED Status Code. It indicates whether a MEDID has been superseded by another MEDID.

Related Tables

[MED Status Code Description Table--French](#)

MED_STRENGTH

MED Strength

a 15-character alphanumeric column that provides a character representation of the product's ingredient strength. When combined with the MED Strength Unit of Measure ([MED_STRENGTH_UOM](#)), this represents the dosage strength as provided by the manufacturer.

Example—**MED_STRENGTH** and associated columns

MEDID	MED_STRENGTH	MED_STRENGTH_UOM	MED_MEDID_DESC
00501154	300	mg	allopurinol 300 mg Tab
00501254	4	%	amino acid - branched chain 4 % IV
00501554	100-1	mg	B complex-vitamin C-folic acid 100 mg-1 mg Tab
00501654	6	%	benzocaine 6 % Topical Pads
00501954	270-56	mg	calcium carbonate-mag hydroxid 270 mg-56 mg Chewable Tab
00502154	0.1-0.17	g	cascara sagrada-senna 0.1 g-0.17 g Tab
00502354	4	g/9 g	cholestyramine 4 g/9 g Oral Packet
00502554	15-300-30	mg	codeine-acetaminophen-caff eine 15 mg-300 mg-30 mg Tab
00502754	150	mcg/0.3 mL	darbepoetin alfa-polysorbat 150 mcg/0.3 mL Syringe

Related Tables

[MED Medication Table](#)

MED_STRENGTH_T

MED Strength (Translated)

a 25-character alphanumeric column that provides a character representation of the product's ingredient strength. When combined with the MED Strength Unit of Measure ([MED_STRENGTH_UOM](#)), this represents the dosage strength as provided by the manufacturer.

Related Tables

[MED Medication Table--French](#)

MED_STRENGTH_UOM

MED Strength Unit of Measure

a 15-character alphanumeric column that identifies the unit or units of measure used to standardize the value of the product strength, using reasonable and locally accepted unit standards.

Example—MED_STRENGTH_UOM and associated columns

MEDID	MED_STRENGTH	MED_STRENGTH_UOM	MED_MEDID_DESC
00501154	300	mg	allopurinol 300 mg Tab
00501254	4	%	amino acid - branched chain 4 % IV
00501554	100-1	mg	B complex-vitamin C-folic acid 100 mg-1 mg Tab
00501654	6	%	benzocaine 6 % Topical Pads
00501954	270-56	mg	calcium carbonate-mag hydroxid 270 mg-56 mg Chewable Tab
00502154	0.1-0.17	g	cascara sagrada-senna 0.1 g-0.17 g Tab
00502354	4	g/9 g	cholestyramine 4 g/9 g Oral Packet
00502554	15-300-30	mg	codeine-acetaminophen-caff eina 15 mg-300 mg-30 mg Tab
00502754	150	mcg/0.3 mL	darbepoetin alfa-polysorbat 150 mcg/0.3 mL Syringe

Related Tables

MED Medication Table

MED_STRENGTH_UOM_T

MED Strength Unit of Measure (Translated)

a 20-character alphanumeric column that identifies the unit or units of measure used to standardize the value of the product strength, using reasonable and locally accepted unit standards.

Related Tables

[MED Medication Table--French](#)

MEDID

MED Medication ID

an eight-character numeric column that identifies the unique combination of product or generic name, route of administration, dosage form, strength, and strength unit-of-measure. It is the most specific name concept in MedKnowledge. This column is a stable identifier.

Examples of its use include outpatient prescribing and patient medication profiling. In contrast to the inpatient setting, outpatient prescribing must be specific as to dosage form and strength. Attributes of the MEDID provide drug information and access to clinical and patient education modules within MedKnowledge.

Sample Valid Values Table

MEDID	MED_MEDID_DESC
00501054	acetic acid-aluminum acetate Ear Drops
00501154	allopurinol 300 mg Tab
00501254	amino acid - branched chain 4 % IV
00501354	amsacrine 50 mg/mL IV
00501473	ascorbic acid 500 mg/mL Injection
00501554	B complex-vitamin C-folic acid 100 mg-1 mg Tab
00501654	benzocaine 6 % Topical Pads
00501756	biperiden 2 mg Tab
00501854	bupropion SR 100 mg Tab
00501892	calamine Ointment
00501954	calcium carbonate-mag hydroxid 270 mg-56 mg Chewable Tab
00502154	cascara sagrada-senna 0.1 g-0.17 g Tab
00502254	cetrimide 1 % Topical Liquid
00502354	cholestyramine 4 g/9 g Oral Packet
00502454	clindamycin-benzoyl peroxide 1 %-5 % Topical Gel
00502554	codeine-acetaminophen-caffeine 15 mg-300 mg-30 mg Tab
00502654	cromolyn 20 mg Capsules for Inhalation
00502754	darbepoetin alfa-polysorbat 150 mcg/0.3 mL Syringe
00502854	dextrose 25 % in water (D25W) IV Syringe
00502954	diltiazem 240 mg Continuous Release Cap

Related Tables

[MED GCN_SEQNO to Medication ID Cross-Reference Table](#)

[MED IDC to Generic Medication ID Cross-Reference Table](#)

[MED IDC to Medication ID Cross-Reference Table](#)

[MED Medication Table](#)

[MED Medication Table--French](#)

MFG

Manufacturer Name

a 15-character alphanumeric column that provides the name of the distributor as listed on the drug label. The MFG is found via the IDDF MFG/Labeler Unique Identifier ([ILBLRID](#)).

Sample Valid Values Table

ILBLRID	MFG
CA0743	ACO PRODUCTS
CA0766	GALDERMA CANADA
CA0832	ARROW INT'L INC
CA0836	ASSEJA LABS INC
CA0837	ASSOC. DENTAL
CA0838	ASTA MEDICA
CA0839	ASTRA PHARMA
CA0860	BAKER CUMMINS
CA0861	BAKER NORTON
CA0863	BALLARD MEDICAL
CA0864	BARKER & DOBSON
CA0865	BARNES HIND CA
CA0866	BARRY LABS.
CA0891	BEIERSDORF CA
CA0893	BEL ART PRODUCT
CA0957	BOEHRINGER MANN
CA0960	BOEHRINGER ING.
CA0991	BRITISH COD LIV
CA1017	CANADIAN CUSTOM
CA1021	CANADIAN OXYGEN
CA1022	CANAPHARM INC
CA1023	CANDERM PHARM
CA1044	JAMIESON LAB
CA1127	COOPERVISION

CA1160	CYANAMID CANADA
CA1294	ERNO LASZLO
CA1500	HUNTINGTON LABS

Related Tables

IDDF Canada Labeler (MFG) Identifier Description Table

MMA_MND

MMAD Minimum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the minimum adult daily dose usually expressed in metric strength units (such as MG, MCG, G). The Minimum Daily Dose Strength Quantity must be used in conjunction with the Minimum Daily Dose Strength Units ([MMA_MNDU](#)).

The first example in the following table shows that MMA_MND of 000000.100 works in conjunction with MMA_MNDU of MG to express the minimum daily dose of 0.100 MG.

Example—MMA_MND and associated columns

MMA_MND	MMA_MNDU
000000.100	MG
000050.000	MCG
000100.000	MCG

Related Tables

[MMAD Master Table](#)

MMA_MNDU

MMAD Minimum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMAD Minimum Daily Dose Strength Quantity ([MMA_MND](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the UNIT_DESC_EXPANDED, page 3637 column instead of this column for ordering and patient records.

Valid Values Table

MMA_MNDU	Description
G	gram
MG	milligram
MCG	microgram
MEQ	milliequivalent
U	units
AP	applicatorful
SC	scoops
IN	inhalations
MU	units x 1,000
MMU	units x 1,000,000
GTT	drops

Related Tables

[MMAD Master Table](#)

MMA_MNU

MMAD Minimum Daily Dose Units Quantity

an eight-character numeric column that provides the quantitative value for the minimum adult daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.). The Minimum Daily Dose Units Quantity must be used in conjunction with the Minimum Daily Dose Units Form ([MMA_MNUF](#)).

The first example in the following table shows that MMA_MNU of 0001.000 works in conjunction with MMA_MNUF of EA to express the minimum daily dose of 1EA.

Example—MMA_MNU and associated columns

MMA_MNU	MMA_MNUF
0001.000	EA
0001.000	ML
0000.400	ML

Related Tables

[MMAD Master Table](#)

MMA_MNUF

MMAD Minimum Daily Dose Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the Minimum Daily Dose Units Quantity ([MMA_MNU](#)).

Valid Values Table

MMA_MNUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMAD Master Table](#)

MMA_MXD

MMAD Maximum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the maximum adult daily dose usually expressed in metric strength units (such as MG, MCG, G). The Maximum Daily Dose Strength Quantity must be used in conjunction with the Maximum Daily Dose Strength Units ([MMA_MXDU](#)).

The first example in the following table shows that MMA_MXD of 000000.300 works in conjunction with MMA_MXDU of MG to express the maximum daily dose of 0.300MG.

Example—MMA_MXD and associated columns

MMA_MXD	MMA_MXDU
000000.300	MG
000350.000	MCG
000300.000	MCG

Related Tables

[MMAD Master Table](#)

MMA_MXDU

MMAD Maximum Daily Dose Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the Maximum Daily Dose Strength Quantity ([MMA_MXD](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the [UNIT_DESC_EXPANDED](#) column instead of this column for ordering and patient records.

Valid Values Table

MMA_MXDU	Description
AP	applicatorful
G	gram
GTT	drops
IN	inhalations
MCG	microgram
MEQ	milliequivalent
MG	milligram
MMU	units x 1,000,000
MU	units x 1,000
SC	scoops
U	units

Related Tables

[MMAD Master Table](#)

MMA_MXU

MMAD Maximum Daily Dose Units Quantity

an eight-character numeric column that provides the quantitative value for the maximum adult daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.). The Maximum Daily Dose Units Quantity must be used in conjunction with the Maximum Daily Dose Units Form ([MMA_MXUF](#)).

The first example in the following table shows that MMA_MXU of 0000.840 works in conjunction with MMA_MXUF of G to express the maximum daily dose of 0.840G.

Example—MMA_MXU and associated columns

MMA_MXU	MMA_MXUF
0000.840	G
0003.000	EA
0005.000	ML
0007.000	EA
0012.000	IN
0045.000	ML

Related Tables

[MMAD Master Table](#)

MMA_MXUF

MMAD Maximum Daily Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the Maximum Daily Dose Units Quantity ([MMA_MXU](#))

Valid Values Table

MMA_MXUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMAD Master Table](#)

MMAR_MND

MMAR Minimum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the absolute minimum adult daily dose usually expressed in metric strength units (such as MG, MCG, G). The MMAR Minimum Daily Dose Strength Quantity must be used in conjunction with the MMAR Minimum Daily Dose Strength Units ([MMAR_MNDU](#)).

The first example in the following table shows that MMA_MND of 000000.100 works in conjunction with MMA_MNDU of MG to express the minimum daily dose of 0.100MG.

Example—MMAR_MND and associated columns

MMAR_MND	MMAR_MNDU
000000.100	MG
000050.000	MCG
000050.000	MCG

Related Tables

[MMAR Master Table](#)

MMAR_MNDU

MMAR Minimum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMAR Minimum Daily Dose Strength Quantity (**MMAR_MND**). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the **UNIT_DESC_EXPANDED** column instead of this column for ordering and patient records.

Valid Values Table

MMAR_MNDU	Description
AP	applicatorful
G	gram
GTT	drops
IN	inhalations
MCG	microgram
MEQ	milliequivalent
MG	milligram
MMU	units x 1,000,000
MU	units x 1,000
SC	scoops
U	units

Related Tables

[MMAR Master Table](#)

MMAR_MNU

MMAR Minimum Daily Dose Units Quantity

an eight-character numeric column that provides the numeric value for the minimum adult daily dose expressed in relation to its dosage form. The MMAR Minimum Daily Dose Units Quantity must be used in conjunction with the MMAR Minimum Daily Dose Units Form ([MMAR_MNUF](#)).

The first example in the following table shows that MMAR_MNU of 0001.000 works in conjunction with MMAR_MNUF of EA to express the minimum daily dose of 1EA.

Example—MMAR_MNU and associated columns

MMAR_MNU	MMAR_MNUF
0001.000	EA
0000.500	EA
0001.000	ML
0000.400	ML

Related Tables

[MMAR Master Table](#)

MMAR_MNUF

MMAR Minimum Daily Dose Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the MMAR Minimum Daily Dose Units Quantity ([MMAR_MNU](#)).

Valid Values Table

MMAR_MNUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMAR Master Table](#)

MMAR_MXD

MMAR Maximum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the absolute maximum adult daily dose usually expressed in metric strength units (such as MG, MCG, G). The MMAR Maximum Daily Dose Strength Quantity must be used in conjunction with the MMAR Maximum Daily Dose Strength Units ([MMAR_MXDU](#)).

The first example in the following table shows that MMAR_MXD of 000000.300 works in conjunction with MMAR_MXDU of MG to express the maximum daily dose of 0.300MG.

Example—MMAR_MXD and associated columns

MMAR_MXD	MMAR_MXDU
000000.300	MG
000350.000	MCG
000900.000	MG

Related Tables

[MMAR Master Table](#)

MMAR_MXDU

MMAR Maximum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMAR Maximum Daily Dose Strength Quantity ([MMAR_MXD](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the [UNIT_DESC_EXPANDED](#) column instead of this column for ordering and patient records.

Valid Values Table

MMAR_MXDU	Description
AP	applicatorful
G	gram
GTT	drops
IN	inhalations
MCG	microgram
MEQ	milliequivalent
MG	milligram
MMU	units x 1,000,000
MU	units x 1,000
SC	scoops
U	units

Related Tables

[MMAR Master Table](#)

MMAR_MXU

MMAR Maximum Daily Dose Units Quantity

an eight-character numeric column that provides the numeric value for the maximum adult daily dose expressed in relation to its dosage form. The MMAR Maximum Daily Dose Units Quantity must be used in conjunction with the MMAR Maximum Daily Dose Units Form ([MMAR_MXUF](#)).

The first example in the following table shows that MMAR_MXU of 0003.000 works in conjunction with MMAR_MXUF of EA to express the maximum daily dose of 3EA.

Example—MMAR_MXU and associated columns

MMAR_MXU	MMAR_MXUF
0003.000	EA
0007.000	EA
0005.000	ML
0002.000	ML
0004.000	EA

Related Tables

[MMAR Master Table](#)

MMAR_MXUF

MMAR Maximum Daily Dose Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the MMAR Maximum Daily Dose Units Quantity (**MMAR_MXU**).

Valid Values Table

MMAR_MXUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMAR Master Table](#)

MMG_MND

MMGD Minimum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the minimum geriatric daily dose usually expressed in metric strength units (such as MG, MCG, G). The MMGD Minimum Daily Dose Strength Quantity must be used in conjunction with the MMGD Minimum Daily Dose Strength Units ([MMG_MNDU](#)).

The first example in the following table shows that MMG_MND of 000000.100 works in conjunction with MMG_MNDU of MG to express the minimum daily dose of 0.100MG.

Example—MMG_MND and associated columns

MMG_MND	MMG_MNDU
000000.100	MG
000050.000	MCG
000300.000	MG
000400.000	MG
000375.000	MG

Related Tables

[MMGD Master Table](#)

MMG_MNDU

MMGD Minimum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMGD Minimum Daily Dose Strength Quantity ([MMG_MND](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the [UNIT_DESC_EXPANDED](#) column instead of this column for ordering and patient records.

Valid Values Table

MMG_MNDU	Description
AP	applicatorful
G	gram
GTT	drops
IN	inhalations
MCG	microgram
MEQ	milliequivalent
MG	milligram
MMU	units x 1,000,000
MU	units x 1,000
SC	scoops
U	units

Related Tables

[MMGD Master Table](#)

MMG_MNU

MMGD Minimum Daily Dose Units Quantity

an eight-character numeric column that provides the quantitative value for the minimum geriatric daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.). The MMGD Minimum Daily Dose Units Quantity must be used in conjunction with the MMGD Minimum Daily Dose Units Form ([MMG_MNUF](#)).

The first example in the following table shows that MMG_MNU of 0001.000 works in conjunction with MMG_MNUF of EA to express the minimum daily dose of 1EA.

Example—MMG_MNU and associated columns

MMG_MNU	MMG_MNUF
0001.000	EA
0001.000	ML
0000.400	ML
0000.500	EA

Related Tables

[MMGD Master Table](#)

MMG_MNUF

MMGD Minimum Daily Dose Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the MMGD Minimum Daily Dose Units Quantity (**MMG_MNU**).

Valid Values Table

MMG_MNUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMGD Master Table](#)

MMG_MXD

MMGD Maximum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the maximum geriatric daily dose usually expressed in metric strength units (such as MG, MCG, G). The MMGD Maximum Daily Dose Strength Quantity must be used in conjunction with the MMGD Maximum Daily Dose Strength Units ([MMG_MXDU](#)).

The first example in the following table shows that MMG_MXD of 000000.300 works in conjunction with MMG_MXDU of MG to express the maximum daily dose of 0.300MG.

Example—MMG_MXD and associated columns

MMG_MXD	MMG_MXDU
000000.300	MG
000350.000	MCG
000300.000	MCG
000900.000	MG

Related Tables

[MMGD Master Table](#)

MMG_MXDU

MMGD Maximum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMGD Maximum Daily Dose Strength Quantity ([MMG_MXD](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the [UNIT_DESC_EXPANDED](#) column instead of this column for ordering and patient records

Valid Values Table

MMG_MXDU	Description
AP	applicatorful
G	gram
GTT	drops
IN	inhalations
MCG	microgram
MEQ	milliequivalent
MG	milligram
MMU	units x 1,000,000
MU	units x 1,000
SC	scoops
U	units

Related Tables

[MMGD Master Table](#)

MMG_MXU

MMGD Maximum Daily Dose Units Quantity

an eight-character numeric column that provides the quantitative value for the maximum geriatric daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.). The MMGD Maximum Daily Dose Units Quantity must be used in conjunction with the MMGD Maximum Daily Dose Unit Forms ([MMG_MXUF](#)).

The first example in the following table shows that MMG_MXU of 0003.000 works in conjunction with MMG_MXUF of EA to express the maximum daily dose of 3EA.

Example—MMG_MXU and associated columns

MMG_MXU	MMG_MXUF
0003.000	EA
0007.000	EA
0004.000	ML
0001.600	ML
0004.000	EA
0168.750	ML

Related Tables

[MMGD Master Table](#)

MMG_MXUF

MMGD Maximum Daily Dose Units Form

a two-character alphanumeric column that defines the units of use form that must be used in conjunction with the MMGD Maximum Daily Dose Units Quantity ([MMG_MXU](#)).

Valid Values Table

MMG_MXUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMGD Master Table](#)

MMGR_MND

MMGR Minimum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the absolute minimum geriatric daily dose usually expressed in metric strength units (such as MG, MCG, G). The MMGR Minimum Daily Dose Strength Quantity must be used in conjunction with the MMGR Minimum Daily Dose Strength Units ([MMGR_MNDU](#)).

The first example in the following table shows that MMGR_MND of 100000.000 works in conjunction with MMGR_MNDU of U to express the minimum daily dose of 100000U.

Example—MMGR_MND and associated columns

MMGR_MND	MMGR_MNDU
100000.000	U
050000.000	U
000001.000	SC
000001.000	MMU
000001.500	MMU
000000.250	MG

Related Tables

[MMGR Master Table](#)

MMGR_MNDU

MMGR Minimum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMGR Minimum Daily Dose Strength Quantity ([MMGR_MND](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the [UNIT_DESC_EXPANDED](#) column instead of this column for ordering and patient records.

Valid Values Table

MMGR_MNDU	Description
AP	applicatorful
G	gram
GTT	drops
IN	inhalations
MCG	microgram
MEQ	milliequivalent
MG	milligram
MMU	units x 1,000,000
MU	units x 1,000
SC	scoops
U	units

Related Tables

[MMGR Master Table](#)

MMGR_MNU

MMGR Minimum Daily Dose Units Quantity

an eight-character numeric column that provides the numeric value for the minimum geriatric daily dose expressed in relation to its dosage form. The MMGR Minimum Daily Dose Units Quantity must be used in conjunction with the MMGR Minimum Daily Dose Units Form ([MMGR_MNUF](#)).

The first example in the following table shows that MMGR_MNU of 0001.000 works in conjunction with MMGR_MNUF of EA to express the minimum daily dose of 1EA.

Example—MMGR_MNU and associated columns

MMGR_MNU	MMGR_MNUF
0001.000	EA
0001.000	EA
0000.250	ML
0009.000	G
0017.000	G
0005.000	G

Related Tables

[MMGR Master Table](#)

MMGR_MNUF

MMGR Minimum Daily Dose Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the MMGR Minimum Daily Dose Units Quantity (**MMGR_MNU**). An example of MMGR_MNUF in conjunction with MMGR_MNU is provided below in the Valid Values Table.

Valid Values Table

MMGR_MNUF	Description
AP	vaginal creams prescribed by the “applicatorful”
EA	tablets, capsules, suppositories, etc.
G	grams
IN	metered dose aerosols for inhalation
ML	liquids
SC	powders that are prescribed by the “scoop”

Related Tables

[MMGR Master Table](#)

MMGR_MXD

MMGR Maximum Daily Dose Strength Quantity

a ten-character numeric column that provides the quantitative value for the absolute maximum geriatric daily dose usually expressed in metric strength units (such as MG, MCG, G). The MMGR Maximum Daily Dose Strength Quantity must be used in conjunction with the MMGR Maximum Daily Dose Strength Units ([MMGR_MXDU](#)).

The first example in the following table shows that MMGR_MXD of 200000.000 works in conjunction with MMGR_MXDU of U to express the maximum daily dose of 200000U.

Example—MMGR_MXD and associated columns

MMGR_MXD	MMGR_MXDU
200000.000	U
000001.000	SC
000006.000	SC
000008.000	SC
000030.000	MMU
000030.000	MMU
000009.000	MG
000300.000	MG

Related Tables

[MMGR Master Table](#)

MMGR_MXDU

MMGR Maximum Daily Dose Strength Units

a three-character alphanumeric column that defines the units that must be used in conjunction with the MMGR Maximum Daily Dose Strength Quantity ([MMGR_MXD](#)). These units are usually expressed as metric strength units.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the [UNIT_DESC_EXPANDED](#) column instead of this column for ordering and patient records.

Valid Values Table

MMGR_MXDU	Description
G	gram
MG	milligram
MCG	microgram
MEQ	milliequivalent
U	units
AP	applicatorful
SC	scoops
IN	inhalations
MU	units x 1,000
MMU	units x 1,000,000
GTT	drops

Related Tables

[MMGR Master Table](#)

MMGR_MXU

MMGR Maximum Daily Dose Units Quantity

an eight-character numeric column that provides the numeric value for the maximum geriatric daily dose expressed in relation to its dosage form. The MMGR Maximum Daily Dose Units Quantity must be used in conjunction with the MMGR Maximum Daily Dose Units Form ([MMGR_MXUF](#)).

The first example in the following table shows that MMGR_MXU of 0002.000 works in conjunction with MMGR_MXUF of EA to express the maximum daily dose of 2EA.

Example—MMGR_MXU and associated columns

MMGR_MXU	MMGR_MXUF
0002.000	EA
0003.000	EA
0011.200	ML
0002.000	EA
0072.000	G
0017.000	G
0750.000	ML
1000.000	ML

Related Tables

[MMGR Master Table](#)

MMGR_MXUF

MMGR Maximum Daily Dose Units Form

a two-character alphanumeric column that defines the unit of use form that must be used in conjunction with the MMGR Maximum Daily Dose Units Quantity ([MMGR_MXU](#)).

Valid Values Table

MMGR_MXUF	Description
EA	tablets, capsules, suppositories, etc.
ML	liquids
IN	metered dose aerosols for inhalation
SC	powders that are prescribed by the “scoop”
AP	vaginal creams prescribed by the “applicatorful”
G	grams

Related Tables

[MMGR Master Table](#)

MONOX_END_DT

Drug-Drug Interaction Monograph End Date

an eight-character numeric column that provides the last date a drug-drug interaction monograph was active. The date format is YYYYMMDD.

Related Tables

[Drug-Drug Interaction Monograph Master Table](#)

MONOX_TITLE

Drug-Drug Interaction Monograph Title

a 255-character alphanumeric column that provides the title of the Drug-Drug Interaction Monograph.

Related Tables

[Drug-Drug Interaction Monograph Master Table](#)

MOVE_REASON_CD

Move Reason Code

a four-character alphanumeric column that indicates the reason for why one of the following associations has changed:

- an IDC/MEDID association identified within the MED IDC to Medication ID Cross-Reference Table (RMEDIDC0_IDC_MEDID_LINK)
- an IDC/MEDID association identified within the MED IDC to Generic Medication ID Cross-Reference Table (RMEDIGM0_IDC_GEN_MEDID)

See the IDC/MEDID Relationships and Change History Maintenance section for more information on the IDC/MEDID relationship tables.

The text description is provided by the Move Reason Code Description (**MOVE_REASON_CD_DESC**) column.

Valid Values Table

MOVE_REASON_CD	MOVE_REASON_CD_DESC
1	Ingredient List change - Product associated with a new or existing MedID
2	Route change - Product associated with a new or existing MedID
3	Strength value change - Product associated with a new or existing MedID
4	Dosage Form change - Product associated with a new or existing MedID
5	Brand Name change - Product associated with a new or existing Brand MedID
6	Product associated with a new or existing Generic MedID
7	Product associated with a new or existing Preservative Free MedID
8	Product previously associated with Preservative Free now associated with non-Preservative Free MedID
9	Product associated with a MedID representing the total drug strength & total volume
10	Product associated with a MedID representing a normalized (per mL) strength & volume
11	Product associated with a new or existing MedID from a MedID with a duplicate description

Related Tables

MED IDC/Generic MEDID Move History Reason Table

MED IDC/MEDID Move History Reason Table

MED Move Reason Description Table

MED Move Reason Description Table--French

MOVE_REASON_CD_DESC

Move Reason Code Description

an 100-character alphanumeric column that provides the text description of a Move Reason Code (**MOVE_REASON_CD**).

Valid Values Table

MOVE_REASON_CD	MOVE_REASON_CD_DESC
1	Ingredient List change - Product associated with a new or existing MedID
2	Route change - Product associated with a new or existing MedID
3	Strength value change - Product associated with a new or existing MedID
4	Dosage Form change - Product associated with a new or existing MedID
5	Brand Name change - Product associated with a new or existing Brand MedID
6	Product associated with a new or existing Generic MedID
7	Product associated with a new or existing Preservative Free MedID
8	Product previously associated with Preservative Free now associated with non-Preservative Free MedID
9	Product associated with a MedID representing the total drug strength & total volume
10	Product associated with a MedID representing a normalized (per mL) strength & volume
11	Product associated with a new or existing MedID from a MedID with a duplicate description

Related Tables

[MED Move Reason Description Table](#)

MOVE_REASON_CD_DESC_T

Move Reason Code Description (Translated)

an 150-character alphanumeric column that provides the text description of a Move Reason Code (
MOVE_REASON_CD).

Related Tables

MED Move Reason Description Table--French

MTL_ANALYTE_ID

MTL Analyte Identifier

an eight-character numeric column that identifies the substance measured via a laboratory test.

Sample Valid Values Table

MTL_ANALYTE_ID	MTL_ANALYTE_ID_DESC
0000000001	Not Applicable
0000000002	Not Yet Available
0000000003	Calcium, Urine
0000000004	Tonometry
0000000005	Osmolality
0000000006	Weight, Body
0000000007	Adrenocorticotropic Hormone
0000000008	Drug Concentration, Serum
0000000009	Cortisol, Urine
0000000010	Chloride

Related Tables

[MTL Analyte Identifier Table](#)

[MTL Laboratory Test Identifier \(LAB_ID\) Table](#)

MTL_ANALYTE_ID_DESC

MTL Analyte Identifier Description

a 50-character alphanumeric column that provides a primary professional text description for the MTL Analyte Identifier ([MTL_ANALYTE_ID](#)).

Sample Valid Values Table

MTL_ANALYTE_ID	MTL_ANALYTE_ID_DESC
0000000001	Not Applicable
0000000002	Not Yet Available
0000000003	Calcium, Urine
0000000004	Tonometry
0000000005	Osmolality
0000000006	Weight, Body
0000000007	Adrenocorticotropic Hormone
0000000008	Drug Concentration, Serum
0000000009	Cortisol, Urine
0000000010	Chloride

Related Tables

[MTL Analyte Identifier Table](#)

MTL_EXTRN_VOCAB_CODE

MTL External Vocabulary Code

a 20-character alphanumeric column that uniquely identifies an individual laboratory test associated with the external vocabulary.

Sample Valid Values Table

MTL_EXTRN_VOCAB_CODE
10535-3
10878-7
10885-2
11041-1
11042-9
11064-3
11065-0
11212-8
11215-1
11225-0
11228-4
11253-2

Related Tables

[MTL External Vocabulary Link Table](#)

MTL_EXTRN_VOCAB_TYP_CODE

MTL External Vocabulary Type Code

a two-character alphanumeric column that identifies the external vocabulary.

Valid Values Table

MTL_EXTRN_VOCAB_TYP_CODE	MTL_EXTRN_VOCAB_TYP_CODE_DESC
01	LOINC

Related Tables

[MTL External Vocabulary Link Table](#)

[MTL External Vocabulary Type Description Table](#)

MTL_EXTRN_VOCAB_TYP_CODE_DESC

MTL External Vocabulary Type Code Description

a 50-character alphanumeric column that provides the text description for the MTL External Vocabulary Type Code ([MTL_EXTRN_VOCAB_TYP_CODE](#)).

Valid Values Table

MTL_EXTRN_VOCAB_TYP_CODE	MTL_EXTRN_VOCAB_TYP_CODE_DESC
01	LOINC

Related Tables

[MTL External Vocabulary Type Description Table](#)

MTL_FDB_ID

MTL First Databank Identifier

an eight-character numeric column that represents an FDB MTL identifier that will be used in external vocabulary mapping. The following example displays MTL_FDB_ID values with their corresponding MTL First Databank Identifier Code Descriptions ([MTL_FDB_ID_TYP_CODE_DESC](#)) and MTL External Vocabulary Code ([MTL_EXTRN_VOCAB_CODE](#)) values.

Example—MTL_FDB_ID and associated columns

MTL_EXTRN_VOCAB_CODE	MTL_FDB_ID_TYP_CODE_DESC	MTL_FDB_ID
10535-3	Laboratory Test Identifier (LAB_ID)	00000117
10878-7	Laboratory Test Identifier (LAB_ID)	00000054
10885-2	Laboratory Test Identifier (LAB_ID)	00000035
11041-1	Laboratory Test Identifier (LAB_ID)	00000032
11042-9	Laboratory Test Identifier (LAB_ID)	00000032
11064-3	Laboratory Test Identifier (LAB_ID)	00000020
11065-0	Laboratory Test Identifier (LAB_ID)	00000020
11212-8	Laboratory Test Identifier (LAB_ID)	00000029
11215-1	Laboratory Test Identifier (LAB_ID)	00000022
11225-0	Laboratory Test Identifier (LAB_ID)	00000035
11228-4	Laboratory Test Identifier (LAB_ID)	00000027
11253-2	Laboratory Test Identifier (LAB_ID)	00000712

Related Tables

[MTL External Vocabulary Link Table](#)

MTL_FDB_ID_TYP_CODE

MTL First Databank Identifier Type Code

a two-character alphanumeric column that identifies the type of First Databank MTL identifier.

Valid Values Table

MTL_FDB_ID_TYP_CODE	MTL_FDB_ID_TYP_CODE_DESC
01	Laboratory Test Identifier (LAB_ID)
02	Laboratory Specific Identifier
03	Laboratory Panel Identifier

Related Tables

[MTL External Vocabulary Link Table](#)

[MTL First Databank Identifier Type Description Table](#)

MTL_FDB_ID_TYP_CODE_DESC

MTL First Databank Identifier Type Code Description

a 50-character alphanumeric column that provides the text description for the MTL First Databank Identifier Type Code ([MTL_FDB_ID_TYP_CODE](#)).

Valid Values Table

MTL_FDB_ID_TYP_CODE	MTL_FDB_ID_TYP_CODE_DESC
01	Laboratory Test Identifier (LAB_ID)
02	Laboratory Specific Identifier
03	Laboratory Panel Identifier

Related Tables

[MTL First Databank Identifier Type Description Table](#)

MTL_LAB_ID_DESC

MTL Laboratory Test Identifier Description

a 100-character alphanumeric column that provides the primary professional text description for an MTL Laboratory Test Identifier ([LAB_ID](#)).

Sample Valid Values Table

LAB_ID	MTL_LAB_ID_DESC
1	Fasting Blood Glucose
2	Glycated Blood Hemoglobin
3	Semiquantitative Urine Glucose
4	Urine Ketones
5	Serum Alkaline Phosphatase
6	Serum Sodium
7	Serum Osmolality
9	Serum Ketones
10	Serum Potassium
11	Venous Blood pH
12	Quantitative Urine 5-Hydroxyindoleacetic Acid
17	Serum Chloride

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Table](#)

MTL_LAB_ID_REPL_EFF_DT

MTL Laboratory Test Identifier Replacement Effective Date

an eight-character numeric column that represents the effective date for an MTL Replacement Laboratory Test Identifier ([MTL_REPL_LAB_ID](#)). The date format is MMDDYYYY.

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Replacement History Table](#)

MTL_LAB_ID_STATUS

MTL Laboratory Test Identifier Status Code

a one-character alphanumeric column that indicates whether a LAB_ID is currently live, replaced, or retired.

Valid Values Table

MTL_LAB_ID_STATUS	MTL_LAB_ID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Table](#)

[MTL Laboratory Test Identifier \(LAB_ID\) Status Code Description Table](#)

MTL_LAB_ID_STATUS_DESC

MTL Laboratory Test Identifier Status Code Description

a 50-character alphanumeric column that provides the text description for the MTL Laboratory Test Identifier Status Code ([MTL_LAB_ID_STATUS](#)).

Valid Values Table

MTL_LAB_ID_STATUS	MTL_LAB_ID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Status Code Description Table](#)

MTL_LAB_ID_SYN_CODE_DESC

MTL Laboratory Test Identifier Synonym Description

a 100-character alphanumeric column that provides the synonym name for the MTL Laboratory Test Identifier (**LAB_ID**). The following example shows the Synonym Description with its MTL Laboratory Test Identifier Synonym Name Type Code (**MTL_LAB_ID_SYN_NMTYP_CODE_DESC**) and LAB_ID.

Example—MTL_LAB_ID_SYN_CODE_DESC and associated columns

LAB_ID	MTL_LAB_ID_SYN_NMTYP_CODE_DESC	MTL_LAB_ID_SYN_CODE_DESC
00000001	Primary Layman Name	Blood Glucose
00000001	Layman Synonym	Amount of Sugar in the Blood
00000002	Primary Layman Name	Glycosylated Blood Hemoglobin
00000002	Layman Synonym	A1C Blood Sugar Test
00000003	Primary Layman Name	Urine Glucose
00000003	Layman Synonym	Urine Sugar Test
00000004	Primary Layman Name	Urine Ketones
00000005	Primary Layman Name	Serum Alk Phos
00000005	Layman Synonym	Serum Alkaline Phosphatase
00000006	Primary Layman Name	Amount of Sodium in the Blood
00000006	Layman Synonym	Blood Sodium Level
00000009	Primary Layman Name	Amount of Ketones in the Blood

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Identifier Table](#)

MTL_LAB_ID_SYN_NMTYP_CODE

MTL Laboratory Test Identifier Synonym Name Type Code

a two-character alphanumeric column that identifies the type of synonym name indicated by the MTL Laboratory Test Identifier Synonym Identifier ([MTL_LAB_ID_SYNID](#)). Allows for filtering or sorting between synonym types, including professional synonym, primary layman terms, layman synonyms, and abbreviations.

Valid Values Table

MTL_LAB_ID_SYN_NMTYP_CODE	MTL_LAB_ID_SYN_NMTYP_CODE_DESC
01	Professional Synonym
02	Primary Layman Name
03	Layman Synonym
04	Abbreviation

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Identifier Table](#)

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Name Type Description Table](#)

MTL_LAB_ID_SYN_NMTYP_CODE_DESC

MTL Laboratory Test Identifier Synonym Name Type Code Description

a 50-character alphanumeric column that provides the text description for the MTL Laboratory Test Identifier Synonym Name Type Code (**MTL_LAB_ID_SYN_NMTYP_CODE**).

Valid Values Table

MTL_LAB_ID_SYN_NMTYP_CODE	MTL_LAB_ID_SYN_NMTYP_CODE_DESC
01	Professional Synonym
02	Primary Layman Name
03	Layman Synonym
04	Abbreviation

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Name Type Description Table](#)

MTL_LAB_ID_SYN_STATUS

MTL Laboratory Test Identifier Synonym Status Code

a one-character alphanumeric column that indicates whether the synonym concept is live or retired.

Valid Values Table

MTL_LAB_ID_SYN_STATUS	MTL_LAB_ID_SYN_STATUS_DESC
0	Live
2	Retired

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Identifier Table](#)

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Status Description Table](#)

MTL_LAB_ID_SYN_STATUS_DESC

MTL Laboratory Test Identifier Synonym Status Code Description

a 50-character alphanumeric column that provides a text description for the MTL Laboratory Test Identifier Synonym Status Code (**MTL_LAB_ID_SYN_STATUS**).

Valid Values Table

MTL_LAB_ID_SYN_STATUS	MTL_LAB_ID_SYN_STATUS_DESC
0	Live
2	Retired

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Status Description Table](#)

MTL_LAB_ID_SYNID

MTL Laboratory Test Identifier Synonym Identifier

an eight-character numeric column that represents a MTL Laboratory Test Identifier (**LAB_ID**) synonym name.
This number is a stable identifier.

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Synonym Identifier Table](#)

MTL_METHOD_ID

MTL Methodology Identifier

a five-character numeric column that uniquely identifies the method used to measure laboratory test values.

Sample Valid Values Table

MTL_METHOD_ID	MTL_METHOD_ID_DESC
00001	Not Applicable
00002	Not Yet Available
00003	Bentiromide Method
00004	Bittner Method
00005	Blood
00006	Enzymatic
00007	Column
00008	Direct
00009	Fasting
00010	Fluorescent Method
00011	Frings Thin Layer Chromatography
00012	Glenn Nelson Method

Related Tables

[MTL Methodology Identifier Table](#)

[MTL Specific Laboratory Test Identifier Table](#)

MTL_METHOD_ID_DESC

MTL Methodology Identifier Description

a 50-character alphanumeric column that provides the name for the MTL Methodology Identifier (**MTL_METHOD_ID**).

Sample Valid Values Table

MTL_METHOD_ID	MTL_METHOD_ID_DESC
00001	Not Applicable
00002	Not Yet Available
00003	Bentiromide Method
00004	Bittner Method
00005	Blood
00006	Enzymatic
00007	Column
00008	Direct
00009	Fasting
00010	Fluorescent Method
00011	Frings Thin Layer Chromatography
00012	Glenn Nelson Method

Related Tables

[MTL Methodology Identifier Table](#)

MTL_PANEL_ID

MTL Panel Identifier

a five-character numeric column that identifies a group of laboratory tests ordered together as part of a laboratory panel or profile. This number is a stable identifier.

Sample Valid Values Table

MTL_PANEL_ID	MTL_PANEL_ID_DESC
00005	Hepatic Function Tests
00006	Renal Function Profile
00010	Chemistry Analysis
00013	Urinalysis
00014	Electrolyte Concentration,Serum
00017	Transaminase Concentration, Serum
00023	Lipid Profile
00024	Cardiovascular Panel (CPT)
00027	Cardiac Enzymes
00028	Chem 6 Profile
00029	Chem 20
00030	Chem 12

Related Tables

[MTL Panel Identifier Table](#)

[MTL Panel to LAB_ID Association Table](#)

MTL_PANEL_ID_DESC

MTL Panel Identifier Description

a 50-character alphanumeric column that provides a text description for the MTL Panel Identifier (**MTL_PANEL_ID**).

Sample Valid Values Table

MTL_PANEL_ID	MTL_PANEL_ID_DESC
00005	Hepatic Function Tests
00006	Renal Function Profile
00010	Chemistry Analysis
00013	Urinalysis
00014	Electrolyte Concentration,Serum
00017	Transaminase Concentration, Serum
00023	Lipid Profile
00024	Cardiovascular Panel (CPT)
00027	Cardiac Enzymes
00028	Chem 6 Profile
00029	Chem 20
00030	Chem 12

Related Tables

[MTL Panel Identifier Table](#)

MTL_PANEL_ID REPL EFF DT

MTL Panel Identifier Replacement Effective Date

an eight-character numeric column that represents the date that the MTL Replacement Panel Identifier (**MTL_REPL_PANEL_ID**) became effective. The date format is MMDDYYYY.

Related Tables

[MTL Panel Identifier Replacement History Table](#)

MTL_PANEL_ID_STATUS

MTL Panel Identifier Status Code

a one-character alphanumeric column that indicates whether an MTL Panel Identifier ([MTL_PANEL_ID](#)) is currently live, replaced, or retired.

Valid Values Table

MTL_PANEL_ID_STATUS	MTL_PANEL_ID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[MTL Panel Identifier Table](#)

[MTL Panel ID Status Code Description Table](#)

MTL_PANEL_ID_STATUS_DESC

MTL Panel Identifier Status Code Description

a 50-character alphanumeric column that provides the text description for the MTL Panel Identifier Status Code ([MTL_PANEL_ID_STATUS](#)).

MTL_PANEL_ID_STATUS	MTL_PANEL_ID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[MTL Panel ID Status Code Description Table](#)

MTL_PREV_LAB_ID

MTL Previous Laboratory Test Identifier

an eight-character numeric column that references the LAB_ID that has been superseded by another MTL Laboratory Test Identifier ([LAB_ID](#)).

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Replacement History Table](#)

MTL_PREV_PANEL_ID

MTL Previous Panel Identifier

a five-character numeric column that references the MTL Panel Identifier (**MTL_PANEL_ID**) that has been replaced by another MTL_PANEL_ID.

Related Tables

[MTL Panel Identifier Replacement History Table](#)

MTL_PREV_SPEC_LAB_ID

MTL Previous Specific Laboratory Test Identifier

an eight-character numeric column that references the MTL Specific Laboratory Test Identifier (**MTL_SPEC_LAB_ID**) that has been superseded by another **MTL_SPECIFIC_LAB_ID**.

Related Tables

MTL Specific Laboratory Test ID Replacement History Table

MTL REPL LAB ID

MTL Replacement Laboratory Test Identifier

an eight-character numeric column that references the MTL Laboratory Test Identifier (**LAB_ID**) that has superseded the previous value.

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Replacement History Table](#)

MTL REPL PANEL ID

MTL Replacement Panel Identifier

a five-character numeric column that references the MTL Panel Identifier (**MTL_PANEL_ID**) that has replaced the previous MTL_PANEL_ID.

Related Tables

[MTL Panel Identifier Replacement History Table](#)

MTL REPL SPEC LAB ID

MTL Replacement Specific Laboratory Test Identifier

an eight-character numeric column that references the MTI Specific Laboratory Test Identifier (**MTL_SPEC_LAB_ID**) that has superseded the previous value.

Related Tables

MTL Specific Laboratory Test ID Replacement History Table

MTL_SPEC_LAB_ID

MTL Specific Laboratory Test Identifier

an eight-character numeric column that uniquely identifies the combination of a laboratory test with the MTL Methodology Identifier ([MTL_METHOD_ID](#)). This number is a stable identifier.

Sample Valid Values Table

MTL_SPEC_LAB_ID	MTL_SPEC_LAB_ID_DESC
00000001	Fasting Blood Glucose, Glucose Oxidase
00000002	Glycated Blood Hemoglobin, Electrophoresis
00000003	Semiquantitative Urine Glucose, Copper Reductase
00000004	Semiquantitative Urine Glucose, Glucose Oxidase
00000005	Urine Ketones, Nitroprusside (Legal)
00000006	Serum Alkaline Phosphatase, End-Point Spectrophotometric (pNPP)
00000007	Serum Sodium, Flame Atomic Emission Spectroscopy
00000010	Serum Ketones, Nitroprusside (Legal)
00000011	Serum Potassium, Flame Atomic Emission Spectroscopy
00000014	Quantitative Urine 5-Hydroxyindoleacetic Acid, Nitrosonaphthol Reagent
00000019	Serum Chloride, Colorimetric with Hg/Fe Thiocyanate
00000020	Serum Aspartate Aminotransferase, Colorimetric

Related Tables

[MTL Specific Laboratory Test Identifier Table](#)

[DLIM Laboratory Interference Master Table](#)

MTL_SPEC_LAB_ID_DESC

MTL Specific Laboratory Test Identifier Description

a 100-character alphanumeric column that provides a primary professional description for the MTL Specific Laboratory Test Identifier ([MTL_SPEC_LAB_ID](#)).

Sample Valid Values Table

MTL_SPEC_LAB_ID	MTL_SPEC_LAB_ID_DESC
00000001	Fasting Blood Glucose, Glucose Oxidase
00000002	Glycated Blood Hemoglobin, Electrophoresis
00000003	Semiquantitative Urine Glucose, Copper Reductase
00000004	Semiquantitative Urine Glucose, Glucose Oxidase
00000005	Urine Ketones, Nitroprusside (Legal)
00000006	Serum Alkaline Phosphatase, End-Point Spectrophotometric (pNPP)
00000007	Serum Sodium, Flame Atomic Emission Spectroscopy
00000010	Serum Ketones, Nitroprusside (Legal)
00000011	Serum Potassium, Flame Atomic Emission Spectroscopy
00000014	Quantitative Urine 5-Hydroxyindoleacetic Acid, Nitrosonaphthol Reagent
00000019	Serum Chloride, Colorimetric with Hg/Fe Thiocyanate
00000020	Serum Aspartate Aminotransferase, Colorimetric

Related Tables

[MTL Specific Laboratory Test Identifier Table](#)

MTL_SPEC_LAB_ID REPL EFF DT

MTL Specific Laboratory Test Identifier Replacement Date

an eight-character numeric column that represents the effective date of the MTL Replacement Specific Laboratory Test Identifier ([MTL_REPL_SPEC_LAB_ID](#)). The date format is MMDDYYYY.

Related Tables

[MTL Specific Laboratory Test ID Replacement History Table](#)

MTL_SPEC_LAB_ID_STATUS

MTL Specific Laboratory Test Identifier Status Code

a one-character alphanumeric column that indicates whether the MTL Specific Laboratory Test Identifier (**MTL_SPEC_LAB_ID**) is currently live, replaced, or retired.

Valid Values Table

MTL_SPEC_LAB_ID_STATUS	MTL_SPEC_LAB_ID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[MTL Specific Laboratory Test Identifier Table](#)

[MTL Specific Laboratory Test ID Status Code Description Table](#)

MTL_SPEC_LAB_ID_STATUS_DESC

MTL Specific Laboratory Test Identifier Status Code Description

a 50-character alphanumeric column that provides a text description for the MTL Specific Laboratory Test Identifier Status Code ([MTL_SPEC_LAB_ID_STATUS](#)).

Valid Values Table

MTL_SPEC_LAB_ID_STATUS	MTL_SPEC_LAB_ID_STATUS_DESC
0	Live
1	Replaced
2	Retired

Related Tables

[MTL Specific Laboratory Test ID Status Code Description Table](#)

MTL_SPECIMEN_ID

MTL Specimen Identifier

a five-character numeric column that identifies the bodily source (such as urine, serum, blood) of the substance measured via a laboratory test.

Sample Valid Values Table

MTL_SPECIMEN_ID	MTL_SPECIMEN_ID_DESC
00001	Not Applicable
00002	Not Yet Available
00003	Serum
00004	Blood
00005	Plasma
00006	Urine
00007	Stool
00008	Gastric/Duodenal
00009	Serous Fluid
00010	Sweat
00011	Cerebrospinal Fluid
00012	Breath
00013	Semen
00014	Skin
00015	Blood, Arterial
00016	Venous Blood
00017	Exudate
00018	Erythrocytes
00019	Red Blood Cells
00020	Leukocytes
00021	Vaginal Smear
00022	Bone Marrow

Related Tables

[MTL Laboratory Test Identifier \(LAB_ID\) Table](#)

MTL Specimen Identifier Table

MTL_SPECIMEN_ID_DESC

MTL Specimen Identifier Description

a 50-character alphanumeric column that provides a text description for the MTL Specimen Identifier (**MTL_SPECIMEN_ID**).

Sample Valid Values Table

MTL_SPECIMEN_ID	MTL_SPECIMEN_ID_DESC
00001	Not Applicable
00002	Not Yet Available
00003	Serum
00004	Blood
00005	Plasma
00006	Urine
00007	Stool
00008	Gastric/Duodenal
00009	Serous Fluid
00010	Sweat
00011	Cerebrospinal Fluid
00012	Breath
00013	Semen
00014	Skin
00015	Blood, Arterial
00016	Venous Blood
00017	Exudate
00018	Erythrocytes
00019	Red Blood Cells
00020	Leukocytes
00021	Vaginal Smear
00022	Bone Marrow

Related Tables

[MTL Specimen Identifier Table](#)

MTL Laboratory Test Identifier (LAB_ID) Table

N

NARDCDE

NAV_CD

NAV_CD_DESC

NEOM_CALC_REQ_TYPE_CODE

NEOM_CALC_REQ_TYPE_CODE_DESC

NEOM_CONVERSION_FACTOR

NEOM_CREATININE_CLR_THRESHOLD

NEOM_CREATININE_CLR_UNIT_CODE

NEOM_DOSE_CALC_CODE

NEOM_DOSE_CODE_DESC

NEOM_DOSE_TYPE_CODE

NEOM_DOSE_TYPE_CODE_DESC

NEOM_GEST_BIRTH_AGE_REQ_IND

NEOM_HALF_LIFE_UNIT_CODE

NEOM_HEPATIC_IMPAIRMENT_IND

NEOM_HIGH_AGE_DAYS

NEOM_HIGH_CURRENT_WEIGHT_GRAMS

NEOM_HIGH_DOSE_PER_DAY

NEOM_HIGH_DOSE_UNIT_CODE

NEOM_HIGH_DURATION_OF_TX

NEOM_HIGH_ELIM_HALF_LIFE

NEOM_HIGH_FREQUENCY

NEOM_HIGH_GEST_BIRTH_AGE_WEEKS

NEOM_LOW_AGE_DAYS

NEOM_LOW_CURRENT_WEIGHT_GRAMS

NEOM_LOW_DOSE_PER_DAY

NEOM_LOW_DOSE_UNIT_CODE

NEOM_LOW_DURATION_OF_TX

NEOM_LOW_ELIM_HALF_LIFE
NEOM_LOW_FREQUENCY
NEOM_LOW_GEST_BIRTH_AGE_WEEKS
NEOM_MATH_PROCESS_CODE
NEOM_MATH_PROCESS_CODE_DESC
NEOM_MAX_DOSE_PER_DAY
NEOM_MAX_DOSE_UNIT_CODE
NEOM_MAX_DURATION_OF_TX
NEOM_MAX_LIFE_DOSE
NEOM_MAX_LIFE_DOSE_UNIT_CODE
NEOM_MAX_SINGLE_DOSE
NEOM_MAX_SINGLE_DOSE_UNIT_CODE
NEOM_PRESCRIBED_UNIT_CODE
NEOM_RENAL_IMPAIRMENT_IND
NEOM_RESULT_UNIT_CODE
NEOM_ROUTE_CODE
NEOM_ROUTE_CODE_DESC
NEOM_UNIT_CODE
NEOM_UNIT_CODE_DESC
NEOM_WEIGHT_REQ_IND
NEXT_SCREENING_DOSE_AGE_TEXT
NEXT_SCREENING_DOSE_TEXT
NLM_ACCEPTABILITY_ID
NLM_ACTIVE_IND
NLM_CASE_SIGNIFICANCE_ID
NLM_CHARACTERISTIC_TYPE_ID
NLM_CONCEPT_ID
NLM_DEFINITION_STATUS_ID
NLM_DESCRIPTION_ID
NLM_DESTINATION_ID

NLM_EFFECTIVE_TIME

NLM_LANGUAGE_CD

NLM_LANGUAGE_ID

NLM_MODIFIER_ID

NLM_MODULE_ID

NLM_REFERENCED_COMPONENT_ID

NLM_REFSET_ID

NLM_RELATIONSHIP_GROUP

NLM_RELATIONSHIP_ID

NLM_SOURCE_ID

NLM_TERM

NLM_TYPE_ID

NOT_MARKETED_INDICATOR

NTE_SINGLE_DOSE

NTE_SINGLE_DOSE_UNIT_CODE

NARDCDE

National Association of Retail Druggists Code

This column is no longer supported.

Related Tables

Patient Education Master Table

NAV_CD

Navigation Code

a two-character alphanumeric column that identifies whether a SNOMED CT concept is an equal or related concept, relative to the retrieved DXID.

Valid Values Table

NAV_CD	NAV_CD_DESC
01	Equal
04	Related

Related Tables

[Navigation Code Description Table](#)

[SNOMED CT to DXID Search Table](#)

[SNOMED CT to DXID Search History Table](#)

NAV_CD_DESC

Navigation Code Description

a 50-character alphanumeric column that provides the text description for a Navigation Code (**NAV_CD**).

Valid Values Table

NAV_CD	NAV_CD_DESC
01	Equal
04	Related

Related Tables

[Navigation Code Description Table](#)

NEOM_CALC_REQ_TYPE_CODE

NEOM Calculation Required Type Code

a one-character numeric column that defines the additional input required to calculate a specific patient dose.

Valid Values Table

NEOM_CALC_REQ_TYPE_CODE	NEOM_CALC_REQ_TYPE_CODE_DESC
0	not applicable
1	Patient weight (kilograms)
2	Body surface area (square meters)
3	Per Lesion
4	Per cm ² of Lesion
5	Per 1.73 m ²
6	Per "x" grams of carbohydrate

The following are examples of how the patient parameter units are used:

- **Per Lesion:** A prescriber orders Betamethasone Acetate/Betamethasone Sodium Phosphate 2 mg/lesion. The application prompts the provider to enter the total number of lesions, which is 3. The application then calculates that the total dose is 6 mg, which is the value then used for dose screening.
- **Per cm² Lesion:** A prescriber orders Aldesleukin 4 million units/cm². The application prompts the prescriber for the total surface area of the lesion. The prescriber responds with 2.75 cm². The system then calculates the total dose as 11 million units, which is the value then used for dose screening.
- **Per 1.73 m²:** A prescriber enters the patient's CrCl as 90 mL/min. The CrCl threshold for a dose screening record is specified as 70 – 90 mL/min/1.73 m². The system prompts the prescriber for the patient's Body Surface Area (BSA), which is entered as 1.5 m². The system then calculates the patient's CrCl as $(1.5 \text{ m}^2 / 1.73 \text{ m}^2) * 90 \text{ mL/min} = 78.03 \text{ mL/min}/1.73 \text{ m}^2$. This is within the threshold, so the system uses the selected record.
- **Per "x" grams of carbohydrate:** A prescriber orders Insulin Aspart Subcutaneous 0.15 units/grams of carbohydrate (gCH2O) with each meal. At meal time, it is determined that the meal the patient is about to consume contains 30 gCH2O. The application is then able to calculate that the patient should receive 4.5 units of Insulin Aspart subcutaneously, and the 4.5 units would be the value used for dose screening.

Related Tables

[NEOM Calculation Required Type Code Description Table](#)

[NEOM Unit Code Description Table](#)

NEOM_CALC_REQ_TYPE_CODE_DESC

NEOM Calculation Required Type Code Description

a 50-character alphanumeric column that provides the text description for NEOM Calculation Required Type Code (**NEOM_CALC_REQ_TYPE_CODE**)

Valid Values Table

NEOM_CALC_REQ_TYPE_CODE	NEOM_CALC_REQ_TYPE_CODE_DESC
0	not applicable
1	Patient weight (kilograms)
2	Body surface area (square meters)
3	Per Lesion
4	Per cm ² of Lesion
5	Per 1.73 m ²
6	Per "x" grams of carbohydrate

The following are examples of how the patient parameter units are used:

- **Per Lesion:** A prescriber orders Betamethasone Acetate/Betamethasone Sodium Phosphate 2 mg/lesion. The application prompts the provider to enter the total number of lesions, which is 3. The application then calculates that the total dose is 6 mg, which is the value then used for dose screening.
- **Per cm² Lesion:** A prescriber orders Aldesleukin 4 million units/cm². The application prompts the prescriber for the total surface area of the lesion. The prescriber responds with 2.75 cm². The system then calculates the total dose as 11 million units, which is the value then used for dose screening.
- **Per 1.73 m²:** A prescriber enters the patient's CrCl as 90 mL/min. The CrCl threshold for a dose screening record is specified as 70 – 90 mL/min/1.73 m². The system prompts the prescriber for the patient's Body Surface Area (BSA), which is entered as 1.5 m². The system then calculates the patient's CrCl as $(1.5 \text{ m}^2/1.73 \text{ m}^2) * 90 \text{ mL/min} = 78.03 \text{ mL/min}/1.73 \text{ m}^2$. This is within the threshold, so the system uses the selected record.
- **Per "x" grams of carbohydrate:** A prescriber orders Insulin Aspart Subcutaneous 0.15 units/grams of carbohydrate (gCH2O) with each meal. At meal time, it is determined that the meal the patient is about to consume contains 30 gCH2O. The application is then able to calculate that the patient should receive 4.5 units of Insulin Aspart subcutaneously, and the 4.5 units would be the value used for dose screening.

Related Tables

[NEOM Calculation Required Type Code Description Table](#)

[NEOM Unit Code Description Table](#)

NEOM_CONVERSION_FACTOR

NEOM Conversion Factor

a 16-character numeric column whose value is applied to the prescribed dose to convert it to units common in NEOM.

Example - NEOM_CONVERSION_FACTOR and associated columns

NEOM_PRESCRIBED_UNIT_CODE	NEOM_RESULT_UNIT_CODE	NEOM_MATH_PROCESS_CODE	NEOM_CONVERSION_FACTOR
03	30	2	0000001000.00000
04	88	2	0000000024.00000
05	02	1	0000000001.44000

Related Tables

[NEOM Unit Conversion Table](#)

NEOM_CREATININE_CLR_THRESHOLD

NEOM Creatinine Clearance Threshold

a three-character numeric column that indicates the lowest creatinine clearance to which dosing applies. The dosage regimen should be adjusted for patients with a lower creatinine clearance. If more than one creatinine clearance is provided in the literature, the highest (most conservative) value is reported.

The following table shows NEOM_CREATININE_CLR_THRESHOLD data for specified products.

Example - NEOM_CREATININE_CLR_THRESHOLD and associated columns

GCN_SEQNO	NEOM_CREATININE_CLR_THRESH OLD	NOEM_CREATININE_CLR_UNIT_C ODE
000011	050	01
015358	070	01
015921	029	01

- ⓘ The Renal Impairment Assessment Indicator is Y for all agents that must be adjusted in renal impairment, regardless of the presence or absence of creatinine clearance information.
- ⓘ NEOM does not provide dosage adjustments for renal impairment.

Related Tables

[NEOM Master Table](#)

NEOM_CREATININE_CLR_UNIT_CODE

NEOM Creatinine Clearance Threshold Unit Code

a two-character alphanumeric column that indicates the unit of measurement for the NEOM Creatinine Clearance Threshold ([NEOM_CONVERSION_FACTOR](#)).

Valid Values Table

NOEM_CREATININE_CLR_UNIT_CODE	Description
01	ML/MIN
02	ML/MIN/1.73M2

Related Tables

[NEOM Master Table](#)

NEOM_DOSE_CALC_CODE

NEOM Dose Calculation Code

a one-character alphanumeric column that indicates whether the NEOM dose units are represented in terms of the dose amount of the drug or in terms of the number of dosage units.

Valid Values Table

NEOM_DOSE_CALC_CODE	NEOM_DOSE_CODE_DESC
1	Dose in Dose Amount (for example, mg, mcg)
2	Dose in Dose Units (for example, tab, cap, ml)

Related Tables

[NEOM Dose Calculation Code Description Table](#)

[NEOM Unit Code Description Table](#)

NEOM_DOSE_CODE_DESC

NEOM Dose Code Description

a 50-character alphanumeric column that provides the text description for the NEOM Dose Calculation Code ([NEOM_DOSE_CALC_CODE](#)).

Valid Values Table

NEOM_DOSE_CALC_CODE	NEOM_DOSE_CODE_DESC
1	Dose in Dose Amount (for example, mg, mcg)
2	Dose in Dose Units (for example, tab, cap, ml)

Related Tables

[NEOM Dose Calculation Code Description Table](#)

NEOM_DOSE_TYPE_CODE

NEOM Dose Type Code

a two-character alphanumeric column that identifies the type of dose being screened.

Valid Values Table

NEOM_DOSE_TYPE_CODE	NEOM_DOSE_TYPE_CODE_DESC
01	LOADING
02	MAINTENANCE
07	SINGLE DOSE

Related Tables

[NEOM Dose Type Code Description Table](#)

[NEOM Master Table](#)

NEOM_DOSE_TYPE_CODE_DESC

NEOM Dose Type Code Description

a 25-character alphanumeric column that provides the text description of the NEOM Dose Type Code ([NEOM_DOSE_TYPE_CODE](#)).

Valid Values Table

NEOM_DOSE_TYPE_CODE	NEOM_DOSE_TYPE_CODE_DESC
01	LOADING
02	MAINTENANCE
07	SINGLE DOSE

Related Tables

[NEOM Dose Type Code Description Table](#)

NEOM_GEST_BIRTH_AGE_REQ_IND

Neonatal Gestational Birth Age Required Indicator

a one-character alphanumeric column that identifies whether a drug requires a Gestational Age at Birth in order to select the appropriate dose range check record.

If the Neonatal Gestational Birth Age Required Indicator column indicates that the gestational age is not required (`NEOM_GEST_BIRTH_AGE_REQ_IND = 0`), the `NEOM_LOW_GEST_BIRTH_AGE_WEEKS` and `NEOM_HIGH_GEST_BIRTH_AGE_WEEKS` columns contain zeroes.

Valid Values Table

NEOM_GEST_BIRTH_AGE_REQ_IND	Description
0	Gestational Age at Birth IS NOT required to select dose range check record
1	Gestational Age at Birth IS required to select dose range check record

Related Tables

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NEOM_HALF_LIFE_UNIT_CODE

NEOM Half Life Unit Code

a two-character alphanumeric column that identifies the units of time for the half-life range of a drug.

Valid Values Table

NEOM_HALF_LIFE_UNIT_CODE	Description
01	Minutes
02	Hours
03	Days

Related Tables

[NEOM Master Table](#)

NEOM_HEPATIC_IMPAIRMENT_IND

NEOM Hepatic Impairment Indicator

a one-character alphanumeric column that indicates whether a dosage regimen needs to be adjusted for hepatic impairment.

Valid Values Table

NEOM_HEPATIC_IMPAIRMENT_IND	Description
Y	Dose needs to be adjusted for hepatic impairment
N	Dose does not need to be adjusted for hepatic impairment

Related Tables

[NEOM Master Table](#)

NEOM_HIGH_AGE_DAYS

NEOM High Age in Days

a five-character numeric column that indicates the highest patient age (in days) to which the dosing information applies.

Example - NEOM_HIGH_AGE_DAYS and associated columns

GCN_SEQNO	NEOM_ROUTE_CODE	NEOM_LOW_AGE_DAYS	NEOM_HIGH_AGE_DAYS
002366	052	00030	00156
002366	052	00157	00364
002366	064	00000	00029

Related Tables

[NEOM Master Table](#)

NEOM_HIGH_CURRENT_WEIGHT_GRAMS

Neonatal High Current Weight in Grams

a five-character numeric column that identifies the highest range of the current weight for a neonate, expressed in grams; this column is used in selecting the appropriate dosing record for a neonatal dose of a particular drug.

-  A High Current Weight of 0 indicates that any weight above the Low Current Weight is covered by the dose record.

Example - NEOM_HIGH_CURRENT_WEIGHT_GRAMS and associated columns

GCN_SEQNO	NEOM_LOW_CURRENT_WEIGHT_GRAMS	NEOM_HIGH_CURRENT_WEIGHT_GRAMS
000012	00000	00000
000012	00000	01500
000012	02500	00000

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NEOM_HIGH_DOSE_PER_DAY

NEOM High Dose Per Day

a nine-character numeric column that identifies the high amount of a drug that should be administered per day.

Example - NEOM_HIGH_DOSE_PER_DAY and associated columns

GCN_SEQNO	NEOM_DOSE_TYPE_CODE	NEOM_HIGH_DOSE_PER_DAY	NEOM_HIGH_DOSE_UNIT_CODE
000011	01	00000.030	02
000011	02	00000.011	02
000011	01	00000.030	02

Related Tables

[NEOM Master Table](#)

NEOM_HIGH_DOSE_UNIT_CODE

NEOM High Dose Unit Code

a two-character alphanumeric column that indicates the units for the NEOM High Dose per Day (
NEOM_HIGH_DOSE_PER_DAY).

Valid Values Table

NEOM_HIGH_DOSE_UNIT_CODE	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
11	CM/DAY
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
18	MG/KG/H
20	INH/DAY
21	SPR/DAY
22	ML/DAY
26	U/KG/DAY
27	U/KG/H
45	G/KG/DAY
46	MCG/KG/DAY
47	MEQ/KG/HOUR
51	G/DAY
56	PAT/DAY
57	MMU/M2/DAY
58	MMU/DAY

60	MMU/KG/DAY
63	MEQ/KG/DAY
76	MG/KG/MIN
77	ML/KG/DAY
78	MCG/KG/H
82	TAB-CAP/KG/D
88	MG/M2/H
92	ML/M2/DAY
98	MMOL/KG/DAY

Related Tables[NEOM Master Table](#)

NEOM_HIGH_DURATION_OF_TX

NEOM High Duration of Therapy

a five-character numeric column that indicates the highest recommended amount of time for which a drug should be administered. High duration of therapy is expressed in days.

The following table shows NEOM_HIGH_DURATION_OF_TX data for specified products.

Example - NEOM_HIGH_DURATION_OF_TX and associated columns

GCN_SEQNO	NEOM_LOW_DURATION_OF_TX	NEOM_HIGH_DURATION_OF_TX
009523	00090	00180
029927	00010	00014
050268	00000	00000

 Not all reasons for use have a High Duration of Therapy. For example, duration of therapy does not apply to maintenance medications.

 High Duration of Therapy values may be the same as Low Duration of Therapy values, or these values may represent a range.

Related Tables

[NEOM Master Table](#)

NEOM_HIGH_ELIM_HALF_LIFE

NEOM High Elimination Half Life

a six-character numeric column that provides the high end of the drug's half-life range, which indicates the time necessary to reduce the drug concentration in the blood by one-half. The NEOM_HIGH_ELIM_HALF_LIFE value can be a single value or a range in which a high and low value are recorded. If half-life is not expressed as a range in the literature, the NEOM_HIGH_ELIM_HALF_LIFE and NEOM_LOW_ELIM_HALF_LIFE are the same. This column contains 0 if the high elimination half-life value is not known.

The following table shows NEOM_HIGH_ELIM_HALF_LIFE data for different age ranges for Clinical Formulation ID ([GCN_SEQNO](#)) 011671:

Example - NEOM_HIGH_ELIM_HALF_LIFE and associated columns

GCN_SEQNO	NEOM_LOW_AGE_DAYS	NEOM_HIGH_AGE_DAYS	NEOM_LOW_ELIM_HALF_LIFE	NEOM_HIGH_ELIM_HALF_LIFE	NEOM_HALF_LIFE_UNIT_CODE
011671	0	29	3	7	02 (hours)
011671	30	364	1.4	3.5	02 (hours)

 Half-life information is provided for reporting purposes only and is not intended as screening data.

Related Tables

[NEOM Master Table](#)

NEOM_HIGH_FREQUENCY

NEOM High Frequency

a five-character numeric column that represents the high end of the frequency of administration, which specifies the number of times that a drug is administered to the patient per day.

Example - NEOM_HIGH_FREQUENCY and associated columns

GCN_SEQNO	NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY
000011	03.00	06.00
000011	02.00	03.00
000012	03.00	06.00

Related Tables

[NEOM Master Table](#)

NEOM_HIGH_GEST_BIRTH_AGE_WEEKS

Neonatal High Gestational Age at Birth in Weeks

a two-character numeric column that identifies the highest range of the gestational age at birth for a neonate, expressed in weeks; this column is used in selecting the appropriate dosing record for a neonatal dose of a particular drug.

If the Neonatal Gestational Birth Age Required Indicator column indicates that the gestational age is not required (**NEOM_GEST_BIRTH_AGE_REQ_IND = 0**), the **NEOM_LOW_GEST_BIRTH_AGE_WEEKS** and **NEOM_HIGH_GEST_BIRTH_AGE_WEEKS** columns contain zeroes.

- i** A High Gestational Age of 0 indicates one of the following conditions:

- Any gestational age above the Low Gestational Age (or any gestational age if the Low Gestational Age is also 0) is covered by the dose record
- The gestational age is not required to select a DRCM dosing record.

Example - NEOM_HIGH_GEST_BIRTH_AGE_WEEKS and associated columns

GCN_SEQNO	NEOM_LOW_GEST_BIRTH_AGE_WEEKS	NEOM_HIGH_GEST_BIRTH_AGE_WEEKS
000017	30	36
002366	00	36
015962	38	00

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NEOM_LOW AGE DAYS

NEOM Low Age in Days

a five-character numeric column that indicates the lowest patient postnatal age (in days) to which the dosing information applies.

 Zero is a valid value for this field.

Example—NEOM_LOW AGE DAYS and associated columns

GCN_SEQNO	NEOM_ROUTE_CODE	NEOM_LOW AGE DAYS	NEOM_HIGH AGE DAYS
002366	052	00030	00156
002366	052	00157	00364
002366	064	00000	00029

Related Tables

[NEOM Master Table](#)

NEOM_LOW_CURRENT_WEIGHT_GRAMS

Neonatal Low Current Weight in Grams

a five-character numeric column that identifies the lowest range of the current weight for a neonate, expressed in grams; this column is used in selecting the appropriate dosing record for a neonatal dose of a particular drug.

- i A Low Current Weight of 0 indicates that any weight below the High Current Weight (or any weight if the High Current Weight is also 0) is covered by the dose record.

Example - NEOM_LOW_CURRENT_WEIGHT_GRAMS and associated columns

GCN_SEQNO	NEOM_LOW_CURRENT_WEIGHT_GRAMS	NEOM_HIGH_CURRENT_WEIGHT_GRAMS
000012	00000	00000
000012	00000	01500
000012	02500	00000

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NEOM_LOW_DOSE_PER_DAY

NEOM Low Dose Per Day

a nine-character numeric column that indicates the minimum amount of a drug that should be administered per day.

Example—NEOM_LOW_DOSE_PER_DAY and associated columns

GCN_SEQNO	NEOM_DOSE_TYPE_CODE	NEOM_LOW_DOSE_PER_DAY	NEOM_LOW_DOSE_UNIT_CODE
000011	01	00000.015	02
000011	02	00000.003	02
000011	01	00000.015	02

Related Tables

[NEOM Master Table](#)

NEOM_LOW_DOSE_UNIT_CODE

NEOM Low Dose Unit Code

a two-character alphanumeric column that indicates the unit of measure for the NEOM Low Dose per Day ([NEOM_LOW_DOSE_PER_DAY](#)).

Valid Values Table

NEOM_LOW_DOSE_UNIT_CODE	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
11	CM/DAY
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
18	MG/KG/H
20	INH/DAY
21	SPR/DAY
22	ML/DAY
26	U/KG/DAY
27	U/KG/H
45	G/KG/DAY
46	MCG/KG/DAY
47	MEQ/KG/HOUR
51	G/DAY
56	PAT/DAY
57	MMU/M2/DAY
58	MMU/DAY

60	MMU/KG/DAY
63	MEQ/KG/DAY
76	MG/KG/MIN
77	ML/KG/DAY
78	MCG/KG/H
82	TAB-CAP/KG/D
88	MG/M2/H
92	ML/M2/DAY
98	MMOL/KG/DAY

Related Tables[NEOM Master Table](#)

NEOM_LOW_DURATION_OF_TX

NEOM Low Duration of Therapy

a five-character numeric column that indicates the lowest recommended amount of time, expressed in days, for which a drug should be administered.

The following table shows NEOM_LOW_DURATION_OF_TX data for specified products.

Example - NEOM_LOW_DURATION_OF_TX and associated columns

GCN_SEQNO	NEOM_LOW_DURATION_OF_TX	NEOM_HIGH_DURATION_OF_TX
009523	00090	00180
029927	00010	00014
050268	00000	00000

 Not all reasons for use have a NEOM_LOW_DURATION_OF_TX. For example, duration of therapy does not apply to maintenance medication.

 NEOM_LOW_DURATION_OF_TX values may be the same as NEOM_HIGH_DURATION_OF_TX values, or these values may represent a range.

Related Tables

[NEOM Master Table](#)

NEOM_LOW_ELIM_HALF_LIFE

NEOM Low Elimination Half Life

a six-character numeric column that provides the low end of the drug's half-life range, which indicates the time necessary to reduce the drug concentration in the blood by one-half. The NEOM_LOW_ELIM_HALF_LIFE can be a single value or a range in which a high and low value are recorded. If half-life is not expressed as a range in the literature, the NEOM_LOW_ELIM_HALF_LIFE and NEOM_HIGH_ELIM_HALF_LIFE are the same. This column contains 0 if the low elimination half-life value is not known.

The following table shows NEOM_LOW_ELIM_HALF_LIFE data for different age ranges for Clinical Formulation ID ([GCN_SEQNO](#)) 011671:

Example - NEOM_LOW_ELIM_HALF_LIFE and associated columns

GCN_SEQNO	NEOM_LOW_AGE_DAYS	NEOM_HIGH_AGE_DAYS	NEOM_LOW_ELIM_HALF_LIFE	NEOM_HIGH_ELIM_HALF_LIFE	NEOM_HALF_LIFE_UNIT_CODE
011671	0	29	3	7	02 (hours)
011671	30	364	1.4	3.5	02 (hours)

Half-life information is provided for reporting purposes only and is not intended as screening data.

Related Tables

[NEOM Master Table](#)

NEOM_LOW_FREQUENCY

NEOM Low Frequency

a five-character numeric column that indicates the low end of the frequency of administration for a drug. Frequency of administration is expressed in terms of times of administration per day.

Example - NEOM_LOW_FREQUENCY and associated columns

GCN_SEQNO	NEOM_LOW_FREQUENCY	NEOM_HIGH_FREQUENCY
000011	03.00	06.00
000011	02.00	03.00
000012	03.00	06.00

Related Tables

[NEOM Master Table](#)

NEOM_LOW_GEST_BIRTH_AGE_WEEKS

Neonatal Low Gestational Age at Birth in Weeks

a two-character numeric column that identifies the lowest range of the gestational age at birth for a neonate, expressed in weeks; this column is used in selecting the appropriate dosing record for a neonatal dose of a particular drug.

If the Neonatal Gestational Birth Age Required Indicator column indicates that the gestational age is not required (**NEOM_GEST_BIRTH_AGE_REQ_IND=0**), the **NEOM_LOW_GEST_BIRTH_AGE_WEEKS** and **NEOM_HIGH_GEST_BIRTH_AGE_WEEKS** columns contain zeroes.

i A Low Gestational Age of 0 indicates one of the following conditions:

- Any gestational age below the High Gestational Age (or any gestational age if the High Gestational Age is also 0) is covered by the dose record
- The gestational age is not required to select a DRCM dosing record.

Example - NEOM_LOW_GEST_BIRTH_AGE_WEEKS and associated columns

GCN_SEQNO	NEOM_LOW_GEST_BIRTH_AGE_WEEKS	NEOM_HIGH_GEST_BIRTH_AGE_WEEKS
000017	30	36
002366	00	36
015962	38	00

Related Tables

[DRCM Age Exclusion Table](#)

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NEOM_MATH_PROCESS_CODE

NEOM Math Process Code

a one-character alphanumeric column that describes the mathematical process used to convert the prescribed dose to NEOM dose.

Valid Values Table

NEOM_MATH_PROCESS_CODE	NEOM_MATH_PROCESS_CODE_DESCRIPTION
1	multiply
2	divide

Related Tables

[NEOM Math Process Code Description Table](#)

[NEOM Unit Conversion Table](#)

NEOM_MATH_PROCESS_CODE_DESC

NEOM Math Process Code Description

a 50-character alphanumeric column that provides the text description for NEOM Math Process Code ([NEOM_MATH_PROCESS_CODE](#)).

Valid Values Table

NEOM_MATH_PROCESS_CODE	NEOM_MATH_PROCESS_CODE_DESC
1	multiply
2	divide

Related Tables

[NEOM Math Process Code Description Table](#)

NEOM_MAX_DOSE_PER_DAY

NEOM Maximum Dose Per Day

a nine-character numeric column that indicates the maximum drug dose that should be administered per day.

This column's value may be the same as that of the High Dose Per Day (**NEOM_HIGH_DOSE_PER_DAY**).

Alternately, **NEOM_MAX_DOSE_PER_DAY** may indicate a dose for severe cases of the reason for use. For example, a usual dose is 1000 to 2000 mg per day, or 3000 mg per day for severe cases. Therefore, the **NEOM_HIGH_DOSE_PER_DAY** is 2000 mg and the **NEOM_MAX_DOSE_PER_DAY** is 3000 mg.

Example - NEOM_MAX_DOSE_PER_DAY and associated columns

GCN_SEQNO	NEOM_MAX_DOSE_PER_DAY	NEOM_MAX_DOSE_UNIT_CODE
000011	00000.030	02
008195	00000.200	02
008201	00003.000	02

Related Tables

[NEOM Master Table](#)

NEOM_MAX_DOSE_UNIT_CODE

NEOM Maximum Dose Unit Code

a two-character alphanumeric column that indicates the unit of measure for a maximum dose per day.

Valid Values Table

NEOM_MAX_DOSE_UNIT_CODE	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
11	CM/DAY
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
18	MG/KG/H
20	INH/DAY
21	SPR/DAY
22	ML/DAY
24	U/KG/MIN
26	U/KG/DAY
27	U/KG/H
45	G/KG/DAY
46	MCG/KG/DAY
47	MEQ/KG/HOUR
51	G/DAY
56	PAT/DAY
57	MMU/M2/DAY

58	MMU/DAY
60	MMU/KG/DAY
63	MEQ/KG/DAY
76	MG/KG/MIN
77	ML/KG/DAY
78	MCG/KG/H
82	TAB-CAP/KG/D
88	MG/M2/H
92	ML/M2/DAY
98	MMOL/KG/DAY

Related Tables**NEOM Master Table**

NEOM_MAX_DURATION_OF_TX

NEOM Maximum Duration of Therapy

a five-character numeric column that indicates the maximum recommended amount of time, expressed in days, for which a drug should be administered.

Example - NEOM_MAX_DURATION_OF_TX and associated columns

GCN_SEQNO	NEOM_DOSE_TYPE_CODE	NEOM_DOSE_TYPE_CODE_DESC	NEOM_MAX_DURATION_OF_TX
004261	02	MAINTENANCE	00000
003722	07	SINGLE DOSE	00001
009323	04	PROPHYLACTIC	00004

- i Not all reasons for use or drugs have a NEOM_MAX_DURATION_OF_TX. For example, duration of therapy does not apply to maintenance medications.

Related Tables

[NEOM Master Table](#)

NEOM_MAX_LIFE_DOSE

NEOM Maximum Lifetime Dose

a nine-character numeric column that indicates the maximum amount of a drug that can be safely administered over a patient's lifetime. If this information is available, it is used for every reason for use and dose type.

This column is not currently being used.

Example - NEOM_MAX_LIFE_DOSE and associated columns

GCN_SEQNO	NEOM_MAX_LIFE_DOSE	NEOM_MAX_LIFE_DOSE_UNIT_CODE
026281	00250.000	64
008815	00400.000	54
015564	00137.500	54

 The majority of drugs do not currently have a Maximum Lifetime Dose.

Related Tables

[NEOM Master Table](#)

NEOM_MAX_LIFE_DOSE_UNIT_CODE

NEOM Maximum Lifetime Dose Unit Code

a two-character alphanumeric column that identifies the appropriate units for the NEOM Maximum Lifetime Dose (**NEOM_MAX_LIFE_DOSE**).

Valid Values Table

NEOM_MAX_LIFE_DOSEUNIT_CODE	NEOM_UNIT_CODE_DESC
03	MG/KG
05	MCG/KG/MIN
10	U/KG
18	MG/KG/H
19	MCG/KG
24	U/KG/MIN
27	U/KG/H
28	MG
29	G
30	G/KG
31	DRP
32	U
33	MCG
34	CM
35	APPLIC
37	TAB-CAP
39	INH
40	SPRAYS
41	ML
47	MEQ/KG/HOUR
49	ML/KG
54	MG/M2
59	MMU/KG
61	MMU

67	MEQ
76	MG/KG/MIN
78	MCG/KG/H
81	TAB-CAP/KG
83	NG
87	MEQ/KG
88	MG/M2/H
93	ML/M2
94	MMU/M2
96	MMOL/KG

Related Tables**NEOM Master Table**

NEOM_MAX_SINGLE_DOSE

NEOM Maximum Single Dose

a nine-character numeric column that indicates the maximum amount of a drug that can be safely administered as one dose. If the information is disease-specific, it is used only for that specific reason for use. If references give a general statement that is not disease-specific, that maximum single dose is used for all appropriate dose types.

Example - NEOM_MAX_SINGLE_DOSE and associated columns

GCN_SEQNO	NEOM_MAX_SINGLE_DOSE	NEOM_MAX_SINGLE_DOSE_UNIT_CODE
009279	00010.000	03
011693	00003.000	94
009283	00025.000	03

 Not all drugs have a NEOM_MAX_SINGLE_DOSE.

Related Tables

[NEOM Master Table](#)

NEOM_MAX_SINGLE_DOSE_UNIT_CODE

NEOM Maximum Single Dose Unit Code

a two-character alphanumeric column that identifies the appropriate units for the NEOM Maximum Single Dose (NEOM_MAX_SINGLE_DOSE).

Valid Values Table

NEOM_MAX_SINGLE_DOSE_UNIT_CODE	NEOM_UNIT_CODE_DESC
03	MG/KG
05	MCG/KG/MIN
10	U/KG
18	MG/KG/H
19	MCG/KG
24	U/KG/MIN
27	U/KG/H
28	MG
29	G
30	G/KG
31	DRP
32	U
33	MCG
34	CM
35	APPLIC
37	TAB-CAP
39	INH
40	SPRAYS
41	ML
47	MEQ/KG/HOUR
49	ML/KG
54	MG/M2
59	MMU/KG
61	MMU

67	MEQ
76	MG/KG/MIN
78	MCG/KG/H
81	TAB-CAP/KG
83	NG
87	MEQ/KG
88	MG/M2/H
93	ML/M2
94	MMU/M2
96	MMOL/KG

Related Tables**NEOM Master Table**

NEOM_PRESCRIBED_UNIT_CODE

NEOM Prescribed Unit Code

a two-character alphanumeric column that identifies the units of the input dose according to the NEOM Unit Code Description Table.

- i** To define the NEOM_PRESCRIBED_UNIT_CODE, match the code to the NEOM Unit Code Description Table.

NEOM_PRESCRIBED_UNIT_CODE	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

Related Tables

[NEOM Unit Conversion Table](#)

NEOM_RENAL_IMPAIRMENT_IND

NEOM Renal Impairment Indicator

a one-character alphanumeric column that indicates whether a dosage regimen needs to be adjusted for renal impairment.

Valid Values Table

NEOM_RENAL_IMPAIRMENT_IND	Description
Y	Dose needs to be adjusted for renal impairment
N	Dose does not need to be adjusted for renal impairment

Related Tables

[NEOM Master Table](#)

NEOM_RESULT_UNIT_CODE

NEOM Result Unit Code

a two-character alphanumeric column that identifies the dose units after the dose is multiplied or divided by the conversion factor.

Sample Valid Values Table

NEOM Unit Conversion Table	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

- ⓘ To define the NEOM_RESULT_UNIT_CODE, match the unit code to the NEOM Unit Code Description (**NEOM_UNIT_CODE_DESC**) column to the NEOM Unit Code Description Table.

Related Tables

NEOM Unit Code Description Table

NEOM Unit Conversion Table

NEOM_ROUTE_CODE

NEOM Route Code

a three-character alphanumeric column that identifies a distinct route of administration and associates the routed drug to the route information.

Valid Values Table

NEOM_ROUTE_CODE	NEOM_ROUTE_CODE_DESC
004	BUCCAL
006	CONTINUOUS INFUSION
010	ENDOTRACHEAL
012	EPIDURAL
021	INHALATION
023	IPPB
024	INTRA-ARTERIAL
025	INTRA-ARTICULAR
028	INTRA-CAVERNOSAL
030	CERVICAL
033	INTRADERMAL
036	INTRALESIONAL
037	INTRALUMBAR
040	INTRAMUSCULAR
044	INTRAPERITONEAL
045	INTRAPLEURAL
046	INTRASPINAL
048	INTRATHECAL
050	INTRATRACHEAL
052	INTRAVENOUS
054	INTRAVENTRICULAR
058	MUCOUS MEMBRANE
060	INTRANASAL
062	NEBULIZATION -UNSPEC

063	OPHTHALMIC
064	ORAL
066	OTIC
074	RECTAL
078	SUBCONJUNCTIVAL
079	SUBCUTANEOUS
080	SUBLESIONALLY
081	SUBLINGUAL
083	TOPICAL
084	TRANSDERMAL
085	TRANSLINGUAL
086	INTRA-URETHRAL
087	VAGINAL
090	INTRAVESICAL
091	INTRACARDIAC
092	TRANSTRACHEAL
093	RETROBULBAR
094	O2 AEROSOLIZATION
095	HAND BULB NEBULIZER
097	INTRAPERICARDIAL

Related Tables

[NEOM Master Table](#)

[NEOM Route Code Description Table](#)

[NEOM Route Conversion Table](#)

NEOM_ROUTE_CODE_DESC

NEOM Route Code Description

a 22-character alphanumeric column that contains the text description for NEOM Route Code (**NEOM_ROUTE_CODE**).

Valid Values Table

NEOM_ROUTE_CODE	NEOM_ROUTE_CODE_DESC
004	BUCCAL
030	CERVICAL
006	CONTINUOUS INFUSION
010	ENDOTRACHEAL
012	EPIDURAL
095	HAND BULB NEBULIZER
021	INHALATION
024	INTRA-ARTERIAL
025	INTRA-ARTICULAR
091	INTRACARDIAC
028	INTRA-CAVERNOSAL
033	INTRADERMAL
036	INTRALESIONAL
037	INTRALUMBAR
040	INTRAMUSCULAR
060	INTRANASAL
097	INTRAPERICARDIAL
044	INTRAPERITONEAL
045	INTRAPLEURAL
046	INTRASPINAL
048	INTRATHECAL
050	INTRATRACHEAL
086	INTRA-URETHRAL
052	INTRAVENOUS

054	INTRAVENTRICULAR
090	INTRAVESICAL
023	IPPB
058	MUCOUS MEMBRANE
062	NEBULIZATION -UNSPEC
094	O2 AEROSOLIZATION
063	OPHTHALMIC
064	ORAL
066	OTIC
074	RECTAL
093	RETROBULBAR
078	SUBCONJUNCTIVAL
079	SUBCUTANEOUS
080	SUBLESIONALLY
081	SUBLINGUAL
083	TOPICAL
084	TRANSDERMAL
085	TRANSLINGUAL
092	TRANSTRACHEAL
087	VAGINAL

Related Tables

[NEOM Route Code Description Table](#)

NEOM_UNIT_CODE

NEOM Unit Code

a two-character alphanumeric column that indicates the unit used in the Neonatal and Infant Dosage Range Check Module (NEOM).

Sample Valid Values Table

NEOM_UNIT_CODE	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

Related Tables

[NEOM Unit Code Description Table](#)

NEOM_UNIT_CODE_DESC

NEOM Unit Code Description

a 12-character alphanumeric column that provides a text description for the NEOM Unit Code (**NEOM_UNIT_CODE**).

Valid Values Table

NEOM_UNIT_CODE	NEOM_UNIT_CODE_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

Related Tables

[NEOM Unit Code Description Table](#)

NEOM_WEIGHT_REQ_IND

Neonatal Weight Required Indicator

a one-character alphanumeric column that identifies whether a drug requires a current weight in order to select the dose range check record.

Valid Values Table

NEOM_WEIGHT_REQ_IND	Description
0	Current Weight IS NOT required to select dose range check record
1	Current Weight IS required to select dose range check record

Related Tables

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NEXT_SCREENING_DOSE_AGE_TEXT

Next Screening Dose Age Text

a 255-character alphanumeric column that includes the age, gestational age at birth and/or current weight ranges associated with the closest dosage screening values for a particular age exclusion.

Example—NEXT_SCREENING_DOSE_AGE_TEXT

DR2_SL_MESSAGE_TEXT	Desogestrel-ethynodiol has a management or monitoring precaution for this patient.
EXCLUSION_REASON_TEXT_SHORT	Birth control not indicated for post-menopausal women.
NEXT_SCREENING_DOSE_AGE_TEXT	The next available dosing age range is for 18 to 65 years of age.
NEXT_SCREENING_DOSE_TEXT	The next available dosing age range is for 18 to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.
EXCLUSION_MESSAGE_TEXT	Desogestrel-ethynodiol has a management or monitoring precaution for this patient. Birth control not indicated for post-menopausal women. The next available dosing age range is for 18 to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.

Related Tables

[DRCM Age Exclusion Table](#)

NEXT_SCREENING_DOSE_TEXT

Next Screening Dose Text

a 510-character alphanumeric column that identifies the next available dosing age range in a given severity level precaution.

Example—NEXT_SCREENING_DOSE_TEXT and associated columns

DR2_SL_MESSAGE_TEXT	Desogestrel-ethynodiol has a management or monitoring precaution for this patient.
EXCLUSION_REASON_TEXT_SHORT	Birth control not indicated for post-menopausal women.
NEXT_SCREENING_DOSE_AGE_TEXT	The next available dosing age range is for 18 to 65 years of age.
NEXT_SCREENING_DOSE_TEXT	The next available dosing age range is for 18 to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.
EXCLUSION_MESSAGE_TEXT	Desogestrel-ethynodiol has a management or monitoring precaution for this patient. Birth control not indicated for post-menopausal women. The next available dosing age range is for 18 to 65 years of age. Low dose per day is 1 tab-cap/day. High dose per day is 1 tab-cap/day. Max dose per day is 1 tab-cap/day. Max single dose is 1 tab-cap. Not to exceed single dose is 1 tab-cap.

Related Tables

[DRCM Age Exclusion Table](#)

NLM_ACCEPTABILITY_ID

NLM Acceptability Identifier

an 18-character numeric column that identifies a descendant of “Acceptability” in the metadata hierarchy.

Example—NLM_ACCEPTABILITY_ID and associated columns

NLM_ACCEPTABILITY_ID	NLM_TERM
9000000000000548007	Preferred

Related Tables

[NLM SNOMED CT Language Table](#)

NLM_ACTIVE_IND

NLM Active Indicator

a one-character alphanumeric column that indicates whether a SNOMED CT Concept is active or inactive.

Valid Values Table

NLM_ACTIVE_IND	Description
0	Inactive
1	Active

Related Tables

[NLM SNOMED CT Concept Table](#)

[NLM SNOMED CT Concept Description Table](#)

[NLM SNOMED CT Language Table](#)

[NLM SNOMED CT Relationship Table](#)

NLM_CASE_SIGNIFICANCE_ID

NLM Case Significance Identifier

an 18-character numeric column that identifies a SNOMED CT Concept description as case-sensitive or case-insensitive.

Example—NLM_CASE_SIGNIFICANCE_ID and associated columns

NLM_CASE_SIGNIFICANCE_ID	NLM_TERM
90000000000000017005	Case sensitive

Related Tables

[NLM SNOMED CT Concept Description Table](#)

NLM_CHARACTERISTIC_TYPE_ID

NLM Characteristic Type Identifier

an 18-character numeric column that identifies a SNOMED CT Concept relationship characteristic type as defining, qualifying, or additional.

Example—NLM_CHARACTERISTIC_TYPE_ID and associated columns

NLM_CHARACTERISTIC_TYPE_ID	nlm_term
90000000000000011006	Inferred relationship

Related Tables

[NLM SNOMED CT Relationship Table](#)

NLM_CONCEPT_ID

NLM Concept Identifier

an 18-character numeric column that identifies a SNOMED CT Concept.

Example—NLM_CONCEPT_ID and associated columns

NLM_CONCEPT_ID	NLM_TERM
90000000000000003001	Fully specified name
90000000000000013009	Synonym

Related Tables

[NLM SNOMED CT Concept Table](#)

[NLM SNOMED CT Concept Description Table](#)

NLM_DEFINITION_STATUS_ID

NLM Definition Status Identifier

an 18-character numeric column that identifies the definition status of a SNOMED CT Concept as either fully defined or primitive. Concepts are defined by a set of relationships to other concepts. Fully defined concepts have a definition sufficient to differentiate them from parents and siblings. If a definition is insufficient to differentiate a concept from parents and siblings, it is considered primitive.

Example—NLM_DEFINITION_STATUS_ID and associated columns

NLM_DEFINITION_STATUS_ID	NLM_TERM
90000000000000073002	Defined

Related Tables

[NLM SNOMED CT Concept Table](#)

NLM_DESCRIPTION_ID

NLM Description Identifier

an 18-character numeric column that identifies a SNOMED CT Concept description. A concept can have several associated descriptions, each representing a synonym that describes the same clinical idea.

Example—NLM_DESCRIPTION_ID and associated columns

NLM_CONCEPT_ID	NLM_DESCRIPTION_ID	NLM_TERM
50177009	1230841017	Has a temperature
50177009	1230842012	Temperature raised
50177009	1230843019	Increased body temperature

Related Tables

[NLM SNOMED CT Concept Description Table](#)

NLM_DESTINATION_ID

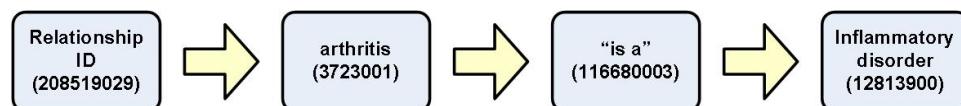
NLM Destination Identifier

an 18-character numeric column that identifies a SNOMED CT Concept relationship target.

Example—NLM_DESTINATION_ID and associated columns

NLM_RELATIONSHIP_ID	NLM_SOURCE_ID	NLM_TYPE_ID	NLM_DESTINATION_ID
208519029	3723001	116680003	128139000

The following diagram illustrates the relationship of these example values:



Related Tables

[NLM SNOMED CT Relationship Table](#)

NLM_EFFECTIVE_TIME

NLM Effective Time

an eight-character numeric column that provides the date on which a SNOMED CT Concept takes effect. The date format is YYYYMMDD.

Example—NLM_EFFECTIVE_TIME and associated columns

NLM_EFFECTIVE_TIME	NLM_SOURCE_ID	NLM_DESTINATION_ID	NLM_RELATIONSHIP_ID
20020731	271737000	57171008	596862024
20050131	271737000	57171008	2257387023
20050131	271737000	41898006	596861028

Related Tables

[NLM SNOMED CT Concept Table](#)

[NLM SNOMED CT Concept Description Table](#)

[NLM SNOMED CT Language Table](#)

[NLM SNOMED CT Relationship Table](#)

NLM_LANGUAGE_CD

NLM Language Code

a 50-character alphanumeric column that identifies the language of a description, as coded in accordance with ISO-639-1.

Valid Values Table

NLM_LANGUAGE_CD	Description
en	English

Related Tables

[NLM SNOMED CT Concept Description Table](#)

NLM_LANGUAGE_ID

NLM Language Identifier

a 36-character alphanumeric column that identifies the language of a reference set member.

Example—NLM_LANGUAGE_ID and associated columns

NLM_LANGUAGE_ID	NLM_REFERENCED_COMPONENT_ID
00000692-31c5-5aac-81a8-2e54b488c824	758399015

Related Tables

[NLM SNOMED CT Language Table](#)

NLM_MODIFIER_ID

NLM Modifier Identifier

an 18-character numeric column that identifies the logic restriction of a relationship's description.

Example—NLM_MODIFIER_ID and associated columns

NLM_MODIFIER_ID	NLM_TERM
900000000000451002	Existential restriction modifier

Related Tables

NLM SNOMED CT Relationship Table

NLM_MODULE_ID

NLM Module Identifier

an 18-character numeric column that identifies the SNOMED CT module to which a SNOMED CT Concept belongs.

Example—NLM_MODULE_ID and associated columns

NLM_MODULE_ID	NLM_RELATIONSHIP_ID	NLM_SOURCE_ID
9000000000000207008	1000002029	10002003
9000000000000207008	1000295025	262683000
900000000000012004	2730338020	246399006
900000000000012004	2765872028	246173007

Related Tables

[NLM SNOMED CT Concept Table](#)

[NLM SNOMED CT Concept Description Table](#)

[NLM SNOMED CT Language Table](#)

[NLM SNOMED CT Relationship Table](#)

NLM_REFERENCED_COMPONENT_ID

NLM Referenced Component Identifier

an 18-character numeric column that references the description included in the language reference set.

Example—NLM_REFERENCED_COMPONENT_ID and associated columns

NLM_REFERENCED_COMPONENT_ID	NLM_LANGUAGE_ID	NLM_REFSET_ID
662557014	0005412a-e046-5402-8b38-791b90ea9f20	9000000000000509007

Related Tables

[NLM SNOMED CT Language Table](#)

NLM_REFSET_ID

NLM Reference Set Identifier

an 18-character numeric column that identifies a SNOMED CT Concept as language type descendant in the metadata hierarchy.

Example—NLM_REFSET_ID and associated columns

NLM_REFSET_ID	NLM_TERM
900000000000509007	US English
900000000000508004	GB English

Related Tables

[NLM SNOMED CT Language Table](#)

NLM_RELATIONSHIP_GROUP

NLM Relationship Group

a 50-character alphanumeric column that identifies the logical association within the source concept group to which a relationship belongs.

Example—NLM_RELATIONSHIP_GROUP and associated columns

NLM_RELATIONSHIP_GROUP	NLM_RELATIONSHIP_ID
0	208520024
1	764951025

Related Tables

[NLM SNOMED CT Relationship Table](#)

NLM_RELATIONSHIP_ID

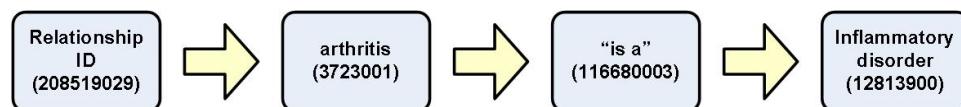
NLM Relationship Identifier

an 18-character numeric column that identifies a SNOMED CT Concept relationship. A relationship refers to 3 concepts: a source, a target, and a relationship type.

Example—NLM_RELATIONSHIP_ID and associated columns

NLM_RELATIONSHIP_ID	NLM_SOURCE_ID	NLM_TYPE_ID	NLM_DESTINATION_ID
208519029	3723001	116680003	128139000

The following diagram illustrates the relationship of these example values:



Related Tables

[NLM SNOMED CT Relationship Table](#)

NLM_SOURCE_ID

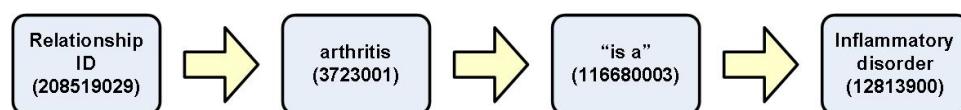
NLM Source Identifier

an 18-character numeric column that identifies a SNOMED CT Concept relationship source.

Example—NLM_SOURCE_ID and associated columns

NLM_RELATIONSHIP_ID	NLM_SOURCE_ID	NLM_TYPE_ID	NLM_DESTINATION_ID
208519029	3723001	116680003	128139000

The relationship of the example values in the above table is represented by the following diagram:



Related Tables

NLM SNOMED CT Relationship Table

NLM_TERM

NLM Terminology

a 250-character alphanumeric column that provides a text description for a SNOMED CT Concept.

Example—NLM_TERM and associated columns

NLM_CONCEPT_ID	NLM_TERM
90000000000000003001	Fully specified name
90000000000000013009	Synonym

Related Tables

[NLM SNOMED CT Concept Description Table](#)

NLM_TYPE_ID

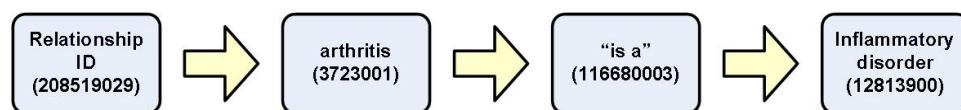
NLM Type Identifier

an 18-character numeric column that identifies a SNOMED CT Concept type as either a fully specified name or as a synonym. SNOMED CT descriptions link appropriate human-readable terms to concepts. A concept can have several associated descriptions, each representing a synonym that describes the same clinical idea.

Example—NLM_TYPE_ID and associated columns

NLM_CONCEPT_ID	NLM_TYPE_ID	NLM_TERM	
90000000000000003001	90000000000000013001	Fully specified name	
90000000000000013009	90000000000000013009	Synonym	
NLM_RELATIONSHIP_ID	NLM_SOURCE_ID	NLM_TYPE_ID	NLM_DESTINATION_ID
208519029	3723001	116680003	128139000

The relationship of the example values in the above table is represented by the following diagram:



Related Tables

[NLM SNOMED CT Concept Description Table](#)

[NLM SNOMED CT Relationship Table](#)

NOT_MARKETED_INDICATOR

Not Marketed Indicator

a one-character alphanumeric column that identifies the market status of a DIN or NPN. A value of '0' indicates that the product is available or was available on the market.

Valid Values Table

NOT_MARKETED_INDICATOR	Description
0	Product is or has been active on the market.
1	Product is not available on the market at the time the product was added from the Notice of Compliance (NOC) from the Health Canada website.

Related Tables

[Product Master Table](#)

NTE_SINGLE_DOSE

Not-to-Exceed Amount Per Single Dose

a nine-character (5.3) numeric column that provides the absolute not-to-exceed single dose amount for a given clinical formulation (**GCN_SEQNO**). This is the largest amount of drug that references indicate should be given as a single dose specific to the patient age, reason for use, dose type, and route of administration, as well as gestational age at birth and current weight for pediatric dosing.

Example—NTE_SINGLE_DOSE and associated columns from the RDRCNMA1_MSTR table

GCN_SEQNO	51833	51833	51833	51833
DR2_RT	052	052	052	064
DR2_LOAGED	0	0	4745	4745
DR2_HIAGED	29	29	40150	40150
DR2_DOSTPI	02	02	02	07
DXID	4892	4849	4892	4892
NEOM_LOW_GEST_BIRTH_AGE_WEEKS	0	37	0	0
NEOM_HIGH_GEST_BIRTH_AGE_WEEKS	36	0	0	0
NEOM_LOW_CURR_ENT_WEIGHT_GRAMS	0	0	0	0
NEOM_HIGH_CURR_ENT_WEIGHT_GRAMS	0	0	0	0
NTE_SINGLE_DOSE	1	1	4.2	4.2
NTE_SINGLE_DOSE_UNIT_CODE	33	33	33	33

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

NTE_SINGLE_DOSE_UNIT_CODE

Not-to-Exceed Amount Per Single Dose Units Code

a two-character alphanumeric column that indicates the unit of measure for the Not-to-Exceed Amount Per Single Dose (**NTE_SINGLE_DOSE**).

The DRCM Dose Units Code Description (**UNITS_DESC**) value is retrieved from the [DRCM Unit Description Table](#) (RDRCUNDO_UNITS_DESC).

Sample Valid Values Table

NTE_SINGLE_DOSE_UNIT_CODE	UNITS_DESC
03	MG/KG
05	MCG/KG/MIN
09	MCG/MIN
0A	PACKET
0B	KILOUNIT
0L	UNITS/H
0Q	PATCH
0R	VAG RING
0T	PKG
0V	INSERT
10	UNITS/KG
17	MG/H
19	MCG/KG
1C	BAR
1E	STRIP
1G	VIAL
1I	PAD
1R	MG/CM2
1T	TOWELETTE
1V	WAFER
1Z	LOZENGE
25	UNITS/MIN

28	MG
29	G
2H	PIECE OF GUM
31	DRP
32	UNITS
33	MCG
34	CM
35	APPLIC
36	INCH
37	TAB-CAP
38	APPFUL
39	INH
40	SPRAYS
41	ML
52	SUPP
61	MMU
65	MG/MIN
67	MEQ
68	SPRAY
72	MCG/H
74	MILI U/MIN
83	NG
89	ML/H
95	MMOL
99	SUPP

Related Tables

[DRCM Master Table](#)

[DRCM Neonatal and Adult Master Table](#)

[NEOM Master Table](#)

P

PACK_IND

PACKAGE_SIZE_UNIT

PARENT_PRODUCT_ID

PDM_AGEDSC

PDM_F05WT

PDM_F25WT

PDM_F50WT

PDM_F75WT

PDM_F95WT

PDM_M05WT

PDM_M25WT

PDM_M50WT

PDM_M75WT

PDM_M95WT

PDM_MNAGE

PDM_MND

PDM_MNDU

PDM_MNU

PDM_MNUF

PDM_MXAGE

PDM_MXD

PDM_MXDU

PDM_MXU

PDM_MXUF

PDM_NTED

PDM_NTEDU

PDM_NTEU

PDM_NTEUF

PDM_UNDESC

PDM_UNIT

PEC

PEDI_CODE

PEDI_DESC

PEDI_MAXAG

PEDI_MINAG

PEDI_NARRATIVE

PEDI_SL

PEDI_SL_DESC

PEMAGE

PEMGNDR

PEMONO

PEMONOE_SN

PEMONOFRA

PEMONOS

PEMTXTE

PEMTXTEI

PHMXCDE

POEADMINSQ

POEADRT

POEADRTUNT

POECALCREQ

POECALCRTC

POECALCRTC_DESC

POECLINID

POECLINTYP

POECLINTYP_DESC

POECLINVAL

POECLINVAL_DESC

POECOCDE

POECOCDE_DESC

POEDESC1

POEDESC2

POEDESC3

POEDISPQTY

POEDOSETYP

POEDOSETYP_DESC

POEHIGHD

POEHIGHDFA

POEHIGHDFU

POEHIGHDR

POEHIGHDRU

POEHIGHDU

POEHIGHF

POEHIGHI

POEHIGHIU

POELANGCDE

POELANGCDE_DESC

POELOWD

POELOWDFA

POELOWDFU

POELOWDR

POELOWDRU

POELOWDU

POELOWF

POELOWI

POELOWIU

POEMAXRANG

POEMINRANG
POEMLCNVRS
POEOSETID
POEOSTRID
POEOSTRSEQ
POEPERDAYC
POERANGUNT
POERROUTE
POERROUTE_D
POERROUTE_D_DESC
POESHIGHF
POESHIGHI
POESHIGHIU
POESLOWF
POESLOWI
POESLOWIU
POETEXTCDE
POETEXTTYP
POETEXTTYP_DESC
POETXLINE
POETXTNUM
POETXTSTRL
POETXTSTRL_DESC
POEUNITCDE
POEUNITTYP
POEUNITTYP_DESC
PRED_CODE
PREDDESC
PREG_BOXED_WARNING_IND
PREG_CODE

PREG_DESC
PREG_MONO_ID
PREG_MONO_LINE
PREG_MONO_SECTION_CD
PREG_MONO_SECTION_CD_DESC
PREG_MONO_SN
PREG_PRCTN
PREG_REFERENCE_ACCESED_DT
PREG_REFERENCE_AUTHOR
PREG_REFERENCE_EDITION
PREG_REFERENCE_ID
PREG_REFERENCE_ISSUE
PREG_REFERENCE_ISSUE_DT_TXT
PREG_REFERENCE_LOCATION
PREG_REFERENCE_NAME
PREG_REFERENCE_PAGE
PREG_REFERENCE_PUBMED_ID
PREG_REFERENCE_SUPPLEMENT_NBR
PREG_REFERENCE_TITLE
PREG_REFERENCE_TYPE_DESC
PREG_REFERENCE_TYPE_ID
PREG_REFERENCE_URL_TEXT
PREG_REFERENCE_VOLUME
PREG_SL
PREG_SLD
PREG_SLSN
PREV_DAM_ALRGN_GRP
PREV_DAM_ALRGN_XSENSE
PREV_HIC_SEQN

PREV_MEDID
PREV_MEDID_DESC
PREV_MEDID_NAME_SOURCE_CD
PREV_MEDID_NEW_STATUS_CD
PREV_MEDID_OLD_STATUS_CD
PRODUCT_ADD_DATE
PRODUCT_BRAND_NAME
PRODUCT_FORMAT
PRODUCT_LABEL_NAME
PRODUCT_OBSOLETE_DATE
PRODUCT_PACKAGE_COUNT
PRODUCT_PACKAGE_DESC
PRODUCT_PACKAGE_UNIT
PRODUCT_TYPE_DESC
PRODUCT_TYPE_ID
PRODUCTION_DATE
PROXY_IND
PST_IND_AB
PST_IND_BC
PST_IND_MB
PST_IND_NB
PST_IND_NL
PST_IND_NS
PST_IND_NT
PST_IND_NU
PST_IND_ON
PST_IND_PE
PST_IND_QC
PST_IND_SK
PST_IND_YT

PACK_IND

Pack Indicator

a one-character numeric column that identifies whether a product (GTIN) is packaged as pack, each pack contains multiple individual units. The PACK_IND column is used with the Unit Indicator (**UNIT_IND**) and Case Indicator (**CASE_IND**) columns.

Valid Values Table

PACK_IND	Description
0	Not packaged as a pack
1	Is packaged as a pack

Related Tables

IDDF Canada Packaged Product Master Table

PACKAGE_SIZE_UNIT

Package Size Unit

a three-character alphanumeric column that identifies the number of units in the labeled quantity of a packaged product.

Sample Valid Values Table

PACKAGE_SIZE_UNIT	Description
DS	dose
EA	each (tablets, kits, etc.)
G	gram
IU	international unit
KG	kilogram
L	liter
M	meter
MCG	microgram
MEQ	milliequivalent
MG	MG milligram
ML	milliliter
OZ	ounce
CM	centimeter
MIN	minim (1 imperial minim=1/480 imperial fluid ounces)

Related Tables

IDDF Canada Packaged Product Master Table

PARENT_PRODUCT_ID

Product Parent Identifier

an eight-character numeric column that provides the parent identifier for an FDB product.

Related Tables

Product Master Table

PDM_AGEDSC

PDM Age Range Description

a 30-character alphanumeric column that provides the text description for the specified age range. The ages are stated in months until 36 months and in years and half years until 18 years. The first example in the following table shows that the PDM Minimum Age ([PDM_MNAGE](#)) of 1095 days and PDM Maximum Age ([PDM_MXAGE](#)) of 1276 days has a PDM_AGEDSC of 36 months. PDM_AGEDSC and associated columns

Example—PDM_AGEDSC and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC
1095	1276	36 MONTHS
1460	1641	4.0 YEARS
2372	2554	6.5 YEARS

Related Tables

[PDM Weight/Age Table](#)

PDM_F05WT

PDM 5th Percentile Weight for Females

a six-character numeric column that provides the 5th percentile weight for a female in the specified age range. The weight unit is kilograms.

The first example in the following table shows that the estimated weight for a female between 0 and 29 days old in the 5th percentile is 2.36KG. PDM_F05WT and associated columns

Example—PDM_F05WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_F05WT
0000	0029	BIRTH	002.36
0030	0059	1 MONTH	002.97
0060	0089	2 MONTHS	003.60
0090	0119	3 MONTHS	004.18
0120	0149	4 MONTHS	004.70
0150	0179	5 MONTHS	005.20
0180	0209	6 MONTHS	005.79
0210	0239	7 MONTHS	006.20
0240	0269	8 MONTHS	006.60
0270	0299	9 MONTHS	007.00
0300	0329	10 MONTHS	007.30
0330	0364	11 MONTHS	007.60
0365	0394	12 MONTHS	007.84
0395	0424	13 MONTHS	008.10
0425	0454	14 MONTHS	008.20
0455	0484	15 MONTHS	008.40
0485	0514	16 MONTHS	008.60
0515	0546	17 MONTHS	008.80
0547	0576	18 MONTHS	008.92
0577	0606	19 MONTHS	009.10
0607	0636	20 MONTHS	009.20

Related Tables

[PDM Weight/Age Table](#)

PDM_F25WT

PDM 25th Percentile Weight for Females

a six-character numeric column that provides the 25th percentile weight for a female in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a female between 0 and 29 days old in the 25th percentile is 2.93KG.

Example—PDM_F25WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_F25WT
0000	0029	BIRTH	002.93
0030	0059	1 MONTH	003.59
0060	0089	2 MONTHS	004.30
0090	0119	3 MONTHS	004.88
0120	0149	4 MONTHS	005.50
0150	0179	5 MONTHS	006.10
0180	0209	6 MONTHS	006.60
0210	0239	7 MONTHS	007.10
0240	0269	8 MONTHS	007.50
0270	0299	9 MONTHS	007.89
0300	0329	10 MONTHS	008.20
0330	0364	11 MONTHS	008.50
0365	0394	12 MONTHS	008.81
0395	0394	13 MONTHS	009.10
0425	0454	14 MONTHS	009.30
0455	0484	15 MONTHS	009.50
0485	0514	16 MONTHS	009.70
0515	0546	17 MONTHS	009.90
0547	0576	18 MONTHS	010.04
0577	0606	19 MONTHS	010.20
0607	0636	20 MONTHS	010.40

Related Tables

[PDM Weight/Age Table](#)

PDM_F50WT

PDM 50th Percentile Weight for Females

a six-character numeric column that provides the 50th percentile weight for a female in the specified age range. The weight unit is kilograms.

The first example in the following table shows that the estimated weight for a female between 0 and 29 days old in the 50th percentile is 3.23KG.

Example—PDM_F50WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_F50WT
0000	0029	BIRTH	003.23
0030	0059	1 MONTH	003.98
0060	0089	2 MONTHS	004.70
0090	0119	3 MONTHS	005.40
0120	0149	4 MONTHS	006.00
0150	0179	5 MONTHS	006.60
0180	0209	6 MONTHS	007.21
0210	0239	7 MONTHS	007.70
0240	0269	8 MONTHS	008.20
0270	0299	9 MONTHS	008.56
0300	0329	10 MONTHS	008.90
0330	0364	11 MONTHS	009.20
0365	0394	12 MONTHS	009.53
0395	0424	13 MONTHS	009.80
0425	0454	14 MONTHS	010.10
0455	0484	15 MONTHS	010.20
0485	0514	16 MONTHS	010.40
0515	0546	17 MONTHS	010.60
0547	0576	18 MONTHS	010.82
0577	0606	19 MONTHS	011.00
0607	0636	20 MONTHS	011.20

Related Tables

[PDM Weight/Age Table](#)

PDM_F75WT

PDM 75th Percentile Weight for Females

a six-character numeric column that provides the 75th percentile weight for a female in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a female between 0 and 29 days old in the 75th percentile is 3.52KG. PDM_F75WT and associated columns

Example—PDM_F75WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_F50WT
0000	0029	BIRTH	003.52
0030	0059	1 MONTH	004.36
0060	0089	2 MONTHS	005.10
0090	0119	3 MONTHS	005.90
0120	0149	4 MONTHS	006.60
0150	0179	5 MONTHS	007.20
0180	0209	6 MONTHS	007.83
0210	0239	7 MONTHS	008.40
0240	0269	8 MONTHS	008.80
0270	0299	9 MONTHS	009.24
0300	0329	10 MONTHS	009.60
0330	0364	11 MONTHS	009.90
0365	0394	12 MONTHS	010.23
0395	0424	13 MONTHS	010.50
0425	0454	14 MONTHS	010.70
0455	0484	15 MONTHS	010.90
0485	0514	16 MONTHS	011.20
0515	0546	17 MONTHS	011.30
0547	0576	18 MONTHS	011.55
0577	0606	19 MONTHS	011.70
0607	0636	20 MONTHS	011.90

Related Tables

[PDM Weight/Age Table](#)

PDM_F95WT

PDM 95th Percentile Weight for Females

a six-character numeric column that provides the 95th percentile weight for a female in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a female between 0 and 29 days old in the 95th percentile is 3.81KG.

Example—PDM_F95WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_F95WT
0000	0029	BIRTH	003.81
0030	0059	1 MONTH	004.92
0060	0089	2 MONTHS	005.90
0090	0119	3 MONTHS	006.74
0120	0149	4 MONTHS	007.50
0150	0179	5 MONTHS	008.20
0180	0209	6 MONTHS	008.73
0210	0239	7 MONTHS	009.20
0240	0269	8 MONTHS	009.80
0270	0299	9 MONTHS	010.17
0300	0329	10 MONTHS	010.60
0330	0364	11 MONTHS	010.90
0365	0394	12 MONTHS	011.24
0395	0424	13 MONTHS	011.50
0425	0454	14 MONTHS	011.80
0455	0484	15 MONTHS	012.00
0485	0514	16 MONTHS	012.30
0515	0546	17 MONTHS	012.60
0547	0576	18 MONTHS	012.36
0577	0606	19 MONTHS	013.00
0607	0636	20 MONTHS	013.20

Related Tables

[PDM Weight/Age Table](#)

PDM_M05WT

PDM 5th Percentile Weight for Males

a six-character numeric column that provides the 5th percentile weight for a male in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a male between 0 and 29 days old in the 5th percentile is 2.54KG.

Example—PDM_M05WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M05WT
0000	0029	BIRTH	002.54
0030	0059	1 MONTH	003.16
0060	0089	2 MONTHS	003.80
0090	0119	3 MONTHS	004.43
0120	0149	4 MONTHS	005.00
0150	0179	5 MONTHS	005.60
0180	0209	6 MONTHS	006.20
0210	0239	7 MONTHS	006.70
0240	0269	8 MONTHS	007.10
0270	0299	9 MONTHS	007.52
0300	0329	10 MONTHS	007.80
0330	0364	11 MONTHS	008.20
0365	0394	12 MONTHS	008.43
0395	0424	13 MONTHS	008.70
0425	0454	14 MONTHS	008.90
0455	0484	15 MONTHS	009.10
0485	0514	16 MONTHS	009.30
0515	0546	17 MONTHS	009.40
0547	0576	18 MONTHS	009.59
0577	0606	19 MONTHS	009.80
0607	0636	20 MONTHS	009.90

Related Tables

[PDM Weight/Age Table](#)

PDM_M25WT

PDM 25th Percentile Weight for Males

a six-character numeric column that provides the 25th percentile weight for a male in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a male between 0 and 29 days old in the 25th percentile is 3.00KG.

Example—PDM_M25WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M25WT
0000	0029	BIRTH	003.00
0030	0059	1 MONTH	003.82
0060	0089	2 MONTHS	004.50
0090	0119	3 MONTHS	005.32
0120	0149	4 MONTHS	006.00
0150	0179	5 MONTHS	006.60
0180	0209	6 MONTHS	007.20
0210	0239	7 MONTHS	007.70
0240	0269	8 MONTHS	008.10
0270	0299	9 MONTHS	008.56
0300	0329	10 MONTHS	008.90
0330	0364	11 MONTHS	009.20
0365	0394	12 MONTHS	009.49
0395	0424	13 MONTHS	009.80
0425	0454	14 MONTHS	010.00
0455	0484	15 MONTHS	010.20
0485	0514	16 MONTHS	010.40
0515	0546	17 MONTHS	010.50
0547	0576	18 MONTHS	010.67
0577	0606	19 MONTHS	010.90
0607	0636	20 MONTHS	011.00

Related Tables

[PDM Weight/Age Table](#)

PDM_M50WT

PDM 50th Percentile Weight for Males

PDM 50th Percentile Weight for Males a six-character numeric column that provides the 50th percentile weight for a male in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a male between 0 and 29 days old in the 50th percentile is 3.27KG.

Example—PDM_M50WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M50WT
0000	0029	BIRTH	003.27
0030	0059	1 MONTH	004.29
0060	0089	2 MONTHS	005.20
0090	0119	3 MONTHS	005.98
0120	0149	4 MONTHS	006.70
0150	0179	5 MONTHS	007.30
0180	0209	6 MONTHS	007.85
0210	0239	7 MONTHS	008.30
0240	0269	8 MONTHS	008.80
0270	0299	9 MONTHS	009.18
0300	0329	10 MONTHS	009.60
0330	0364	11 MONTHS	009.90
0365	0394	12 MONTHS	010.15
0395	0424	13 MONTHS	010.40
0425	0454	14 MONTHS	010.70
0455	0484	15 MONTHS	010.90
0485	0514	16 MONTHS	011.10
0515	0546	17 MONTHS	011.30
0547	0576	18 MONTHS	011.47
0577	0606	19 MONTHS	011.70
0607	0636	20 MONTHS	011.90

Related Tables

[PDM Weight/Age Table](#)

PDM_M75WT

PDM 75th Percentile Weight for Males

a six-character numeric column that provides the 75th percentile weight for a male in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a male between 0 and 29 days old in the 75th percentile is 3.64KG.

Example—PDM_M75WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M75WT
0000	0029	BIRTH	003.64
0030	0059	1 MONTH	004.75
0060	0089	2 MONTHS	005.70
0090	0119	3 MONTHS	006.56
0120	0149	4 MONTHS	007.30
0150	0179	5 MONTHS	007.90
0180	0209	6 MONTHS	008.49
0210	0239	7 MONTHS	009.00
0240	0269	8 MONTHS	008.50
0270	0299	9 MONTHS	009.88
0300	0329	10 MONTHS	010.20
0330	0364	11 MONTHS	010.60
0365	0394	12 MONTHS	010.91
0395	0424	13 MONTHS	011.20
0425	0454	14 MONTHS	011.50
0455	0484	15 MONTHS	011.70
0485	0514	16 MONTHS	011.90
0515	0546	17 MONTHS	012.20
0547	0576	18 MONTHS	012.31
0577	0606	19 MONTHS	012.50
0607	0636	20 MONTHS	012.70

Related Tables

[PDM Weight/Age Table](#)

PDM_M95WT

PDM 95th Percentile Weight for Males

a six-character numeric column that provides the 95th percentile weight for a male in the specified age range. The weight unit is kilograms. The first example in the following table shows that the estimated weight for a male between 0 and 29 days old in the 95th percentile is 4.15KG.

Example - PDM_M95WT and associated columns

PDM_MNAGE	PDM_MXAGE	PDM_AGEDSC	PDM_M95WT
0000	0029	BIRTH	004.15
0030	0059	1 MONTH	005.38
0060	0089	2 MONTHS	006.40
0090	0119	3 MONTHS	007.37
0120	0149	4 MONTHS	008.20
0150	0179	5 MONTHS	008.80
0180	0209	6 MONTHS	009.46
0210	0239	7 MONTHS	010.00
0240	0269	8 MONTHS	010.50
0270	0299	9 MONTHS	010.93
0300	0329	10 MONTHS	011.30
0330	0364	11 MONTHS	011.70
0365	0394	12 MONTHS	011.99
0395	0424	13 MONTHS	012.30
0425	0454	14 MONTHS	012.60
0455	0484	15 MONTHS	012.80
0485	0514	16 MONTHS	013.10
0515	0546	17 MONTHS	013.30
0547	0576	18 MONTHS	013.50
0577	0606	19 MONTHS	013.70
0607	0636	20 MONTHS	014.00

Related Tables

[PDM Weight/Age Table](#)

PDM_MNAGE

PDM Minimum Dosing Age (Days)

a four-character numeric column that indicates the minimum age (in days) to which the dosing information applies. PDM_MNAGE works in conjunction with PDM Maximum Age ([PDM_MXAGE](#)) to express an age range specified for a particular dose. The first example in the following table shows that PDM_MNAGE works in conjunction with PDM_MXAGE to express the age range from 42 days old to 179 days old.

Example—PDM_MNAGE and associated columns

PDM_MNAGE	PDM_MXAGE
0042	0179
0031	4379
0090	4379

Related Tables

[PDM Master Table](#)

[PDM Weight/Age Table](#)

PDM_MND

PDM Minimum Daily Dose Strength Quantity

a 13-character numeric column that provides the quantitative value for the minimum pediatric daily dose usually expressed in metric strength units (such as MG, MCG, G). PDM_MND must be used in conjunction with the PDM Minimum Daily Dose Strength Units ([PDM_MNDU](#)) and the PDM Units Code Description ([PDM_UNDESC](#)). The first example in the following table shows that PDM_MND works in conjunction with PDM_MNDU and PDM_UNDESC to express the minimum daily dose of 1.5G/DAY.

Example—PDM_MND and associated columns

PDM_MND	PDM_MNDU	PDM_UNDESC
000001.500000	06	g/day
000006.000000	10	mg/kg/day
000000.090000	05	g/kg/day

Related Tables

[PDM Master Table](#)

PDM_MNDU

PDM Minimum Daily Dose Strength Units

a two-character alphanumeric column that identifies the units that must be used in conjunction with the PDM Minimum Daily Dose Strength Quantity (**PDM_MND**) and the PDM Units Code Description (**PDM_UNDESC**) columns. These units are usually expressed as metric strength units. The first example in the following table shows that PDM_MND works in conjunction with PDM_MNDU and PDM_UNDESC to express the minimum daily dose of 1.5G/DAY.

Example—PDM_MNDU and associated columns

PDM_MND	PDM_MNDU	PDM_UNDESC
000001.500000	06	g/day
000006.000000	10	mg/kg/day
000000.090000	05	g/kg/day

Related Tables

[PDM Master Table](#)

PDM_MNU

PDM Minimum Daily Dose Units Quantity

a 13-character numeric column that provides the quantitative value for the minimum pediatric daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.). PDM_MNU must be used in conjunction with the PDM Minimum Daily Dose Units Form ([PDM_MNUF](#)) and the PDM Units Code Description ([PDM_UNDESC](#)) columns. The first example in the following table shows that PDM_MNU works in conjunction with PDM_MNUF and PDM_UNDESC to express the minimum daily dose of 1.125ML/KG/DAY.

Example—PDM_MNU and associated columns

PDM_MNU	PDM_MNUF	PDM_UNDESC
000001.125000	03	ml/kg/day
000000.100000	05	g/kg/day
000000.075000	01	ea/kg/day

Related Tables

[PDM Master Table](#)

PDM_MNUF

PDM Minimum Daily Dose Units Form

a two-character alphanumeric column that identifies the unit of use form that must be used in conjunction with the PDM Minimum Daily Dose Units Quantity (**PDM_MNU**) and the PDM Units Code Description (**PDM_UNDESC**) columns. The first example in the following table shows that PDM_MNU works in conjunction with PDM_MNUF and PDM_UNDESC to express the minimum daily dose of 1.125ML/KG/DAY.

Example—PDM_MNUF and associated columns

PDM_MNU	PDM_MNUF	PDM_UNDESC
000001.125000	03	ml/kg/day
000000.100000	05	g/kg/day
000000.075000	01	ea/kg/day

Related Tables

[PDM Master Table](#)

PDM_MXAGE

PDM Maximum Dosing Age (Days)

a four-character numeric column that indicates the maximum age (in days) to which the dosing information applies. PDM_MXAGE works in conjunction with PDM Minimum Age ([PDM_MNAGE](#)) to express an age range specified for a particular dose. The first example in the following table shows that PDM_MNAGE works in conjunction with PDM_MXAGE to express the age range from 42 days old to 179 days old.

Example—PDM_MXAGE and associated columns

PDM_MNAGE	PDM_MXAGE
0042	0179
0031	4379
0090	4379

Related Tables

[PDM Master Table](#)

[PDM Weight/Age Table](#)

PDM_MXD

PDM Maximum Daily Dose Strength Quantity

a 13-character numeric column that provides the quantitative value for the maximum pediatric daily dose usually expressed in metric strength units (such as MG, MCG, G). PDM_MXD must be used in conjunction with the PDM Maximum Daily Dose Strength Units ([PDM_MXDU](#)) and the PDM Units Code Description ([PDM_UNDESC](#)) columns.

The first example in the following table shows that PDM_MXD works in conjunction with PDM_MXDU and PDM_UNDESC to express the maximum daily dose of 10MG/KG/DAY.

Example—PDM_MXD and associated columns

PDM_MXD	PDM_MXDU	PDM_UNDESC
000010.000000	10	mg/kg/day
000000.200000	05	g/kg/day
000012.250000	07	mcg/kg/day

Related Tables

[PDM Master Table](#)

PDM_MXDU

PDM Maximum Daily Dose Strength Units

a two-character alphanumeric column that identifies the unit of measure used in conjunction with the PDM Maximum Daily Dose Strength Quantity (**PDM_MXD**) of the drug. These units are usually expressed as metric strength units. PDM_MXDU must be used in conjunction with PDM_MXD and the PDM Units Code Description (**PDM_UNDESC**) columns. The first example in the following table shows that PDM_MXD works in conjunction with PDM_MXDU and PDM_UNDESC to express the maximum daily dose of 10MG/KG/DAY.

Example—PDM_MXDU and associated columns

PDM_MXD	PDM_MXDU	PDM_UNDESC
000010.000000	10	mg/kg/day
000000.200000	05	g/kg/day
000012.250000	07	mcg/kg/day

Related Tables

[PDM Master Table](#)

PDM_MXU

PDM Maximum Daily Dose Units Quantity

a 13-character numeric column that provides the quantitative value for the maximum pediatric daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.). PDM_MXU must be used in conjunction with the PDM Maximum Daily Dose Units Form ([PDM_MXUF](#)) and the PDM Units Code Description ([PDM_UNDESC](#)) columns. The first example in the following table shows that PDM_MXU works in conjunction with PDM_MXUF and PDM_UNDESC to express the maximum daily dose of 1.875ML/KG/DAY.

Example—PDM_MXU and associated columns

PDM_MXU	PDM_MXUF	PDM_UNDESC
000001.875000	03	ml/kg/day
000007.000000	02	ea/day
000000.250000	01	ea/kg/day

Related Tables

[PDM Master Table](#)

PDM_MXUF

PDM Maximum Daily Dose Units Quantity

The first example in the following table shows that PDM_MXU works in conjunction with PDM_MXUF and PDM_UNDESC to express the maximum daily dose of 1.875ML/KG/DAY.

Example—PDM_MXU and associated columns

PDM_MXU	PDM_MXUF	PDM_UNDESC
000001.875000	03	ml/kg/day
000007.000000	02	ea/day
000000.250000	01	ea/kg/day

Related Tables

[PDM Master Table](#)

PDM_NTED

PDM Not-to-Exceed Daily Dose Strength Quantity

a 13-character numeric column that provides the quantitative pediatric dose value that is not to be exceeded in a day, usually expressed in metric strength units (such as MG or G). PDM_NTED must be used in conjunction with the PDM Not-to-Exceed Daily Dose Strength Units ([PDM_NTEDU](#)) and the PDM Units Code Description ([PDM_UNDESC](#)) columns. The first example in the following table shows that PDM_NTED works in conjunction with PDM_NTEDU and PDM_UNDESC to express that the daily dose is not to exceed 900MG/DAY.

Example—PDM_NTED and associated columns

PDM_NTED	PDM_NTEDU	PDM_UNDESC
000900.000000	11	mg/day
000008.000000	06	g/day
000100.000000	09	meq/day

Related Tables

[PDM Master Table](#)

PDM_NTEDU

PDM Not-to-Exceed Daily Dose Strength Units

a two-character alphanumeric column that identifies the units associated to the PDM Not-to-Exceed Daily Dose Units Quantity (**PDM_NTED**) and must be used in conjunction with the PDM Units Code Description (**PDM_UNDESC**) column. The first example in the following table shows that PDM_NTED works in conjunction with PDM_NTEDU and PDM_UNDESC to express that the daily dose is not to exceed 900MG/DAY.

Example—PDM_NTEDU and associated columns

PDM_NTED	PDM_NTEDU	PDM_UNDESC
000900.000000	11	mg/day
000008.000000	06	g/day
00100.000000	09	meq/day

Related Tables

[PDM Master Table](#)

PDM_NTEU

PDM Not-to-Exceed Daily Dose Units Quantity

a 13-character numeric column that provides the quantitative value for the pediatric daily dose expressed in units of use (such as EA for oral solids, ML for liquids, etc.) that must not be exceeded in a day. PDM_NTEU must be used in conjunction with the PDM Not-to-Exceed Daily Dose Units Form ([PDM_NTEUF](#)) and the PDM Units Code Description ([PDM_UNDESC](#)) columns. The first example in the following table shows that PDM_NTEU works in conjunction with PDM_NTEUF and PDM_UNDESC to express that the daily dose is not to exceed 168.75ML/DAY.

Example—PDM_NTEU and associated columns

PDM_NTEU	PDM_NTEUF	PDM_UNDESC
000168.750000	04	ml/day
000008.000000	06	g/day
000008.000000	02	ea/day

Related Tables

[PDM Master Table](#)

PDM_NTEUF

PDM Not-to-Exceed Daily Dose Units Form

a two-character alphanumeric column that identifies the unit of use form that must be used in conjunction with the PDM Not-to-Exceed Daily Dose Units Quantity (**PDM_NTEU**) and the PDM Units Code Description (**PDM_UNDESC**) columns. The first example in the following table shows that PDM_NTEU works in conjunction with PDM_NTEUF and PDM_UNDESC to express that the daily dose is not to exceed 168.75ML/DAY.

Example—PDM_NTEUF and associated columns

PDM_NTEU	PDM_NTEUF	PDM_UNDESC
000168.750000	04	ml/day
000008.000000	06	g/day
000008.000000	02	ea/day

Related Tables

[PDM Master Table](#)

PDM_UNDESC

PDM Units Code Description

a 30-character alphanumeric column that provides a text description for the PDM Units Code (**PDM_UNIT**).

- i** The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the **UNIT_DESC_EXPANDED** column instead of this column for ordering and patient records.

Valid Values Table

PDM_UNIT	PDM_UNDESC
14	APPLICATOR/DAY
24	EA/1.73M2/DAY
02	EA/DAY
33	EA/DOSE
29	EA/HR
01	EA/KG/DAY
31	EA/KG/DOSE
22	EA/KG/HR
06	G/DAY
26	G/HR
05	G/KG/DAY
25	G/KG/HR
12	INHALATION/DAY
08	MCG/DAY
07	MCG/KG/DAY
09	MEQ/DAY
15	MEQ/KG/DAY
18	MG/1.73M2/DAY
11	MG/DAY
28	MG/DOSE

10	MG/KG/DAY
27	MG/KG/DOSE
17	MG/KG/HR
23	ML/1.73M2/DAY
04	ML/DAY
34	ML/DOSE
30	ML/HR
03	ML/KG/DAY
32	ML/KG/DOSE
21	ML/KG/HR
36	MMU/DAY
38	MMU/KG/DAY
35	MU/DAY
37	MU/KG/DAY
13	SCOOP/DAY
16	SCOOP/KG/DAY
20	UNIT/DAY
19	UNIT/KG/DAY

Related Tables

[PDM Unit Description Table](#)

PDM_UNIT

PDM Units Code

a two-character alphanumeric column that identifies dosing units used in the Pediatric Dose Module (PDM).

Valid Values Table

PDM_UNIT	PDM_UNDESC
01	EA/KG/DAY
02	EA/DAY
03	ML/KG/DAY
04	ML/DAY
05	G/KG/DAY
06	G/DAY
07	MCG/KG/DAY
08	MCG/DAY
09	MEQ/DAY
10	MG/KG/DAY
11	MG/DAY
12	INHALATION/DAY
13	SCOOP/DAY
14	APPLICATOR/DAY
15	MEQ/KG/DAY
16	SCOOP/KG/DAY
17	MG/KG/HR
18	MG/1.73M2/DAY
19	UNIT/KG/DAY
20	UNIT/DAY
21	ML/KG/HR
22	EA/KG/HR
23	ML/1.73M2/DAY
24	EA/1.73M2/DAY

25	G/KG/HR
26	G/HR
27	MG/KG/DOSE
28	MG/DOSE
29	EA/HR
30	ML/HR
31	EA/KG/DOSE
32	ML/KG/DOSE
33	EA/DOSE
34	ML/DOSE
35	MU/DAY
36	MMU/DAY
37	MU/KG/DAY
38	MMU/KG/DAY

Related Tables[PDM Unit Description Table](#)

PEC

Patient Education Code

a six-character numeric column that supports the creation of useful, accurate educational information to help patients better understand their medical therapy. DGNAME identifies the drug or drug class. PEC and its related tables has application in all medical settings, especially outpatient and community pharmacy systems. Each drug record carries a maximum of one advisory.

Sample Valid Values Table

PEC	DGNAME
000000	NO MONOGRAPH AT THIS TIME
000100	ALLOPURINOL - ORAL
000202	HCTZ W/AMILORIDE-ORAL
000300	ASPIRIN-ORAL
000400	BELLADONNA ALK. AND BARB.-ORAL
000500	CARBAMAZEPINE-ORAL
000602	BENZODIAZEPINES(MISC.)-ORAL
000603	BENZODIAZEPINES(OTHER)-ORAL
000605	ALPRAZOLAM-ORAL
000606	CHLORDIAZEPOXIDE-ORAL
000607	CLORAZEPATE-ORAL
000608	DIAZEPAM-ORAL
000610	PRAZEPAM-ORAL
000613	OXAZEPAM-ORAL
000700	BROMOCRIPTINE-ORAL
000800	BRONchodilator-AER ORAL INHALR
000803	ISOPROTER/PHENYLEPH-AER INHLR
000806	BITOLTEROL-AEROSOL ORL INHALER
000808	ISOPROTERENOL-AER ORAL INHALER
000809	TERBUTALINE-AER ORAL INHALER

Related Tables

[GCN_SEQNO/Patient Education Code Relation Table](#)

Patient Education Master Table

PEDI_CODE

Pediatric Precaution Code

a six-character numeric column that identifies drugs and drug classes that are contraindicated or require special consideration for use in pediatric patients.

Sample Valid Values Table

PEDI_CODE	PEDI_DESC
000001	Acetaminophen (oral,rectal)
000004	Activated Charcoal_Sorbitol
000005	Acyclovir (Oral)
000006	Alclometasone Dipropionate
000009	Alprazolam
000011	Aluminum Hydroxide
000013	Amantadine
000017	Amikacin
000019	Aminoglutethimide
000020	Amiodarone (Oral)
000021	Amitriptyline
000023	Amobarbital (Sodium)
000025	Amoxapine

Related Tables

[PEDI GCN_SEQNO Link Table](#)

[PEDI ROUTED_MED_ID Link Table](#)

[Pediatric Precautions Master Table](#)

PEDI_DESC

Pediatric Precaution Description

a 34-character alphanumeric column that provides a description of the drug or drug class which the precaution applies to.

Sample Valid Values Table

PEDI_CODE	PEDI_DESC
000001	Acetaminophen (oral,rectal)
000004	Activated Charcoal_Sorbitol
000005	Acyclovir (Oral)
000006	Alclometasone Dipropionate
000009	Alprazolam
000011	Aluminum Hydroxide
000013	Amantadine
000017	Amikacin
000019	Aminoglutethimide
000020	Amiodarone (Oral)
000021	Amitriptyline
000023	Amobarbital (Sodium)
000025	Amoxapine

Related Tables

[Pediatric Precautions Master Table](#)

PEDI_MAXAG

Pediatric Precaution Age Range (Maximum Days)

a four-character numeric column that indicates the maximum age in days which a precaution applies to.

Example—PEDI_MAXAG and associated columns

PEDI_CODE	PEDI_DESC	PEDI_MAXAG
000045	Asternizole	0030
000390	Measles And Rubella Vaccine	0456

Related Tables

Pediatric Precautions Master Table

PEDI_MINAG

Pediatric Precaution Age Range (Minimum Days)

a four-character numeric column that identifies the minimum age in days which a precaution applies to.

Example—PEDI_MINAG and associated columns

PEDI_CODE	PEDI_DESC	PEDI_MINAG
000045	Astemizole	0001
000390	Measles and Rubella Vaccine	0365

Related Tables

[Pediatric Precautions Master Table](#)

PEDI_NARRATIVE

Pediatric Precaution Narrative

a 500-character alphanumeric column that describes the pediatric precaution.

Example—PEDI_NARRATIVE and associated columns

PEDI_CODE	PEDI_DESC	PEDI_NARRATIVE
000137	Chloramphenicol	Gray syndrome risk in neonates and premature infants with immature metabolic function. Monitoring recommended.
000770	Fluoxetine	Monitor growth and behavior. Possible aggression, mania, suicidal ideation. Reports of hyperkinesia, agitation, personality disorder.
000785	Xanthines (select)	Clearance may be reduced age < 1 year. Administer with caution.

Related Tables

[Pediatric Precautions Master Table](#)

PEDI_SL

Pediatric Precaution Severity Level

a one-character alphanumeric column that identifies the severity of the possible adverse effects.

Valid Values Table

PEDI_SL	PEDI_SL_DESC
1	Contraindication
2	Severe Precaution
3	Management or Monitoring Precaution

Related Tables

[DRCM Severity Level Description Table](#)

[Pediatric Precautions Master Table](#)

[PEDI Severity Level Description Table](#)

PEDI_SL_DESC

Pediatric Precaution Severity Level

a 255-character alphanumeric column that provides the text description for Pediatric Precaution Severity Level (**PEDI_SL**).

Valid Values Table

PEDI_SL	PEDI_SL_DESC
1	Contraindication
2	Severe Precaution
3	Management or Monitoring Precaution

Related Tables

[PEDI Severity Level Description Table](#)

PEMAGE

Patient Education Monograph Text Stage-of-Life Specificity Indicator

This column is not currently being used.

Related Tables

[Patient Education French Language Standard Monograph Text Table](#)

[Patient Education Standard Monograph Text Canada Brand Names Table](#)

PEMGNDR

Patient Education Monograph Text Gender Specificity Indicator

This column is not currently being used.

Related Tables

[Patient Education French Language Standard Monograph Text Table](#)

[Patient Education Standard Monograph Text Canada Brand Names Table](#)

PEMONO

Patient Education Monograph Code

a four-character numeric column that provides a cross-reference to the PEMTXTE column of the standard monograph text table. A value of "0000" indicates that there is no monograph for the associated drug. PEMONO and associated columns

Example—PEMONO and associated columns

PEMONO	PEMONOE_SN	PEMTXTEI	PEMTXTE
0001	001	Z	IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and
0001	002	Z	does NOT have all possible information about this product. This
0001	003	Z	information does not assure that this product is safe, effective,
0001	004	Z	or appropriate for you. This information is not individual
0001	005	Z	medical advice and does not substitute for the advice of your
0001	006	Z	health care professional. Always ask your health care
0001	007	Z	professional for complete information about this product and your
0001	008	Z	specific health needs.
0001	009	B	
0001	010	T	ALLOPURINOL - ORAL

Example—PEMONO and associated columns

PEMONO	PEMONOE_SN	PEMTXTEI	PEMTXTE
0002	001	Z	IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and
0002	002	Z	does NOT have all possible information about this product. This

0002	003	Z	information does not assure that this product is safe, effective,
0002	004	Z	or appropriate for you. This information is not individual
0002	005	Z	medical advice and does not substitute for the advice of your
0002	006	Z	health care professional. Always ask your health care
0002	007	Z	professional for complete information about this product and your
0002	008	Z	specific health needs.
0002	009	B	
0002	010	T	AMILORIDE/HYDROCHLOROTHIAZIDE - ORAL

Related Tables

[GCN_SEQNO/Patient Education Monograph Code Relation Table](#)

[Patient Education Master Table](#)

[Patient Education Standard Monograph Text Canada Brand Names Table](#)

PEMONOE_SN

Patient Education Text Sequence Number (Standard)

a three-character numeric column used to maintain the proper order of the FDB Standard Monograph text.

Example—PEMONOE_SN and associated columns

PEMONO	PEMONOE_SN	PEMTXTEI	PEMTXTE
0001	001	Z	IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and
0001	002	Z	does NOT have all possible information about this product. This
0001	003	Z	information does not assure that this product is safe, effective,
0001	004	Z	or appropriate for you. This information is not individual
0001	005	Z	medical advice and does not substitute for the advice of your
0001	006	Z	health care professional. Always ask your health care
0001	007	Z	professional for complete information about this product and your
0001	008	Z	specific health needs.
0001	009	B	
0001	010	T	ALLOPURINOL - ORAL
0001	011	F	(al-oh-PURE-in-ohl)

Related Tables

[Patient Education French Language Standard Monograph Text Table](#)

[Patient Education Standard Monograph Text Canada Brand Names Table](#)

PEMONOFRA

Patient Education French Language Monograph Code

a four-character numeric column that provides the code to access the monograph for a specified drug. A value of "0000" indicates that there is no monograph for the specified drug.

Example—PEMONOFRA and associated columns

PEMONOFRA	PEMONOE_SN	PEMTXTE
0003	001	IMPORTANT: COMMENT UTILISER CES RENSEIGNEMENTS: Ce document
0003	002	n'est qu'un résumé et ne fournit PAS toutes les informations
0003	003	disponibles sur ce produit. Ces renseignements ne garantissent
0003	004	pas l'innocuité ou l'efficacité de ce produit, ni qu'il s'agit du
0003	005	produit adapté à votre cas. Ils ne constituent pas un avis
0003	006	médical personnalisé et ne se substituent pas aux conseils de
0003	007	votre professionnel de la santé. Veillez à demander à votre
0003	008	professionnel de la santé de vous fournir toutes les informations
0003	009	sur ce produit et sur vos besoins spécifiques en matière de
0003	010	santé.
0003	011	
0003	012	ASPIRINE - VOIE ORALE
0003	013	
0003	014	MARQUES NOMINATIVES CONNUES: Easprin, Ecotrin
0003	015	
0003	016	INDICATIONS: L'aspirine est utilisée pour réduire la fièvre et
0003	017	soulager les douleurs légères à modérées qu'entraînent certaines

0003	018	affections comme le rhume, les courbatures musculaires, maux de
0003	019	dents et maux de tête. Elle peut également être utilisée pour
0003	020	réduire la douleur et l'inflammation liées à des problèmes de
0003	021	santé comme l'arthrite. L'aspirine est un médicament de type
0003	022	salicylé et anti-inflammatoire non stéroïdien (AINS). Son action
0003	023	consiste à bloquer l'effet d'une substance naturelle particulière
0003	024	de l'organisme de sorte à réduire la douleur et l'inflammation.

The following table demonstrates the use of the PEMTXTEI column to indicate the type of PEMTXTE associated with a specified PEMONOFRA. In this example the monograph title (T), common brand name (C), blank lines (B), warnings (W), and uses (U) are shown.

Example—PEMONOFRA, PEMTXTEI, and associated columns

PEMONOFRA	PEMONOE_SN	PEMTXTEI	PEMTXTE
0002	012	T	AMILORIDE/HYDROCHLOROTHIAZIDE - VOIE ORALE
0002	013	B	
0002	014	C	MARQUES NOMINATIVES CONNUES: Moduretic
0002	015	B	
0002	016	W	AVERTISSEMENT: Ce produit peut entraîner une hausse du taux de
0002	017	W	potassium (hyperkaliémie) dans des cas peu fréquents. Cet effet
0002	018	W	est plus susceptible de survenir chez les personnes âgées et les
0002	019	W	patients souffrant d'un trouble rénal, de diabète ou d'une grave

0002	020	W	maladie. Le taux de potassium doit être surveillé de près
0002	021	W	régulièrement pendant la prise de ce médicament. En l'absence de
0002	022	W	traitement, des niveaux très élevés de potassium peuvent
0002	023	W	quelquefois s'avérer mortels. Avertissez immédiatement votre
0002	024	W	médecin en cas d'apparition de symptômes de taux élevé de
0002	025	W	potassium dans le sang dont faiblesse musculaire, battements du
0002	026	W	coeur lents/irréguliers et engourdissement/fourmillement de la
0002	027	W	peau.
0002	028	B	
0002	029	U	INDICATIONS: Ce produit est utilisé pour traiter l'hypertension,
0002	030	U	l'insuffisance cardiaque et l'oedème (excès de liquide dans le
0002	031	U	corps). La baisse de l'hypertension artérielle permet de prévenir
0002	032	U	les attaques cérébrales, crises cardiaques et problèmes rénaux.
0002	033	U	Ce produit contient deux médicaments: l'amiloride et
0002	034	U	l'hydrochlorothiazide. Ces deux médicaments sont des diurétiques
0002	035	U	qui favorisent l'élimination de l'excès de sel et d'eau de

0002	036	U	l'organisme. Cet effet peut augmenter la quantité d'urine
0002	037	U	fabriquée par l'organisme lorsque vous commencez à prendre ce
0002	038	U	produit. L'amiloride aide également à traiter ou prévenir une
0002	039	U	chute du taux de potassium dans le sang.

Related Tables

[GCN_SEQNO/Patient Education French Monograph Code Relation Table](#)

[Patient Education French Language Standard Monograph Text Table](#)

[Patient Education Master Table](#)

PEMONOS

Patient Education Spanish Language Monograph Code

This column is not in use.

Related Tables

[Patient Education Master Table](#)

PEMTXTE

Patient Education Text (Standard)

a 76-character alphanumeric column that contains the FDB Standard Monograph text.

Example—PEMTXTE and associated columns

PEMONO	PEMONOE_SN	PEMTXTEI	PEMTXTE
0002	001	Z	IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and
0002	002	Z	does NOT have all possible information about this product. This
0002	003	Z	information does not assure that this product is safe, effective,
0002	004	Z	or appropriate for you. This information is not individual
0002	005	Z	medical advice and does not substitute for the advice of your
0002	006	Z	health care professional. Always ask your health care
0002	007	Z	professional for complete information about this product and your
0002	008	Z	specific health needs.
0002	009	B	
0002	010	T	AMILORIDE/HYDROCHLOROTHIAZIDE - ORAL

Related Tables

[Patient Education French Language Standard Monograph Text Table](#)

[Patient Education Standard Monograph Text Canada Brand Names Table](#)

PEMTXTEI

Patient Education Text Identifier (Standard)

a one-character alphanumeric column that identifies the sections contained in the Patient Education Monograph.

Valid Values Table

PEMTXTEI	Description
A	Document Information
B	Blank Line
C	Common Brand Name
D	Missed Dose
F	Phonetic Pronunciation
H	How to Use
I	Drug Interaction
M	Medical Alert
N	Notes
O	Overdose
P	Precautions
R	Storage
S	Side Effects
T	Monograph Title
U	Uses
V	Other Uses
W	Warning
Z	Disclaimer

Example—PEMTXTEI and associated columns

PEMONO	PEMONOE_SN	PEMTXTEI	PEMTXTE
0001	001	Z	IMPORTANT: HOW TO USE THIS INFORMATION: This is a summary and
0001	002	Z	does NOT have all possible information about this product. This

0001	003	Z	information does not assure that this product is safe, effective,
0001	004	Z	or appropriate for you. This information is not individual
0001	005	Z	medical advice and does not substitute for the advice of your
0001	006	Z	health care professional. Always ask your health care
0001	007	Z	professional for complete information about this product and your
0001	008	Z	specific health needs.
0001	009	B	
0001	010	T	ALLOPURINOL - ORAL
0001	011	F	(al-oh-PURE-in-ohl)

Related Tables

[Patient Education French Language Standard Monograph Text Table](#)

[Patient Education Standard Monograph Text Canada Brand Names Table](#)

PHMXCDE

Pharmex Codes

This column is not currently being used.

Related Tables

Patient Education Master Table

POEADMINSQ

POEM Administration Rate Sequence Code

a two-character numeric column that places each administration rate record in its proper order.

The resulting concatenated text for the following example is 40 minutes to 60 minutes.

Example—POEADMINSQ and associated columns

POEOSTRID	POEADMINSQ	POEADRT	POEADRTUNT	OEUNITCDE	POEDESC1
0000012830	01	00040.000	0066	0066	minute(s)
0000012830	02	00060.000	0066	0066	minute(s)

The resulting concatenated text for the following example is 30 seconds to 60 seconds:

Example—POEADMINSQ and associated columns

POEOSTRID	POEADMINSQ	POEADRT	POEADRTUNT	OEUNITCDE	POEDESC1
0000012214	01	00030.000	0071	0071	second(s)
0000012214	02	00060.000	0071	0071	second(s)

The resulting concatenated text for the following example is .5 hours to 2 hours.

Example—POEADMINSQ and associated columns

POEOSTRID	POEADMINSQ	POEADRT	POEADRTUNT	OEUNITCDE	POEDESC1
0000012643	01	00000.500	0070	0070	hour(s)
0000012643	02	00002.000	0070	0070	hour(s)

Related Tables

[POEM Administration Rate Table](#)

POEADRT

POEM Administration Rate

a nine-character numeric column that indicates the numeric representation of the drug administration rate.

Example—POEADRT and associated columns

POEOSTRID	POEADMINSQ	POEADRT	POEADRTUNT	POEUNITCDE	POEDESC1
0000012830	01	00040.000	0066	0066	minute(s)
0000012643	01	00000.500	0070	0070	hour(s)
0000020061	01	00015.000	0071	0071	second(s)

Related Tables

POEM Administration Rate Table

POEADRTUNT

POEM Administration Rate Unit Code

a four-character numeric column that links the POEM Administration Rate (**POEADRT**) to a unit of measure.

Values are defined in the POEM Description 1 (**POEDESC1**) column in the POEM Code Definition Table.

Sample Valid Values Table

POEADRTUNT	POEDESC1
0043	MG/H
0044	MG/KG/H
0221	MG/MIN
0222	MINUTE(S)
0252	HOUR(S)
0253	SECOND(S)

Related Tables

[POEM Administration Rate Table](#)

[POEM Code Definition Table](#)

POECALCREQ

POEM Calculation Required

a one-character alphanumeric column that indicates whether the dosage order contains a dose that must be calculated using additional patient information, such as weight or body surface area, prior to dispensing and patient administration.

Valid Values Table

POECALCREQ	Description
0	No
1	Yes

-  If the dose must be calculated, the POEM Low Dose Form Amount, POEM Low Dose Form Units Code, POEM High Dose Form Amount, and POEM High Dose Form Units Code fields contained within linked POEM Order String Table records are not applicable.

Related Tables

[POEM Order Set Table](#)

POECALCRTC

POEM Calculation Required Type Code

a one-character alphanumeric column that identifies the additional input required in order to calculate a specific patient dose in the Prescriber Order Entry Module (POEM).

Valid Values Table

POECALCRTC	POECALCRTC_DESC
0	Not Applicable
1	Patient Weight (Kilograms)
2	Body Surface Area (Square Meters)
3	Per Lesion
4	Per cm ² of Lesion
5	Per 1.73 m ²
6	Per "x" grams of carbohydrate

The following are examples of how the patient parameter units are used:

- **Per Lesion:** A prescriber orders Betamethasone Acetate/Betamethasone Sodium Phosphate 2 mg/lesion. The application prompts the provider to enter the total number of lesions, which is 3. The application then calculates that the total dose is 6 mg, which is the value then used for dose screening.
- **Per cm² Lesion:** A prescriber orders Aldesleukin 4 million units/cm². The application prompts the prescriber for the total surface area of the lesion. The prescriber responds with 2.75 cm². The system then calculates the total dose as 11 million units, which is the value then used for dose screening.
- **Per 1.73 m²:** A prescriber enters the patient's CrCl as 90 mL/min. The CrCl threshold for a dose screening record is specified as 70 – 90 mL/min/1.73 m². The system prompts the prescriber for the patient's Body Surface Area (BSA), which is entered as 1.5 m². The system then calculates the patient's CrCl as $(1.5 \text{ m}^2 / 1.73 \text{ m}^2) * 90 \text{ mL/min} = 78.03 \text{ mL/min}/1.73 \text{ m}^2$. This is within the threshold, so the system uses the selected record.
- **Per "x" grams of carbohydrate:** A prescriber orders Insulin Aspart Subcutaneous 0.15 units/grams of carbohydrate (gCH2O) with each meal. At meal time, it is determined that the meal the patient is about to consume contains 30 gCH2O. The application is then able to calculate that the patient should receive 4.5 units of Insulin Aspart subcutaneously, and the 4.5 units would be the value used for dose screening.

Related Tables

[POEM Calculation Required Type Code Description Table](#)

[POEM Code Definition Table](#)

POECALCRTC_DESC

POEM Calculation Required Type Code Description

a 60-character alphanumeric column that provides the text description for the POEM Calculation Required Type Code (**POECALCRTC**).

Valid Values Table

POECALCRTC	POECALCRTC_DESC
0	Not Applicable
1	Patient Weight (Kilograms)
2	Body Surface Area (Square Meters)
3	Per Lesion
4	Per cm ² of Lesion
5	Per 1.73 m ²
6	Per "x" grams of carbohydrate

The following are examples of how the patient parameter units are used:

- **Per Lesion:** A prescriber orders Betamethasone Acetate/Betamethasone Sodium Phosphate 2 mg/lesion. The application prompts the provider to enter the total number of lesions, which is 3. The application then calculates that the total dose is 6 mg, which is the value then used for dose screening.
- **Per cm² Lesion:** A prescriber orders Aldesleukin 4 million units/cm². The application prompts the prescriber for the total surface area of the lesion. The prescriber responds with 2.75 cm². The system then calculates the total dose as 11 million units, which is the value then used for dose screening.
- **Per 1.73 m²:** A prescriber enters the patient's CrCl as 90 mL/min. The CrCl threshold for a dose screening record is specified as 70 – 90 mL/min/1.73 m². The system prompts the prescriber for the patient's Body Surface Area (BSA), which is entered as 1.5 m². The system then calculates the patient's CrCl as $(1.5 \text{ m}^2/1.73 \text{ m}^2) * 90 \text{ mL/min} = 78.03 \text{ mL/min}/1.73 \text{ m}^2$. This is within the threshold, so the system uses the selected record.
- **Per "x" grams of carbohydrate:** A prescriber orders Insulin Aspart Subcutaneous 0.15 units/grams of carbohydrate (gCH2O) with each meal. At meal time, it is determined that the meal the patient is about to consume contains 30 gCH2O. The application is then able to calculate that the patient should receive 4.5 units of Insulin Aspart subcutaneously, and the 4.5 units would be the value used for dose screening.

Related Tables

[POEM Calculation Required Type Code Description Table](#)

POECLINID

POEM Clinical Context Identifier

a six-character numeric column that identifies specific clinical patient parameters in the Prescriber Order Entry Module (POEM). Currently, there is only one clinical patient parameter, which is for age. The age range for all of the dosage information in POEM is for adults between the ages of 5475 days, as shown in the POEM Minimum Range column (**POEMINRANG**), and the maximum age of 23,724 days, as shown in the POEM Maximum Range column (**POEMAXRANG**).

Valid Values Table

POECLINID	POECLINTYP_DESC	POEMINRANG	POEMAXRANG	POEDESC2
000001	Age	000005475	000023724	days

Related Tables

[POEM Context Table](#)

[POEM GCN_SEQNO POEM Source Table](#)

[POEM GCN_SEQNO Standard Order Table](#)

POECLINTYP

POEM Clinical Context Type

a two-character numeric column that identifies the clinical context for a dosage order set in the Prescriber Order Entry Module (POEM).

Valid Values Table

POECLINTYP	POECLINTYP_DESC
01	Age

Related Tables

[POEM Clinical Context Type Description Table](#)

[POEM Context Table](#)

POECLINTYP_DESC

POEM Clinical Context Type Description

a 30-character alphanumeric column that provides the text description for the POEM Clinical Context Type (POECLINTYP) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POECLINTYP	POECLINTYP_DESC
01	Age

Related Tables

[POEM Clinical Context Type Description Table](#)

POECLINVAL

POEM Clinical Context Value

a two-character alphanumeric column that contains a value that relates to the clinical context type, if required.

Valid Values Table

POECLINVAL	POECLINVAL_DESC
00	Not Applicable

Related Tables

[POEM Clinical Context Value Description Table](#)

[POEM Context Table](#)

POECLINVAL_DESC

POEM Clinical Context Value Description

a 30-character alphanumeric column that provides the text description for the POEM Clinical Context Value (**POECLINVAL**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POECLINVAL	POECLINVAL_DESC
00	Not Applicable

Related Tables

[POEM Clinical Context Value Description Table](#)

POECOCDE

POEM Country Code

a 30-character alphanumeric column that provides the text description for the POEM Country Code (**POECOCDE**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POECOCDE	POECOCDE_DESC
01	USA

Related Tables

[POEM Country Code Description Table](#)

POECOCDE_DESC

POEM Country Code Description

a 30-character alphanumeric column that provides the text description for the POEM Country Code (**POECOCDE**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POECOCDE	POECOCDE_DESC
01	USA

Related Tables

[POEM Country Code Description Table](#)

POEDESC1

POEM Description 1

a 30-character alphanumeric column that provides a text description for the unit code columns and the route columns in the **POEM Order String Table** (RPOEOSR1_ORDER_STRING).

- i** The information in this column might include dosage form =1 (**POEUNITTYP**) or unit of measure descriptions =2 (**POEUNITTYP**) considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the (**UNIT_DESC_EXPANDED**) column instead of this column for ordering and patient records.

Example—POEDESC1 and associated columns

POEUNITCDE	POEUNITTYP	POEDESC1	POEDESC2	POEDESC3
1	2	MG/DAY		
2	2	MG/KG/DAY		
3	2	MG/KG		
4	2	MG/M2/DAY		
5	2	MCG/KG/MIN		
2004	3	buccal	place	
2005	3	intraocular	inject	instill
2006	3	continuous infusion	infuse	
2011	3	intravitreal	insert	inject
2012	3	epidural	inject	infuse
3001	1	tablet	tablets	
3002	1	capsule	capsules	
3003	1	day	days	
3004	1	hour	hours	
3005	1	week	weeks	

Related Tables

[POEM Code Definition Table](#)

POEDESC2

POEM Description 2

a 20-character alphanumeric column that provides a text description for the unit code columns and the route columns in the **POEM Order String Table** (RPOEOSR1_ORDER_STRING).

Example—POEDESC2 and associated columns

POEUNITCDE	POEUNITTYP	POEDESC1	POEDESC2	POEDESC3
2063	3	ophthalmic	apply	instill
2006	3	continuous infusion	infusion	
2021	3	inhalation	inhale	
2060	3	nasal	inhale	spray
2062	3	nebulization	inhale	
3001	1	tablet	tablets	
3002	1	capsule	capsules	
3003	1	day	days	
3004	1	hour	hours	
3005	1	week	weeks	

Related Tables

[POEM Code Definition Table](#)

[POEM Order String Table](#)

POEDESC3

POEM Description 3

a 20-character alphanumeric column that provides a text description for the unit code columns and the route columns in the **POEM Order String Table** (RPOEOSR1_ORDER_STRING).

Example—PEODESC3 and associated columns

POEUNITCDE	POEUNITTYP	POEDESC1	POEDESC2	POEDESC3
2078	3	subconjunctival	insert	apply
2064	3	oral	take	chew
2012	3	epidural	inject	infuse
2048	3	intrathecal	inject	infuse
2052	3	intravenous	inject	infuse
2030	3	intracervical	insert	inject
2063	3	ophthalmic	apply	instill
2085	3	translingual	spray	place
2060	3	nasal	inhale	spray
2083	3	topical	apply	wash

Related Tables

[POEM Code Definition Table](#)

[POEM Order String Table](#)

POEDISPQTY

POEM Disposable Quantity Code

a one-character numeric column that indicates whether the POEM Unit Code (**POEUNITCDE**) can be used in calculations to determine a dispensable amount.

Valid Values Table

POEDISPQTY	Description	Definition
0	No	Do not use to calculate dispensable quantities
1	Yes	Use to calculate dispensable quantities

Related Tables

[POEM Code Definition Table](#)

POEDOSETYP

POEM Dose Type Code

a two-character alphanumeric column that identifies dosage types used to qualify a dosage in the Prescriber Order Entry Module (POEM).

Valid Values Table

POEDOSETYP	POEDOSETYP_DESC
01	Loading
02	Maintenance
03	Sup. Dose Post Dialysis
04	Prophylactic
06	Test Dose
07	Single Dose
08	Initial Dose
09	Intermediate Dose

Related Tables

[POEM Dose Type Code Description Table](#)

[POEM Order Set Table](#)

POEDOSETYP_DESC

POEM Dose Type Code

a 60-character alphanumeric column that provides the text description for the POEM Dose Type Code (**POEDOSETYP**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POEDOSETYP	POEDOSETYP_DESC
01	Loading
02	Maintenance
03	Sup. Dose Post Dialysis
04	Prophylactic
06	Test Dose
07	Single Dose
08	Initial Dose
09	Intermediate Dose

Related Tables

[POEM Dose Type Code Description Table](#)

POEHIGHD

POEM High Dose

a 13-character numeric column that indicates the value of the high dose in a dosage order. The POEHIGHD column works together with the POEM High Dose Units Code (**POEHIGHDU**).

In the following example, the resulting text for a dosage order is 2 MG/M2, where “2” is the high dose value and “MG/M2” is the high dose unit of measure.

Example 1—POEHIGHD and associated columns

POEHIGHD	POEHIGHDU	POEDESC1
0000000000002	0054	MG/M2

In the following example, the resulting text for a dosage order is 2 MG, where “2” is the high dose value and “MG” is the high dose unit of measure.

Example 2—POEHIGHD and associated columns

POEHIGHD	POEHIGHDU	POEDESC1
0000000000002	0028	MG

Related Tables

[POEM Order String Table](#)

POEHIGHDFA

POEM High Dose Form Amount

a seven-character numeric column that indicates the value of the high dose form amount in a dosage order. The POEHIGHDFA column works together with the POEM High Dose Form Units Code (**POEHIGHDFU**) column.

In the following example, the resulting text for a dosage order is 1 tablet, where “1” is the high dose form amount value and “tablet” is the dosage form unit.

Example 1—POEHIGHDFA and associated columns

POEHIGHDFA	POEHIGHDFU	POEDESC1
0000001	3001	tablet

In the following example, the resulting text for a dosage order is 2 tablets, where “2” is the high dose form amount value and “tablets” is the dosage form unit.

Example 2—POEHIGHDFA and associated columns

POEHIGHDFA	POEHIGHDFU	POEDESC2
0000002	3001	tablets

In situations where no upper dosage range is applicable or the dose requires the prescriber to calculate an exact dose, the POEHIGHDFA is zero.

Related Tables

POEM Order String Table

POEHIGHDFU

POEM High Dose Form Units Code

a four-character numeric column that identifies the high dose form unit, such as tablet or capsule. The POEHIGHDFU column works together with the POEM High Dose Form Amount (**POEHIGHDFA**) column, which provides the amount for the high dose form for a dosage order.

The POEHIGHDFU column contains a unit code which identifies from which table row in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the dosage form unit is retrieved. For example, if the POEHIGHDFU column contains 3001, the dosage form unit is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code (**POEUNITCDE**) 3001.

If POEHIGHDFA is a 1, retrieve POEDESC1 from the RPOECD1_DEFINITION table. POEDESC1 always contains the singular version of the dosage form unit. If the POEHIGHDFA is a 2 or more, retrieve POEDESC2 from the RPOECD1_DEFINITION table. POEDESC2 always contains the plural version of the dosage form unit.

Sample Valid Values Table

POEHIGHDFU	POEDESC1	POEDESC2
3001	tablet	tablets
3002	capsule	capsules
3006	milliliter	milliliters
3007	suppository	suppositories
3008	teaspoonful	teaspoonsful
3009	patch	patches
3010	puff	puffs
3014	tablespoonful	tablespoonsful
3015	applicatorful	applicatorsful
3016	spray	sprays
3017	drop	drops
3018	caplet	caplets
3019	piece of gum	pieces of gum
3020	packet	packets
3021	scoop	scoops
3022	inch	inches
3023	sachet	sachets

3024	pastille	pastilles
3025	pellet	pellets
3026	vaginal insert	vaginal inserts
3027	ophthalmic insert	ophthalmic inserts

Related Tables[POEM Order String Table](#)[POEM Code Definition Table](#)

POEHIGHDR

POEM High Duration

a three-character numeric column that indicates the high duration value for length of therapy. The POEHIGHDR column works together with the POEM High Duration Units Code (**POEHIGHDRU**) column.

In the following example, the resulting text for a dosage order is 21 days, where “21” is the high duration and “days” is the high duration dosage form unit.

Example 1—POEHIGHDR and associated columns

POEHIGHDR	POEHIGHDRU	POEDESC2
021	3003	days

In the following example, the resulting text for a dosage order is 10 days, where “10” is the high duration and “days” is the high duration dosage form unit.

Example 2—POEHIGHDR and associated columns

POEHIGHDR	POEHIGHDRU	POEDESC2
010	3003	days

Related Tables

[POEM Order String Table](#)

POEHIGHDRU

POEM High Duration Units Code

a four-character numeric column that identifies the high duration length of therapy dosage form unit, such as day or hour. The POEHIGHDRU column works together with the POEM High Duration (**POEHIGHDR**) column, which provides the amount for the high duration for a dosage order.

The POEHIGHDRU column contains a unit code which identifies from which table row in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the dosage form unit is retrieved. For example, if the POEHIGHDRU contains 3003, the dosage form unit is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code (**POEUNITCDE**) 3003.

If the POEHIGHDR is a 1, retrieve **POEDESC1**, from the RPOECD1_DEFINITION table. POEDESC1 always contains the singular version of the dosage form unit. If the **POEHIGHDR** is a 2 or more, retrieve **POEDESC2**, from the RPOECD1_DEFINITION table. POEDESC2 always contains the plural version of the dosage form unit.

Sample Valid Values Table

POEHIGHDRU	POEDESC1	POEDESC2
3003	day	days
3004	hour	hours
3005	week	weeks
3011	month	months
3012	minute	minutes
3013	year	years

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POEHIGHDU

POEM High Dose Units Code

a four-character numeric column that indicates the high dose unit of measure, such as G or MG. The POEHIGHDU column works together with the POEM High Dose ([POEHIGHHD](#)) column, which provides the value for the high dose for a dosage order.

The POEHIGHDU column contains a unit code which identifies from which table row in the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) the unit of measure description is retrieved. For example, if the POEHIGHDU contains 0028, the unit of measure description is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code ([POEUNITCDE](#)) 0028.

Always retrieve [POEDESC1](#) from the RPOECD1_DEFINITION table for the dosage unit of measure. POEDESC1 is the only column populated for unit of measure columns.

Sample Valid Values Table

POEHIGHDU	POEDESC1
0001	MG/DAY
0002	MG/KG/DAY
0003	MG/KG
0005	MCG/KG/MIN
0008	MCG/DAY
0009	MCG/MIN
0010	U/KG
0017	MG/H
0018	MG/KG/H
0019	MCG/KG
0028	MG
0029	G
0032	U
0033	MCG
0034	CM
0036	IN
0041	ML
0049	ML/KG

0054	MG/M2
0055	G/M2/DAY
0056	PAT/DAY
0057	MMU/M2/DAY
0058	MMU/DAY
0059	MMU/KG
0060	MMU/KG/DAY
0061	MMU
0065	MG/MIN
0067	MEQ
0073	MG/LB
0074	MILI U/MIN
0078	MCG/KG/H
0086	NG/KG/MIN

Related Tables[POEM Order String Table](#)[POEM Code Definition Table](#)

POEHIGHF

POEM High Frequency

a three-character numeric column that indicates the frequency of doses per time period. The POEHIGHF column works together with the POEM High Interval column (**POEHIGHI**) and POEM High Interval Units Code column (**POEHIGHIU**).

In the following example, the resulting text for a dosage order is 4 times per day.

Example 1—POEHIGHF and associated columns

POEHIGHF	POEHIGHI	POEHIGHIU	POEDESC1
004	001	3003	day

- ⓘ For POEHIGHF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1.

In the following example, the resulting text for a dosage order is every 6 hours.

Example 2—POEHIGHF and associated columns

POEHIGHF	POEHIGHI	POEHIGHIU	POEDESC2
001	006	3004	hours

- ⓘ For POEHIGHF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1.

Related Tables

[POEM Order String Table](#)

POEHIGHI

POEM High Interval

a three-character numeric column that indicates the high numeric value for each dosing interval time period. The POEHIGHI column works together with the POEM High Frequency column ([POEHIGHF](#)) and POEM High Interval Units Code column ([POEHIGHIU](#)).

In the following example, the resulting text for a dosage order is 4 times per day.

Example 1—POEHIGHI and associated columns

POEHIGHF	POEHIGHI	POEHIGHIU	POEDESC1
004	001	3003	day

- ⓘ For POEHIGHI, if the value is 1, display the words times per instead of the value 1; for interval values greater than 1, display the value as shown in Example 2.

In the following example, the resulting text for a dosage order is every 6 hours.

Example 2—POEHIGHI and associated columns

POEHIGHF	POEHIGHI	POEHIGHIU	POEDESC2
001	006	3004	hours

- ⓘ For POEHIGHF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1.

Related Tables

[POEM Order String Table](#)

POEHIGHIU

POEM High Interval Units Code

a four-character numeric column that defines the high interval time period dosage form, such as day or hours. The POEHIGHIU column works together with the POEM High Interval (**POEHIGHI**) column, which provides the value for the high interval for a dosage order.

The POEHIGHIU column contains a unit code which identifies from which table row in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the time period dosage form is retrieved. For example, if the POEHIGHIU contains 3005, the dosage form unit is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code (**POEUNITCDE**,) 3005.

If the POEHIGHI column contains a 1, retrieve POEDESC1 from the RPOECD1_DEFINITION table. **POEDESC1** always contains the singular version of the unit. If the POEHIGHI column contains a 2 or higher, retrieve **POEDESC2** from the RPOECD1_DEFINITION table. POEDESC2 always contains the plural version of the unit.

Sample Valid Values Table

POEHIGHIU	POEDESC1	POEDESC2
3003	day	days
3004	hour	hours
3005	week	weeks
3011	month	months
3012	minute	minutes
3013	year	years

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POELANGCDE

POEM Language Code

a two-character numeric column that identifies the language in which orders are written in the Prescriber Order Entry Module (POEM).

Valid Values Table

POELANGCDE	POELANGCDE_DESC
01	English

Related Tables

[POEM Code Definition Table](#)

[POEM Language Code Description Table](#)

[POEM Text Table](#)

POELANGCDE_DESC

POEM Language Code Description

a 30-character alphanumeric column that provides the text description for the POEM Language Code (**POELANGCDE**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POELANGCDE	POELANGCDE_DESC
01	English

Related Tables

[POEM Language Code Description Table](#)

POELOWD

POEM Low Dose

a 13-character numeric column that indicates the value of the low dose in a dosage order. The POELOWD column works together with the POEM LOW Dose Units Code ([POELOWDU](#)).

In the following example, the resulting text for a dosage order is 20 MG, where 20 is the low dose value and MG is the low dose unit of measure.

Example 1—POELOWD and associated columns

POELOWD	POELOWDU	POEDESC1
0000000000020	0028	MG

In the following example, the resulting text for a dosage order is 88 MCG, where 88 is the low dose value and MCG is the low dose unit of measure.

Example 2—POELOWD and associated columns

POELOWD	POELOWDU	POEDESC1
0000000000088	0033	MCG

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POELOWDFA

POEM Low Dose Form Amount

a seven-character numeric column that indicates the value of the low dose form amount in a dosage order. The POELOWDFA column works together with the POEM LOW Dose Form Units Code (**POELOWDFU**) column.

In the following example, the resulting text for a dosage order is 1 capsule, where “1” is the low dose form amount value and “capsule” is the dosage form unit.

Example 1—POELOWDFA and associated columns

POELOWDFA	POELOWDFU	POEDESC1
0000001	3002	capsule

In the following example, the resulting text for a dosage order is 2 tablets, where “2” is the low dose form amount value and “tablets” is the dosage form unit.

Example 2—POELOWDFA and associated columns

POELOWDFA	POELOWDFU	POEDESC2
0000002	3001	tablets

- i In situations where the dose requires the prescriber to calculate an exact dose, the POELOWDFA is zero.

Related Tables

[POEM Order String Table](#)

POELOWDFU

POEM Low Dose Form Units Code

a four-character numeric column that identifies the dosage form unit, such as tablet or capsule. The POELOWDFU column works together with the POEM Low Dose Form Amount ([POELOWDFA](#)) column, which provides the amount for a dosage low dose form for a dosage order.

The POELOWDFU column contains a unit code which identifies from which table row in the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) the dosage form unit is retrieved. For example, if the POELOWDFU contains 3001, the dosage form unit is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code ([POEUNITCDE](#)) 3001.

If the POELOWDFA is a 1, retrieve [POEDESC1](#) from the RPOECD1_DEFINITION table. POEDESC1 always contains the singular version of the dosage form unit. If the POELOWDFA is a 2 or more, retrieve [POEDESC2](#) from the RPOECD1_DEFINITION table. POEDESC2 always contains the plural version of the dosage form unit.

Sample Valid Values Table

POELOWDFU	POEDESC1	POEDESC2
3001	tablet	tablets
3002	capsule	capsules
3006	milliliter	milliliters
3007	suppository	suppositories
3008	teaspoonful	teaspoonsful
3009	patch	patches
3010	puff	puffs
3014	tablespoonful	tablespoonsful
3015	applicatorful	applicatorsful
3016	spray	sprays
3017	drop	drops
3018	caplet	caplets
3019	piece of gum	pieces of gum
3020	packet	packets
3021	scoop	scoops
3022	inch	inches
3023	sachet	sachets

3024	pastille	pastilles
3025	pellet	pellets
3026	vaginal insert	vaginal inserts
3027	ophthalmic insert	ophthalmic inserts

Related Tables[POEM Order String Table](#)[POEM Code Definition Table](#)

POELOWDR

POEM Low Duration

a three-character numeric column that indicates the low duration value for length of therapy. The POELOWDR column works together with the POEM Low Duration Units Code (**POELOWDRU**) column.

In the following example, the resulting text for a dosage order is 14 days, where “14” is the low duration and “days” is the low duration dosage form.

Example 1—POELOWDR and associated columns

POELOWDR	POELOWDRU	POEDESC2
014	3003	days

In the following example, the resulting text for a dosage order is 8 days, where “8” is the low duration and “days” is the low duration dosage form.

Example 2—POELOWDR and associated columns

POELOWDR	POELOWDRU	POEDESC2
008	3003	days

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POELOWDRU

POEM Low Duration Units Code

a four-character numeric column that identifies the low duration dosage form, such as day or hour. The POELOWDRU column works together with the POEM Low Duration (**POELOWDR**) column, which provides the amount for the low duration for a dosage order.

The POELOWDRU column contains a unit code which identifies from which table row in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the duration dosage form is retrieved. For example, if the POELOWDRU contains 3001, the duration dosage form is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code (**POEUNITCDE**) 3001.

If the POELOWDR is a 1, retrieve **POEDESC1** from the RPOECD1_DEFINITION table. POEDESC1 always contains the singular version of the duration dosage form. If the POELOWDR is a 2 or more, retrieve **POEDESC2** from the RPOECD1_DEFINITION table. POEDESC2 always contains the plural version of the duration dosage form.

Sample Valid Values Table

POELOWDRU	POEDESC1	POEDESC2
3003	day	days
3004	hour	hours
3005	week	weeks
3011	month	months
3012	minute	minutes
3013	year	years

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POELOWDU

POEM Low Dose Units Code

a four-character numeric column that indicates the low dose unit of measure, such as G or MG. The POELOWDU column works together with the POEM Low Dose (**POELOWD**) column, which provides the value for the low dose for a dosage order.

The POELOWDU column contains a unit code which identifies from which table row in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the low dose unit of measure is retrieved. For example, if the POELOWDU contains 0028, the unit of measure is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code (**POEUNITCDE**) 0028.

Always retrieve POEDESC1 from the RPOECD1_DEFINITION table for unit of measure columns. POEDESC1 is the only column populated for unit of measure columns.

Sample Valid Values Table

POELOWDU	POEDESC1
0001	MG/DAY
0002	MG/KG/DAY
0003	MG/KG
0005	MCG/KG/MIN
0008	MCG/DAY
0009	MCG/MIN
0010	U/KG
0017	MG/H
0018	MG/KG/H
0019	MCG/KG
0028	MG
0029	G
0032	U
0033	MCG
0034	CM
0036	IN
0041	ML
0049	ML/KG

0054	MG/M2
0055	G/M2/DAY
0056	PAT/DAY
0057	MMU/M2/DAY
0058	MMU/DAY
0059	MMU/KG
0060	MMU/KG/DAY
0061	MMU
0065	MG/MIN
0067	MEQ
0073	MG/LB
0074	MILI U/MIN
0078	MCG/KG/H
0086	NG/KG/MIN

Related Tables[POEM Order String Table](#)[POEM Code Definition Table](#)

POELOWF

POEM Low Frequency

a three-character numeric column that indicates the low frequency of doses per time period. The POELOWF column works together with the POEM Low Interval column ([POELOWI](#)) and POEM Low Interval Units Code column ([POELOWIU](#)).

In the following example, the resulting text for a dosage order is 4 times per day.

Example 1—POELOWF and associated columns

POELOWF	POELOWI	POELOWIU	POEDESC1
004	001	3003	day

- ⓘ For POELOWI, if the value is 1, display the words times per instead of the value 1; for interval values greater than 1, display the value as shown in Example 2.

In the following example, the resulting text for a dosage order is every 6 hours.

Example 2—POELOWF and associated columns

POELOWF	POELOWI	POELOWIU	POEDESC2
001	006	3004	hours

- ⓘ For POELOWF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1..

Related Tables

[POEM Order String Table](#)

POELOWI

POEM Low Interval

a three-character numeric column that indicates the low value linked to each dosing interval time period. The POELOWI column works together with the POEM Low Frequency column (**POELOWF**) and POEM Low Interval Units Code column (**POELOWIU**).

In the following example, the resulting text for a dosage order is 4 times per day.

Example 1—POELOWI and associated columns

POELOWF	POELOWI	POELOWIU	POEDESC1
004	001	3003	day

- ⓘ For POELOWI, if the value is 1, display the words times per instead of the value 1; for interval values greater than 1, display the value as shown in Example 2.

In the following example, the resulting text for a dosage order is every 6 hours.

Example 2—POELOWI and associated columns

POELOWF	POELOWI	POELOWIU	POEDESC2
001	006	3004	hours

- ⓘ For POELOWF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1.

Related Tables

[POEM Order String Table](#)

POELOWIU

POEM Low Interval Units Code

a four-character numeric column that identifies the interval unit, such as day or hour. The POELOWIU column works together with the POEM Low Interval (**POELOWI**) column, which provides the value for the low interval for a dosage order.

The POELOWIU column contains a unit code which indicates from which table row in the **POEM Code Definition Table** (RPOECD1_DEFINITION) the interval unit must be retrieved. For example, if the POELOWIU contains 3005, the interval unit is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code (**POEUNITCDE**) 3005.

If the POELOWI column contains a 1, POEDESC1 must be retrieved for the dosage order's interval unit. POEDESC1 always contains the singular version of the interval unit. If the POELOWI column contains a 2 or higher, POEDESC2 must be retrieved for the dosage order's interval unit. POEDESC2 always contains the plural version of the interval unit.

Sample Valid Values Table

POELOWIU	POEDESC1	POEDESC2
3003	day	days
3004	hour	hours
3005	week	weeks
3011	month	months
3012	minute	minutes
3013	year	years

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POEMAXRANG

POEM Maximum Range

a nine-character numeric column that contains the maximum value for the POEM Clinical Context Type (**POECLINTYP**).

Currently, there is only one clinical patient parameter, which is for age. The age range for all of the dosage information in POEM is for adults between the ages of 5475 days, as shown in the POEM Minimum Range column (**POEMINRANG**), and the maximum age of 23,724 days, as shown in the **POEMAXRANG** column.

Example—**POEMAXRANG** and associated columns

POECLINTYP	POECLINTYP_DESC	POEMINRANG	POEMAXRANG
01	Age	000005475	000023724

Related Tables

[POEM Context Table](#)

POEMINRANG

POEM Minimum Range

a nine-character numeric column that contains the minimum value for the POEM Clinical Context Type ([POECLINTYP](#)).

Currently, there is only one clinical patient parameter, which is for age. The age range for all of the dosage information in POEM is for adults between the ages of 5475 days, as shown in the POEMINRANG, and the maximum age of 23,724 days, as shown in the POEM Maximum Range ([POEMAXRANG](#)) column.

Example—POEMINRANG and associated columns

POECLINTYP	POECLINTYP_DESC	POEMINRANG	POEMAXRANG
01	Age	000005475	000023724

Related Tables

[POEM Context Table](#)

POEMLCNVRS

POEM ML Conversion

a four-character numeric column that provides a means to convert the number of dosage form units in terms of milliliters for POEM Unit Codes (**POEUNITCDE**) representative of fluid volume units of measure.

Sample Valid Values Table

POEUNITCDE	POEMLCNVRS
3006	0001
3008	0005
3014	0015

-  This field is zero-filled when the POEM ML Conversion (**POEMLCNVRS**) is not applicable for the related POEM Unit Code (**POEUNITCDE**).

Related Tables

[POEM Code Definition Table](#)

POEOSETID

POEM Order Set Identifier

a six-character numeric column that uniquely identifies a POEM Order String Identifier (**POEOSTRID**) in the Prescriber Order Entry Module (POEM).

Sample Valid Values Table

POEOSETID	POEOSTRID
000001	0000000001
000002	0000000002
000003	0000000003
000004	0000000004
000005	0000000005
000006	0000000006
000007	0000000007
000008	0000000008
000014	0000000014
000016	0000000016
000017	0000000017
000018	0000000018
000019	0000000019
000020	0000000020
000023	0000000023
000024	0000000024
000025	0000000025
000026	0000000026
000027	0000000027
000030	0000000030

Related Tables

[POEM GCN_SEQNO POEM Source Table](#)

[POEM GCN_SEQNO Standard Order Table](#)

[POEM Order Set Table](#)

POEOSTRID

POEM Order String Identifier

a ten-character numeric column that links specific dosage information such as parsed data and Order String Text to the POEM Order Set Identifier (**POEOSETID**) in the Prescriber Order Entry Module (POEM).

Sample Valid Values Table

POEOSETID	POEOSTRID
000001	0000000001
000002	0000000002
000003	0000000003
000004	0000000004
000005	0000000005
000006	0000000006
000007	0000000007
000008	0000000008
000014	0000000014
000016	0000000016
000017	0000000017
000018	0000000018
000019	0000000019
000020	0000000020
000023	0000000023
000024	0000000024
000025	0000000025
000026	0000000026
000027	0000000027
000030	0000000030

Related Tables

[POEM Administration Rate Table](#)

[POEM Order Set Table](#)

[POEM Order String Table](#)

POEM Order String to Text Table

POEOSTRSEQ

POEM Order String Sequence Code

a two-character numeric column that sequences all possible POEM Order String Identifiers (**POEOSTRID**) related to a POEM Order Set Identifier (**POEOSETID**). Currently, there is only a one-to-one relationship between the POEOSTRID and the POEOSETID, so the POEOSTRSEQ column contains only the value 01.

Related Tables

[POEM Order Set Table](#)

POEPERDAYC

POEM Per Day Conversion

a nine-character numeric column that indicates how many times a particular unit code occurs in a 24-hour period. POEPERDAYC is useful in calculating prescription quantities for dispensing.

Sample Valid Values Table

POEUNITCDE	POEPERDAYC
3003	000000001
3004	000000024
3005	0000.1429
3011	0000.0333
3012	000001440
3013	0000.0027
3021	000000001
3022	000000001

-  This column is zero-filled when the POEM Per Day Conversion is not applicable for a related POEM Unit Code ([POEUNITCDE](#)).

Related Tables

[POEM Code Definition Table](#)

POERANGUNT

POEM Range Unit Code

a four-character numeric column that identifies the interval unit for the POEM Minimum Range (**POEMINRANG**) and POEM Maximum Range (**POEMAXRANG**) columns for the clinical context parameters in the Prescriber Order Entry Module (POEM).

The POERANGUNT column contains a unit code and retrieves its definition from the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) based on the unit code it contains. Currently, there is only one clinical context parameter in POEM, for age, and the POERANGUNT column contains only one unit code: 3003. The POERANGUNT column must retrieve its definition from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code ([POEUNITCDE](#)) 3003.

Example—POERANGUNT and associated columns

POERANGUNT	POEUNITCDE	POEDESC1	POEDESC2
3003	3003	day	days

Related Tables

[POEM Context Table](#)

[POEM Code Definition Table](#)

POEROUTE

POEM Route Code

a four-character numeric column that indicates the route of administration for a dosage string in the Prescriber Order Entry Module (POEM).

The POEROUTE column contains a unit code which identifies from which table row in the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) the route is retrieved. For example, if the POEROUTE contains 2064, the route is retrieved from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code ([POEUNITCDE](#)) 2064.

Always retrieve POEDESC1 from the RPOECD1_DEFINITION table for the route. POEDESC1 always contains the route.

Sample Valid Values Table

POEROUTE	POEUNITCDE	POEDESC1
2004	2004	buccal
2006	2006	continuous infusion
2012	2012	epidural
2021	2021	inhalation
2025	2025	intra-articular
2028	2028	intra-cavernosal
2030	2030	intracervical
2040	2040	intramuscular
2048	2048	intrathecal
2052	2052	intravenous
2058	2058	mucous membrane
2060	2060	nasal
2062	2062	nebulization
2063	2063	ophthalmic
2064	2064	oral
2066	2066	otic
2074	2074	rectal
2078	2078	subconjunctival
2079	2079	subcutaneous

2081	2081	sublingual
2083	2083	topical
2084	2084	transdermal
2085	2085	translingual
2086	2086	urethral
2087	2087	vaginal

Related Tables[POEM Order String Table](#)

POEROUTE_D

POEM Route Description Code

a one-character numeric column that identifies an appropriate route description for dosage orders in the Prescriber Order Entry Module (POEM).

Valid Values Table

POEROUTE_D	POEROUTE_D_DESC
2	Use description 2 (POEDESC2)
3	Use description 3 (POEDESC3)

Related Tables

[POEM Order String Table](#)

[POEM Route Description Code Description Table](#)

POEROUTE_D_DESC

POEM Route Description Code Description

a 60-character alphanumeric column that provides the text description for the POEM Route Description Code (**POEROUTE_D**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POEROUTE_D	POEROUTE_D_DESC
2	Use description 2 (POEDESC2)
3	Use description 3 (POEDESC3)

Related Tables

[POEM Route Description Code Description Table](#)

[POEM Order String Table](#)

POESHIGHF

POEM Second High Frequency

This column is not currently being used.

Related Tables

[POEM Order String Table](#)

POESHIGHI

POEM Second High Interval

This column is not currently being used.

Related Tables

[POEM Order String Table](#)

POESHIGHIU

POEM Second High Interval Units Code

This column is not currently being used.

Related Tables

[POEM Order String Table](#)

POESLOWF

POEM Second Low Frequency

a three-character numeric column that indicates the lowest numeric value when expressing a second frequency range of dose per time period. The POESLOWF column works together with the POEM Low Interval column ([POESLOWI](#)) and POEM Low Interval Units Code column ([POESLOWIU](#)).

In the following example, the resulting text for a dosage order is 4 times per day.

Example 1—POESLOWF and associated columns

POESLOWF	POESLOWI	POESLOWIU	POEDESC1
004	001	3003	day

- ⓘ For POESLOWI, if the value is 1, display the words times per instead of the value 1; for interval values greater than 1, display the value as shown in Example 2.

In the following example, the resulting text for a dosage order is every 6 hours.

Example 2—POESLOWF and associated columns

POESLOWF	POESLOWI	POESLOWIU	POEDESC2
001	006	3004	hours

- ⓘ For POESLOWF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1.

Related Tables

[POEM Order String Table](#)

POESLOWI

POEM Second Low Interval

a three-character numeric column that describes the numeric value for the period of time that each dose is to be administered when paired with the POEM Second Low Frequency ([POESLOWF](#)). The POESLOWI column works together with the POESLOWF and POEM Second Low Interval Units Code column ([POESLOWIU](#)).

In the following example, the resulting text for a dosage order is 4 times per day.

Example 1—POESLOWI and associated columns

POESLOWF	POESLOWI	POESLOWIU	POEDESC1
004	001	3003	day

- i For POESLOWI, if the value is 1, display the words times per instead of the value 1; for interval values greater than 1, display the value as shown in Example 2.

In the following example, the resulting text for a dosage order is every 6 hours.

Example 2—POESLOWI and associated columns

POESLOWF	POESLOWI	POESLOWIU	POEDESC2
001	006	3004	hours

- i For POESLOWF, if the value is 1, display the word every instead of the value 1; for frequency values greater than 1, display the value, as shown in Example 1.

Related Tables

[POEM Order String Table](#)

POESLOWIU

POEM Second Low Interval Units Code

a four-character numeric column that identifies the POEM Second Low Interval time unit of measure, such as day or hour. The POESLOWIU column works together with the POEM Second Low Interval (POESLOWI) column, which provides the value for the low interval for a dosage order.

The POESLOWIU column contains a unit code which identifies from which table row in the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) the low interval unit is retrieved. For example, if the POESLOWIU column contains 3003, it retrieves the interval unit from the table row in the RPOECD1_DEFINITION table beginning with the POEM Unit Code ([POEUNITCDE](#)) 3003.

If POESLOWI column contains a 1, retrieve POEDESC1 from the RPOECD1_DEFINITION table. POEDESC1 always contains the singular version of the interval unit. If the POESLOWI column contains a 2 or higher, retrieve POEDESC2 from the RPOECD1_DEFINITION table. POEDESC2 always contains the plural version of the interval unit.

Sample Valid Values Table

POESLOWIU	POEDESC1	POEDESC2
3003	day	days
3004	hour	hours
3005	week	weeks
3011	month	months
3012	minute	minutes
3013	year	years

Related Tables

[POEM Order String Table](#)

[POEM Code Definition Table](#)

POETEXTCDE

POEM Text Code

a ten-character numeric column that identifies lines of text that reside in the POEM Text Table. The POEM Text Code can identify a single line of text or multiple lines of text.

Sample Valid Values Table

POETEXTCDE	POETXLINE
0000000001	take 1 capsule (200mg) by oral route 2 times per day
0000000002	take 2 capsules (400mg) by oral route 2 times per day
0000000003	take 2 capsules (400mg) by oral route once daily
0000000004	take 3 capsules (600mg) by oral route 2 times per day
0000000005	take 3 capsules (600mg) by oral route once daily
0000000006	take 1 capsule (400mg) by oral route once daily
0000000007	take 1 capsule (400mg) by oral route 2 times per day
0000000008	take 2 capsules (800mg) by oral route once daily
0000000014	take 10 milliliters (320mg) by oral route every 4 hours as needed
0000000016	take 20 milliliters (640mg) by oral route every 4 hours as needed
0000000017	take 1 tablet (325mg) by oral route every 4 hours as needed
0000000018	take 2 tablets (650mg) by oral route every 4 hours as needed
0000000019	take 1 tablet (325mg) by oral route every 6 hours as needed
0000000020	take 2 tablets (650mg) by oral route every 6 hours as needed
0000000023	take 2 capsules (1,000mg) by oral route every 6 hours as needed
0000000024	take 1 tablet (500mg) by oral route every 4 hours as needed
0000000025	take 1 tablet (500mg) by oral route every 6 hours as needed
0000000026	take 2 tablets (1,000mg) by oral route every 6 hours as needed
0000000027	take 1 tablet (650mg) by oral route every 4 hours as needed
0000000030	take 1 capsule by oral route every 4 hours as needed not to exceed 6 capsules per day

0000000032	take 1 tablet by oral route every 4 hours as needed not to exceed 6 tablets per day
0000000034	take 1 capsule by oral route every 4 hours as needed not to exceed 4 capsules per day
0000000036	take 1 tablet by oral route every 4 hours as needed not to exceed 4 tablets per day

Related Tables

[POEM Order String to Text Table](#)

[POEM Text Table](#)

POETEXTTYP

POEM Text Type

a two-character numeric column that identifies the type of order text used in the Prescriber Order Entry Module (POEM).

Valid Values Table

POETEXTTYP	POETEXTTYP_DESC
80	Order String Text
90	Additional Instructions

Related Tables

[POEM Order String to Text Table](#)

[POEM Text Type Code Description Table](#)

POETEXTTYP_DESC

POEM Text Type Description

a 30-character alphanumeric column that provides the text description associated with the POEM Text Type (POETEXTTYP) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POETEXTTYP	POETEXTTYP_DESC
90	Additional Instructions
80	Order String Text

Related Tables

[POEM Text Type Code Description Table](#)

POETXLINE

POEM Text Line

a 70-character alphanumeric column that provides the text description for the POEM Text Code (**POETEXTCDE**).

Sample Valid Values Table

POETEXTCDE	POETXLINE
0000000001	take 1 capsule (200mg) by oral route 2 times per day
0000000002	take 2 capsules (400mg) by oral route 2 times per day
0000000003	take 2 capsules (400mg) by oral route once daily
0000000004	take 3 capsules (600mg) by oral route 2 times per day
0000000005	take 3 capsules (600mg) by oral route once daily
0000000006	take 1 capsule (400mg) by oral route once daily
0000000007	take 1 capsule (400mg) by oral route 2 times per day
0000000008	take 2 capsules (800mg) by oral route once daily
0000000014	take 10 milliliters (320mg) by oral route every 4 hours as needed
0000000016	take 20 milliliters (640mg) by oral route every 4 hours as needed
0000000017	take 1 tablet (325mg) by oral route every 4 hours as needed
0000000018	take 2 tablets (650mg) by oral route every 4 hours as needed
0000000019	take 1 tablet (325mg) by oral route every 6 hours as needed
0000000020	take 2 tablets (650mg) by oral route every 6 hours as needed
0000000023	take 2 capsules (1,000mg) by oral route every 6 hours as needed
0000000024	take 1 tablet (500mg) by oral route every 4 hours as needed
0000000025	take 1 tablet (500mg) by oral route every 6 hours as needed
0000000026	take 2 tablets (1,000mg) by oral route every 6 hours as needed
0000000027	take 1 tablet (650mg) by oral route every 4 hours as needed
0000000030	take 1 capsule by oral route every 4 hours as needed not to exceed 6 capsules per day

0000000032	take 1 tablet by oral route every 4 hours as needed not to exceed 6 tablets per day
0000000034	take 1 capsule by oral route every 4 hours as needed not to exceed 4 capsules per day
0000000036	take 1 tablet by oral route every 4 hours as needed not to exceed 4 tablets per day

Related Tables**POEM Text Table**

POETXTNUM

POEM Text Line Number

a three-character numeric column that keeps multiple segments of text in the POEM Text Line (**POETXLINE**) in the proper relative order.

Sample Valid Values Table

POETEXTCDE	POETXTNUM	POETXLINE
0000000025	001	take 1 tablet (500mg) by oral route every 6 hours as needed
0000000026	001	take 2 tablets (1,000mg) by oral route every 6 hours as needed
0000000027	001	take 1 tablet (650mg) by oral route every 4 hours as needed
0000000030	001	take 1 capsule by oral route every 4 hours as needed not to exceed 6 c
0000000030	002	apsules per day
0000000032	001	take 1 tablet by oral route every 4 hours as needed not to exceed 6 ta
0000000032	002	blets per day
0000000034	001	take 1 capsule by oral route every 4 hours as needed not to exceed 4 c
0000000034	002	apsules per day
0000000036	001	take 1 tablet by oral route every 4 hours as needed not to exceed 4 ta
0000000036	002	blets per day

Related Tables

[POEM Text Table](#)

POETXTSTRL

POEM Text String Location Code

a one-character numeric column that identifies the position of the text in a dosing order generated from the Prescriber Order Entry Module (POEM).

Valid Values Table

POETXTSTRL	POETXTSTRL_DESC
0	Not applicable
1	Text positioned after route
2	Text positioned after frequency
3	Text positioned at the end of the string

Related Tables

[POEM Order String to Text Table](#)

[POEM Text String Location Code Description Table](#)

POETXTSTRL_DESC

POEM Text String Location Code Description

a 60-character alphanumeric column that provides the text description for the POEM Text String Location Code (**POETXTSTRL**) in the Prescriber Order Entry Module (POEM).

Valid Values Tables

POETXTSTRL	POETXTSTRL_DESC
0	Not applicable
1	Text positioned after frequency
2	Text positioned after route
3	Text positioned at the end of the string

Related Tables

[POEM Text String Location Code Description Table](#)

POEUNITCDE

POEM Unit Code

a four-character numeric column that identifies the description for the dosage form unit (for example, tablet) or a dose amount unit (for example, mg) used in POEM. In POEM, this four-character numeric column identifies the unique key into the [POEM Code Definition Table](#) (RPOECD1_DEFINITION) and the table row from which unit code columns and the route columns in the [POEM Order String Table](#) (RPOEOSR1_ORDER_STRING) must retrieve their definitions.

Example—POEUNITCDE and associated columns

POEUNITCDE	POEDESC1	POEDESC2	POEDESC3
2063	ophthalmic	apply	instill
2006	continuous infusion	infuse	
2021	inhalation	inhale	
2060	nasal	inhale	spray
2062	nebulization	inhale	
2012	epidural	inject	infuse
2025	intra-articular	inject	
2028	intra-cavernosal	inject	
2040	intramuscular	inject	
2048	intrathecal	inject	infuse
2052	intravenous	inject	infuse
2030	intracervical	insert	inject
2074	rectal	insert	
2066	otic	instill	
2004	buccal	place	
2058	mucous	membrane	
2064	oral	take	chew

Related Tables

[POEM Code Definition Table](#)

POEUNITTYP

POEM Unit Code Type

a one-character numeric column that identifies the type of unit used in the Prescriber Order Entry Module (POEM).

Valid Values Table

POEUNITTYP	POEUNITTYP_DESC
1	Dosage form
2	Unit of measure
3	Route of administration

Related Tables

[POEM Code Definition Table](#)

[POEM Unit Code Type Description Table](#)

POEUNITTYP_DESC

POEM Unit Code Type Description

a 30-character alphanumeric column that provides the text description for the POEM Unit Type Code (**POEUNITTYP**) in the Prescriber Order Entry Module (POEM).

Valid Values Table

POEUNITTYP	POEUNITTYP_DESC
1	Dosage form
3	Route of administration
2	Unit of measure

Related Tables

[POEM Unit Code Type Description Table](#)

PRED_CODE

INDM Predictor Code

a one-character alphanumeric column that contains a numerical value assigned to each indication in the Indications Module (INDM), implying the likelihood that the drug is being used to manage the indication specified. The text descriptions for PRED_CODE are provided by [PREDDESC](#).

Valid Values Table

PRED_CODE	PREDDESC	Description
1	Certain	The drug is used to manage the medical condition greater than 90% of the time per pharmacist clinical judgment. If someone comes into a pharmacy with a prescription for this drug, you would know for what the drug was prescribed without asking the patient.
2	Somewhat Certain	The drug is used to manage the medical condition 30% to 90% of the time per pharmacist clinical judgment.
3	Uncertain	The drug is used to manage the medical condition less than 30% of the time per pharmacist clinical judgment.

The INDM Predictor Code uses a subjective scoring system to assign numerical values. The utility of the INDM Predictor Code is the ability to infer or prioritize the indications for a known drug when patient diagnoses are unavailable. Often this information is unknown but can be inferred to a somewhat reasonable extent by the indications of the drugs that the patient is taking. For example, a patient taking glyburide would almost certainly have diabetes mellitus.

Related Tables

[INDM Master Table](#)

[INDM Predictor Code Description Table](#)

PREDDESC

INDM Predictor Code Description

a 90-character alphanumeric column that provides the text description associated with an INDM Predictor Code (**INDCTS**) in the Indications Module (INDM).

Valid Values Table

PRED_CODE	PREDDESC	Description
1	Certain	The drug is used to manage the medical condition greater than 90% of the time per pharmacist clinical judgment. If someone comes into a pharmacy with a prescription for this drug, you would know for what the drug was prescribed without asking the patient.
2	Somewhat Certain	The drug is used to manage the medical condition 30% to 90% of the time per pharmacist clinical judgment.
3	Uncertain	The drug is used to manage the medical condition less than 30% of the time per pharmacist clinical judgment.

Related Tables

[INDM Predictor Code Description Table](#)

PREG_BOXED_WARNING_IND

Pregnancy Precautions Boxed Warning (BXW) Indicator

a one-character alphanumeric column that indicates whether the drug has a pregnancy related boxed warning (BXW).

Valid Values Table

PREG_BOXED_WARNING_IND	Description
1	Boxed warning section of the manufacturer drug labeling contains pregnancy/fetal/neonatal information
0	No pregnancy/fetal/neonatal information present in the boxed warnings section of the manufacturer drug labeling

Related Tables

[Pregnancy Precautions Master Table](#)

PREG_CODE

Pregnancy Precautions Code

a six-character numeric column that identifies drugs and drug classes that are contraindicated or require special consideration for use in pregnant patients.

Sample Valid Values Table

PREG_CODE	PREG_DESC
000001	DIGITALIS
000004	CAFFEINE
000005	THEOPHYLLINE
000006	AMINOPHYLLINE
000007	DYPHYLLINE
000008	OXTRIPTYLLINE (CHOLINE THEOPHYLLINATE)
000009	INAMRINONE
000010	QUINIDINE
000011	PROCAINAMIDE HYDROCHLORIDE
000012	DISOPYRAMIDE PHOSPHATE
000013	TOCAINIDE HYDROCHLORIDE
000015	FLECAINIDE
000016	AMIODARONE
000017	MEXILITENE HYDROCHLORIDE
000019	HYDRALAZINE
000020	DIAZOXIDE (ORAL SYSTEMIC)
000021	DIAZOXIDE (PARENTERAL SYSTEMIC)
000022	MINOXIDIL (ORAL)

Related Tables

[PREG GCN_SEQNO Link Table](#)

[PREG Monograph Line Table](#)

[PREG Reference Link Table](#)

[PREG ROUTED_MED_ID Link Table](#)

[Pregnancy Precautions Master Table](#)

PREG_DESC

Pregnancy Precautions Description

a 41-character alphanumeric column that provides a description of the drug or drug class to which the precaution applies.

Sample Valid Values Table

PREG_CODE	PREG_DESC
000001	DIGITALIS
000004	CAFFEINE
000005	THEOPHYLLINE
000006	AMINOPHYLLINE
000007	DYPHYLLINE
000008	OXTRIPHYLLINE (CHOLINE THEOPHYLLINATE)
000009	INAMRINONE
000010	QUINIDINE
000011	PROCAINAMIDE HYDROCHLORIDE
000012	DISOPYRAMIDE PHOSPHATE
000013	TOCAINIDE HYDROCHLORIDE
000015	FLECAINIDE
000016	AMIODARONE
000017	MEXILITENE HYDROCHLORIDE
000019	HYDRALAZINE
000020	DIAZOXIDE (ORAL SYSTEMIC)
000021	DIAZOXIDE (PARENTERAL SYSTEMIC)
000022	MINOXIDIL (ORAL)

Related Tables

[Pregnancy Precautions Master Table](#)

PREG_MONO_ID

Pregnancy Monograph Identifier

an eight-character numeric column that identifies a pregnancy precaution monograph.

Example—PREG_MONO_ID and Associated Columns

PREG_MONO_ID	PREG_MONO_SECT ION_CD	PREG_MONO_SN	PREG_CODE	PREG_MONO_LINE
496	1	1	496	Not recommended in pre-eclampsia and other pregnancy-induced hypertension.

Related Tables

[PREG Monograph Line Table](#)

PREG_MONO_LINE

Pregnancy Monograph Line

a 500-character alphanumeric column that provides the pregnancy precaution monograph text.

Example—PREG_MONO_LINE and Associated Columns

PREG_MONO_ID	PREG_MONO_SECT ION_CD	PREG_MONO_SN	PREG_CODE	PREG_MONO_LINE
496	1	1	496	Not recommended in pre-eclampsia and other pregnancy-induced hypertension.

Related Tables

[PREG Monograph Line Table](#)

PREG_MONO_SECTION_CD

Pregnancy Monograph Section Code

a four-character numeric column that indicates the type of content in the related monograph text column. This allows users to select certain sections of the pregnancy precaution monograph to present according to their business needs.

Valid Values Table

PREG_MONO_SECTION_CD	PREG_MONO_SECTION_CD_DESC
1	Fetal Risk Summary
2	Clinical Considerations
3	Data
4	Pregnancy Exposure Registry

Related Tables

[PREG Monograph Line Table](#)

[PREG Monograph Section Description Table](#)

PREG_MONO_SECTION_CD_DESC

Pregnancy Monograph Section Code Description

a 50-character alphanumeric column that provides a text description of the Pregnancy Monograph Section Code ([PREG_MONO_SECTION_CD](#)).

Valid Values Table

PREG_MONO_SECTION_CD	PREG_MONO_SECTION_CD_DESC
1	Fetal Risk Summary
2	Clinical Considerations
3	Data
4	Pregnancy Exposure Registry

Related Tables

[PREG Monograph Section Description Table](#)

PREG_MONO_SN

Pregnancy Monograph Sequence Number

a two-character numeric column that indicates the sequence in which to display the lines of a pregnancy precaution monograph.

Example—PREG_MONO_SN and Associated Columns

PREG_MONO_ID	PREG_MONO_SECT ION_CD	PREG_MONO_SN	PREG_CODE	PREG_MONO_LINE
496	1	1	496	Not recommended in pre-eclampsia and other pregnancy-induced hypertension.

Related Tables

[PREG Monograph Line Table](#)

PREG_PRCTN

Pregnancy Precautions Narrative

an 80-character alphanumeric column that describes a precaution.

Example - PREG_PRCTN and Associated Columns

PREG_CODE	PREG_DESC	PREG_PRCTN
000060	TERPIN HYDRATE (ELIXIR)	NOT RECOMMENDED DUE TO HIGH PERCENTAGE OF ALCOHOL
000069	POTASSIUM IODIDE	220 MCG RDA IN PREG;FETAL GOITER/HYPOTHYROIDISM POSS W/HIGH DOSE & LONG-TERM USE

Related Tables

[Pregnancy Precautions Master Table](#)

PREG_REFERENCE_ACCESSIONED_DT

Pregnancy Reference Accessed Date

an eight-character numeric column that provides the date on which a source was referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_AUTHOR

Pregnancy Reference Author

a 255-character alphanumeric column that provides the list of authors of a source referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_EDITION

Pregnancy Reference Edition

a 80-character alphanumeric column that provides the edition of a source referenced when compiling a pregnancy precaution.

Related Tables

PREG Reference Table

PREG_REFERENCE_ID

Pregnancy Reference Identifier

an eight-character numeric column that identifies a source referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Link Table](#)

[PREG Reference Table](#)

PREG_REFERENCE_ISSUE

Pregnancy Reference Issue

a 80-character alphanumeric column that provides the issue information for a source which was referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_ISSUE_DT_TXT

Pregnancy Reference Issue Date Text

a 25-character alphanumeric column that provides the date a source referenced when compiling a pregnancy precaution was issued. The Pregnancy Reference Issue Date Text may contain a specific year; month and year; or day, month, and year.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_LOCATION

Pregnancy Reference Location

an 80-character alphanumeric column that provides the location of a source referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_NAME

Pregnancy Reference Name

a 255-character alphanumeric column that provides the name of a journal or reference used when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_PAGE

Pregnancy Reference Page

an 80-character alphanumeric column that provides the pages where a source is located within a journal or reference which was used when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_PUBMED_ID

Pregnancy Reference PUBMED Identifier

a 50-character alphanumeric column that provides the PUBMED identifier for a source which was referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_SUPPLEMENT_NBR

Pregnancy Reference Supplement Number

an 80-character alphanumeric column that provides the supplement number information for a source referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_TITLE

Pregnancy Reference Title

a 255-character alphanumeric column that provides the title of a source referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_TYPE_DESC

Pregnancy Reference Type Description

a 255-character alphanumeric column that provides the text description of the Pregnancy Reference Type Identifier ([PREG_REFERENCE_TYPE_ID](#)).

Valid Values Table

PREG_REFERENCE_TYPE_ID	PREG_REFERENCE_TYPE_DESC
1	Manufacturers Information
2	Human Study
3	Case Report
4	Guideline
5	Reference Textbook
6	FDA MedWatch
7	Meeting Abstract
8	In vitro/Animal Study
9	Review Article
10	AHFS
11	Unclassified
12	Monograph (e.g. Zynx)
13	Website

Related Tables

[PREG Reference Type Table](#)

PREG_REFERENCE_TYPE_ID

Pregnancy Reference Type Identifier

an eight-character numeric column that identifies a type of source referenced to compile a pregnancy precaution.

Valid Values Table

PREG_REFERENCE_TYPE_ID	PREG_REFERENCE_TYPE_DESC
1	Manufacturers Information
2	Human Study
3	Case Report
4	Guideline
5	Reference Textbook
6	FDA MedWatch
7	Meeting Abstract
8	In vitro/Animal Study
9	Review Article
10	AHFS
11	Unclassified
12	Monograph (e.g. Zynx)
13	Website

Related Tables

[PREG Reference Table](#)

[PREG Reference Type Table](#)

PREG_REFERENCE_URL_TEXT

Pregnancy Reference URL Text

a 500-character alphanumeric column that provides the URL text for a source which was referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_REFERENCE_VOLUME

Pregnancy Reference Volume

an 80-character alphanumeric column that provides the volume information for a source referenced when compiling a pregnancy precaution.

Related Tables

[PREG Reference Table](#)

PREG_SL

Pregnancy Precautions Severity Level

a one-character alphanumeric column that identifies the severity of the possible adverse effects. The PREG_SL can contain an FDA-assigned pregnancy risk category or a FDB-assigned severity level.

Valid Values Table

PREG_SL	PREG_SLSN	PREG_SLD
1	01	Contraindicated.
1	02	Fetal/neonatal risk outweighs maternal treatment benefit.
1	03	Available human and/or animal data suggest significant
1	04	fetal/neonatal risk.
3	01	Known or theoretical risk.
3	02	For some indications, maternal treatment benefit may
3	03	outweigh fetal/neonatal risk. Available human and/or anima
3	04	data suggest fetal/neonatal risk or there is a considerable
3	05	theoretical risk.
4	01	Assess risk/benefit.
4	02	Human data limited or unavailable. Maternal treatment may
4	03	outweigh the unclear fetal/neonatal risk. Animal data
4	04	suggest no fetal/neonatal risk.
5	01	No known fetal/neonatal risk.
5	02	Available human and/or animal data suggest no risk.
A	01	No known fetal/neonatal risk.
A	02	Adequate and well-controlled studies in pregnant women have
A	03	failed to demonstrate a risk to the fetus in 1st trimester

A	04	of pregnancy (and no evidence of risk in later trimesters).
B	01	No known animal fetal risk. Unknown human fetal risk.
B	02	Animal studies have failed to demonstrate a risk to the
B	03	fetus but there are no well-controlled studies in pregnant
B	04	women; or animal reproduction studies have shown an adverse
B	05	effect (other than decrease in fertility), but adequate and
B	06	well-controlled studies in pregnant women have failed to
B	07	demonstrate a risk to the fetus during the first trimester
B	08	of pregnancy (and there is no evidence of a risk in later
B	09	trimesters).
C	01	Unknown human fetal risk; assess risk/benefit.
C	02	Animal studies have shown adverse effect on fetus but no
C	03	well-controlled studies in humans: potential benefits may
C	04	warrant use in pregnant women despite potential risks; or no
C	05	animal reproduction studies and no adequate and
C	06	well-controlled studies in humans.
D	01	Known or theoretical risk.
D	02	Positive evidence of human fetal risk based on investigation
D	03	or marketing information but potential benefits may warrant
D	04	use of drug in pregnant women despite potential risks.

X	01	Contraindicated.
X	02	Studies in animals or humans have shown fetal abnormalities
X	03	and/or there is positive evidence of fetal risk based on
X	04	investigational or marketing information and risks involved
X	05	in use of drug in pregnant women clearly outweigh potential
X	06	benefits.

Related Tables[PREG Severity Level Description Table](#)[Pregnancy Precautions Master Table](#)

PREG_SLD

Pregnancy Precautions Severity Level Description

a 60-character alphanumeric column that provides the text description of the Pregnancy Precautions Severity Level (**PREG_SL**). This column can contain an FDA-assigned Pregnancy Category description or an FDB-assigned Pregnancy Category description.

Valid Values Table

PREG_SL	PREG_SLSN	PREG_SLD
1	01	Contraindicated.
1	02	Fetal/neonatal risk outweighs maternal treatment benefit.
1	03	Available human and/or animal data suggest significant
1	04	fetal/neonatal risk.
3	01	Known or theoretical risk.
3	02	For some indications, maternal treatment benefit may
3	03	outweigh fetal/neonatal risk. Available human and/or anima
3	04	data suggest fetal/neonatal risk or there is a considerable
3	05	theoretical risk.
4	01	Assess risk/benefit.
4	02	Human data limited or unavailable. Maternal treatment may
4	03	outweigh the unclear fetal/neonatal risk. Animal data
4	04	suggest no fetal/neonatal risk.
5	01	No known fetal/neonatal risk.
5	02	Available human and/or animal data suggest no risk.
A	01	No known fetal/neonatal risk.
A	02	Adequate and well-controlled studies in pregnant women have

A	03	failed to demonstrate a risk to the fetus in 1st trimester
A	04	of pregnancy (and no evidence of risk in later trimesters).
B	01	No known animal fetal risk. Unknown human fetal risk.
B	02	Animal studies have failed to demonstrate a risk to the
B	03	fetus but there are no well-controlled studies in pregnant
B	04	women; or animal reproduction studies have shown an adverse
B	05	effect (other than decrease in fertility), but adequate and
B	06	well-controlled studies in pregnant women have failed to
B	07	demonstrate a risk to the fetus during the first trimester
B	08	of pregnancy (and there is no evidence of a risk in later
B	09	trimesters).
C	01	Unknown human fetal risk; assess risk/benefit.
C	02	Animal studies have shown adverse effect on fetus but no
C	03	well-controlled studies in humans: potential benefits may
C	04	warrant use in pregnant women despite potential risks; or no
C	05	animal reproduction studies and no adequate and
C	06	well-controlled studies in humans.
D	01	Known or theoretical risk.
D	02	Positive evidence of human fetal risk based on investigation
D	03	or marketing information but potential benefits may warrant

D	04	use of drug in pregnant women despite potential risks.
X	01	Contraindicated.
X	02	Studies in animals or humans have shown fetal abnormalities
X	03	and/or there is positive evidence of fetal risk based on
X	04	investigational or marketing information and risks involved
X	05	in use of drug in pregnant women clearly outweigh potential
X	06	benefits.

Related Tables**PREG Severity Level Description Table**

PREG_SLSN

Pregnancy Precautions Severity Level Description Text Sequence Number

a two-character numeric column that indicates the sequence to display the lines of a description.

Valid Values Table

PREG_SL	PREG_SLSN	PREG_SLD
1	01	Contraindicated.
1	02	Fetal/neonatal risk outweighs maternal treatment benefit.
1	03	Available human and/or animal data suggest significant
1	04	fetal/neonatal risk.
3	01	Known or theoretical risk.
3	02	For some indications, maternal treatment benefit may
3	03	outweigh fetal/neonatal risk. Available human and/or anima
3	04	data suggest fetal/neonatal risk or there is a considerable
3	05	theoretical risk.
4	01	Assess risk/benefit.
4	02	Human data limited or unavailable. Maternal treatment may
4	03	outweigh the unclear fetal/neonatal risk. Animal data
4	04	suggest no fetal/neonatal risk.
5	01	No known fetal/neonatal risk.
5	02	Available human and/or animal data suggest no risk.
A	01	No known fetal/neonatal risk.
A	02	Adequate and well-controlled studies in pregnant women have
A	03	failed to demonstrate a risk to the fetus in 1st trimester

A	04	of pregnancy (and no evidence of risk in later trimesters).
B	01	No known animal fetal risk. Unknown human fetal risk.
B	02	Animal studies have failed to demonstrate a risk to the
B	03	fetus but there are no well-controlled studies in pregnant
B	04	women; or animal reproduction studies have shown an adverse
B	05	effect (other than decrease in fertility), but adequate and
B	06	well-controlled studies in pregnant women have failed to
B	07	demonstrate a risk to the fetus during the first trimester
B	08	of pregnancy (and there is no evidence of a risk in later
B	09	trimesters).
C	01	Unknown human fetal risk; assess risk/benefit.
C	02	Animal studies have shown adverse effect on fetus but no
C	03	well-controlled studies in humans: potential benefits may
C	04	warrant use in pregnant women despite potential risks; or no
C	05	animal reproduction studies and no adequate and
C	06	well-controlled studies in humans.
D	01	Known or theoretical risk.
D	02	Positive evidence of human fetal risk based on investigation
D	03	or marketing information but potential benefits may warrant
D	04	use of drug in pregnant women despite potential risks.

X	01	Contraindicated.
X	02	Studies in animals or humans have shown fetal abnormalities
X	03	and/or there is positive evidence of fetal risk based on
X	04	investigational or marketing information and risks involved
X	05	in use of drug in pregnant women clearly outweigh potential
X	06	benefits.

Related Tables[PREG Severity Level Description Table](#)

PREV_DAM_ALRGN_GRP

Previous DAM Specific Allergen Group Code

a six-character numeric column that identifies the previous value for a replaced DAM_ALRGN_GRP.

The following example table shows Allergen Groups with their previous and replacement values, a description, and the date the replacement became effective.

Sample Valid Values Table

REPL_DAM_ALRGN_GRP	PREV_DAM_ALRGN_GRP	DAM_ALRGN_GRP REPL_EFF_DT
900116	900218	20040723
900207	900111	20040723
900385	000156	20040723

Related Tables

[DAM Specific Allergen Group Code History Table](#)

PREV_DAM_ALRGN_XSENSE

Previous DAM Cross-Sensitive Allergen Group Code

a four-character numeric column that identifies the previous value for a replaced DAM_ALRGN_XSENSE.

The following example table shows Cross-Sensitive Allergen Groups with their previous and replacement values, a description, and the date the replacement became effective.

Sample Valid Values Tables

REPL_DAM_ALRGN_XSENSE	PREV_DAM_ALRGN_XSENSE	DAM_ALRGN_XSENSE_REPL_EFF_DT
0152	0246	20040723
0236	0147	20040723
0413	0065	20040723

Related Tables

[DAM Cross-Sensitive Allergen Group Code History Table](#)

PREV_HIC_SEQN

Previous Hierarchical Ingredient Code Sequence Number

a six-character numeric column that identifies the previous value for a replaced Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**).

The following example table shows ingredients with their previous and replacement values, and the date the replacement became effective.

Example - PREV_HIC_SEQN and associated columns

REPL_HIC_SEQN	PREV_HIC_SEQN	HIC_REPL_EFF_DT
000766	000746	19980810
000766	002330	19980810
000846	000734	19970430

Related Tables

[Ingredient Replacement History Table](#)

PREV_MEDID

Previously Associated Medication ID

an eight-character numeric column that identifies the MED Medication ID (**MEDID**) that has been replaced by the Currently Associated Medication ID (**CURR_MEDID**) within one of the following associations:

- an IDC/MEDID association identified within the MED IDC to Medication ID Cross-Reference Table (RMEDIDC0_IDC_MEDID_LINK)
- an IDC/MEDID association identified within the MED IDC to Generic Medication ID Cross-Reference Table (RMEDIGM0_IDC_GEN_MEDID)

The text description is provided by the Previously Associated Medication ID Description (**PREV_MEDID_DESC**) column.

Example—PREV_MEDID and associated columns

IDC	PREV_MEDID	PREV_MEDID_DESC	CURR_MEDID	CURR_MEDID_DESC	PRODUCTION_DATE
03000029608	509911	Brevicon 1 mg-35 mcg Tab	509907	Brevicon 1/35 (21) 1 mg-35 mcg Tab	20080904
03000025683	509911	Brevicon 1 mg-35 mcg Tab	509909	Brevicon 1/35 (21) 1 mg-35 mcg Tab	20080904
03000029607	509910	Brevicon 0.5 mg-35 mcg Tab	556084	Brevicon 0.5/35 (28) 0.5 mg-35 mcg Tab	20080904
03000029606	509910	Brevicon 0.5 mg-35 mcg Tab	556085	Brevicon 0.5/35 (28) 0.5 mg-35 mcg Tab	20080904
03000055342	505376	505376 Pantoprazole 40 mg IV Solution	550537	pantoprazole sodium 40 mg IV Solution	20071213
03000026076	510367	510367 Clindamycin 900 mg/6 mL IV	502451	clindamycin phosphate 150 mg/mL Injection	200712

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

PREV_MEDID_DESC

Previously Associated Medication ID Description

a 70-character alphanumeric column that provides the text description of a Previously Associated Medication ID ([PREV_MEDID](#)).

Example—PREV_MEDID_DESC and associated columns

PREV_MEDID	PREV_MEDID_DESC
509911	Brevicon 1 mg-35 mcg Tab
505376	Pantoprazole 40 mg IV Solution

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

PREV_MEDID_NAME_SOURCE_CD

Previously Associated Medication ID Name Source Code

a one-character alphanumeric column that provides the Medication Name Source Code (**MED_NAME_SOURCE_CD**) value of a Previously Associated Medication ID (**PREV_MEDID**).

The description text is retrieved by joining the PREV_MEDID_NAME_SOURCE_CD to the MED_SOURCE_CD in the **MED Medication Name Source Code Description Table** (RMINAMD1_NAME_SRC_DESC).

Example—PREV_MEDID_NAME_SOURCE_CD and associated columns

PREV_MEDID	PREV_MEDID_NAME_SOURCE_CD	MED_NAME_SOURCE_CD_DESC
509911	1	Packaged Product Name
505376	2	Generically Named Packaged Product

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

PREV_MEDID_NEW_STATUS_CD

Previously Associated Medication ID New Status Code

a one-character alphanumeric column that provides the current status of a MEDID that has changed its association to a given IDC. With the Previously Associated Medication ID Old Status Code (**PREV_MEDID_OLD_STATUS_CD**), these values indicate how a previously associated MEDID's status has changed.

The description text is retrieved by joining the PREV_MEDID_NEW_STATUS_CD to the MED_STATUS_CD in the [MED Status Code Description Table \(RMISCD1_STATUS_DESC\)](#).

Example—PREV_MEDID_NEW_STATUS_CD and associated columns

PREV_MEDID	PREV_MEDID_OLD_STATUS_CD	MED_STATUS_CD_DESC	PREV_MEDID_NEW_STATUS_CD	MED_STATUS_CD_DESC
509911		Active	1	Replaced
509910		Active	1	Replaced

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

PREV_MEDID_OLD_STATUS_CD

Previously Associated Medication ID Old Status Code

a one-character alphanumeric column that provides the previous status of a MEDID that has changed its association to a given IDC. With the Previously Associated Medication ID New Status Code ([PREV_MEDID_NEW_STATUS_CD](#)), these values indicate how a previously associated MEDID's status has changed.

The description text is retrieved by joining the PREV_MEDID_NEW_STATUS_CD to the MED_STATUS_CD in the [MED Status Code Description Table](#) (RMISCD1_STATUS_DESC).

Example—PREV_MEDID_OLD_STATUS_CD and associated columns

PREV_MEDID	PREV_MEDID_OLD_STATUS_CD	MED_STATUS_CD_DESC	PREV_MEDID_NEW_STATUS_CD	MED_STATUS_CD_DESC
509911	0	Active	1	Replaced
509910	0	Active	1	Replaced

Related Tables

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Relation History Table](#)

PRODUCT_ADD_DATE

Product Add Date

an eight-character numeric column that provides the date that a packaged product was added to the MedKnowledge database. The date format is YYYYMMDD.

Related Tables

[Product Master Table](#)

PRODUCT_BRAND_NAME

Product Brand Name

a 60-character alphanumeric column that provides the brand name for a packaged product.

Example—PRODUCT_BRAND_NAME and associated columns

PRODUCT_ID	PRODUCT_BRAND_NAM E	PRODUCT_LABEL_NAME	GCN_SEQNO
497703	Vitamin B6	Vitamin B6 100 mg tablet	2421
497843	Biotin	Biotin 50 mcg tablet	2290
498507	Folic Acid	Folic Acid 1 mg tablet	2366
499252	Folic Acid	Folic Acid 0.4 mg tablet	2364

Related Tables

Product Master Table

PRODUCT_FORMAT

Product Format

a nine-character alphanumeric column that identifies the number of units in the packaged product from which the pharmacist dispenses; for example, 100+20 tablets, 1000 capsules, or 25X10 ml vials. PRODUCT_FORMAT is used with the Package Size Unit (**PACKAGE_SIZE_UNIT**) column.

The following example shows the Product Format and Package Size Unit for selected products; the first product (Vitamin C 500 MG Tablet) is packaged as 100 tablets plus 20 bonus tablets per container.

Example—**PRODUCT_FORMAT** and associated columns

GTIN	LN	PRODUCT_FORMAT	PACKAGE_SIZE_UNIT
00063806510173	VITAMIN C 500 MG TABLET	100+20	EACH
00076290102530	SYNTHROID 0.025 MG TABLET	100	EACH
00882135488829	SODIUM CHLORIDE 0.9% VIAL	25X10	ML

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PRODUCT_LABEL_NAME

Product Label Name

a 100-character alphanumeric column that provides the label name for a packaged product.

Example—PRODUCT_LABEL_NAME and associated columns

PRODUCT_ID	PRODUCT_LABEL_NAME	GCN_SEQNO	LABELER_ID
497703	Vitamin B6 100 mg table	2421	7817
497843	Biotin 50 mcg tablet	2290	11632
498507	Folic Acid 1 mg tablet	2366	10331
499252	Folic Acid 0.4 mg tablet	2364	8169

Related Tables

[Product Master Table](#)

PRODUCT_OBSOLETE_DATE

Product Obsolete Date

an eight-character numeric column that provides the obsolete date of a packaged product, if applicable. The date format is YYYYMMDD.

- i Products that are no longer produced or have been discontinued by a manufacturer may still be available for sale.

Related Tables

[Product Master Table](#)

PRODUCT_PACKAGE_COUNT

Product Package Count

an eight-character numeric column that provides the package count for a packaged product.

Related Tables

[Product Master Table](#)

PRODUCT_PACKAGE_DESC

Product Package Description

a 25-character alphanumeric column that provides the text description for a packaged product.

Related Tables

[Product Master Table](#)

PRODUCT_PACKAGE_UNIT

Product Package Unit

a one-character alphanumeric column that indicates the type of billing unit to be used for a packaged product.

PRODUCT_PACKAGE_UNIT is used with the PRODUCT_PACKAGE_SIZE column.

Valid Values Table

PRODUCT_PACKAGE_UNIT	Description
1	each (tablets)
2	milliliters (liquids)
3	grams (solids)

Related Tables

[Product Master Table](#)

PRODUCT_TYPE_DESC

Product Type Description

a 60-character alphanumeric column that provides the text description for an FDB Product Type (**PRODUCT_TYPE_ID**).

Valid Values Table

PRODUCT_TYPE_ID	PRODUCT_TYPE_DESC
1	Packaged Product
2	Manufactured Product

Related Tables

[Product Type Table](#)

PRODUCT_TYPE_ID

Product Type Identifier

an eight-character numeric column that identifies the type of an FDB Product.

Valid Values Table

PRODUCT_TYPE_ID	PRODUCT_TYPE_DESC
1	Packaged Product
2	Manufactured Product

Related Tables

[Product Master Link Table](#)

[Product Master Table](#)

[Product Type Table](#)

PRODUCTION_DATE

Production Date

an eight-character numeric column that provides the weekly MedKnowledge production date in which one of the following associations has changed:

- IDC to MED Medication ID ([MEDID](#)) association within the [MED IDC to Medication ID Cross-Reference Table](#) (RMEDIDC0_IDC_MEDID_LINK)
- IDC to Generic MEDID association within the [MED IDC to Generic Medication ID Cross-Reference Table](#) (RMEDIGM0_IDC_GEN_MEDID)

IDC	PRODUCTION_DATE	PREV_MEDID	CURR_MEDID
03000029608	20080904	509911	509907
03000025683	20080904	509911	509909
03000026076	20071213	510367	502451

Related Tables

[MED IDC/Generic MEDID Move History Reason Table](#)

[MED IDC/Generic MEDID Relation History Table](#)

[MED IDC/MEDID Move History Reason Table](#)

[MED IDC/MEDID Relation History Table](#)

PROXY_IND

INDM Proxy Indicator

a one-character alphanumeric column that contains the indicator assigned to each indication represented by a DxID to denote whether the given indication can be used to proxy (that is, to infer patient diagnoses). This indicator can be used as a filter for application functions that display a given drug's list of indications.

The INDM Proxy Indicator (**PROXY_IND**) identifies whether the drug indication has been added for the purpose of facilitating drug-disease (DDCM) contraindication checking and has a value of **no (N)** or **yes (Y)**. For example, many antibiotics are assigned a proxy indication of Bacterial Infection that is then utilized as an inferred patient problem when screening a new prescription for drug-disease (DDCM) contraindications.

This indicator can also be used in [Checking Inferred Patient Diagnoses for Drug-Disease Contraindications Associated with Prospective Drug Therapy](#).

Valid Values Table

PROXY_IND	Description
N	no
Y	yes

Related Tables

[INDM Master Table](#)

PST_IND_AB

Provincial Sales Tax Indicator (PST) - Alberta

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Alberta.

Valid Values Table

PST_IND_AB	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_BC

Provincial Sales Tax Indicator (PST) - British Columbia

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in British Columbia.

Valid Values Table

PST_IND_BC	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

IDDF Canada Packaged Product Master Table

PST_IND_MB

Provincial Sales Tax Indicator (PST) - Manitoba

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Manitoba.

Valid Values Table

PST_IND_MB	Description
0	not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_NB

Provincial Sales Tax Indicator (PST) - New Brunswick

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in New Brunswick.

Valid Values Table

PST_IND_NB	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_NL

Provincial Sales Tax Indicator (PST) - Newfoundland and Labrador

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Newfoundland and Labrador.

Valid Values Table

PST_IND_NL	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

IDDF Canada Packaged Product Master Table

PST_IND_NS

Provincial Sales Tax Indicator (PST) - Nova Scotia

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Nova Scotia.

Valid Values Table

PST_IND_NS	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

IDDF Canada Packaged Product Master Table

PST_IND_NT

Provincial Sales Tax Indicator (PST) - Northwest Territory

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Northwest Territory.

Valid Values Table

PST_IND_NT	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_NU

Provincial Sales Tax Indicator (PST) - Nunavut

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Nunavut.

Valid Values Table

PST_IND_NU	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_ON

Provincial Sales Tax Indicator (PST) - Ontario

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Ontario.

Valid Values Table

PST_IND_ON	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_PE

Provincial Sales Tax Indicator (PST) - Prince Edward Island

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Prince Edward Island.

Valid Values Table

PST_IND_PE	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

IDDF Canada Packaged Product Master Table

PST_IND_QC

Provincial Sales Tax Indicator (PST) - Quebec

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Quebec.

Valid Values Table

PST_IND_QC	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_SK

Provincial Sales Tax Indicator (PST) - Saskatchewan

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Saskatchewan.

Valid Values Table

PST_IND_SK	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

PST_IND_YT

Provincial Sales Tax Indicator (PST) - Yukon

a one-character numeric column that indicates whether a packaged product is subject to the Provincial sales tax in Yukon.

Valid Values Table

PST_IND_YT	Description
0	Not subject to provincial sales tax
1	Subject to provincial sales tax

Related Tables

[IDDF Canada Packaged Product Master Table](#)

R*RANGE_MAX**RANGE_MIN**REGION_LABELER_ID**RELATED_RXID**RELATED_HIC_SEQN**REN_FOOTNOTE**REN_HIAGED**REN_HICRCL**REN_HIDOSD**REN_HIDOSU**REN_HIFREQ**REN_LOAGED**REN_LOCRCL**REN_LODOSD**REN_LODOSU**REN_LOFREQ**REN_MONO_FORMAT_CD**REN_MONO_ID**REN_MONO_LINE_NUMBER**REN_MONO_LINE_TEXT**REN_MONO_SECTION_CD**REN_MX1DOS**REN_MX1DSU**REN_MXDOSD**REN_MXDOSU**REN_NTE_SINGLE_DOSE**REN_NTE_SINGLE_DOSE_UNIT_CODE**REN_SORT_ORDER*

REPL_DAM_ALRGN_GRP

REPL_DAM_ALRGN_XSENSE

REPL_HIC_SEQN

RESULT

RESULT_T

ROUTED_DOSAGE_FORM_MED_ID

ROUTED_GEN_DESC

ROUTED_GEN_ID

ROUTED_GEN_STATUS_CD

ROUTED_GEN_STATUS_CD_DESC

ROUTED_MED_ID

ROUTES_DES

RT

RT_T

RANGE_MAX

Clinical Formulation Ingredient Range Maximum

a 20-character numeric column that contains the maximum strength of an ingredient for products where the strength of the ingredient can vary by lot. Use the value in this column together with the value in the Clinical Formulation Ingredient Range Minimum ([RANGE_MIN](#)) column and the Clinical Formulation Ingredient Strength Unit of Measure Identifier ([STRENGTH_UOM_ID](#)) column to construct a complete strength range.

For example, for Clinical Formulation ID (GCN_SEQNO) 045768, the strength of ingredient Febrinogen (HIC_SEQN value 002066) can be between 75 and 115 mg.

GCN_SEQNO	HIC_SEQN	RANGE_MAX	RANGE_MIN	STRENGTH_UOM_ID
045770	002066	575	375	0
058649	009900	370	148	0
045882	002066	345	225	0
045769	002066	230	150	0
045768	002066	115	75	1

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

RANGE_MIN

Clinical Formulation Ingredient Range Maximum

a 20-character numeric column that contains the maximum strength of an ingredient for products where the strength of the ingredient can vary by lot. Use the value in this column together with the value in the Clinical Formulation Ingredient Range Minimum (**RANGE_MIN**) column and the Clinical Formulation Ingredient Strength Unit of Measure Identifier (**STRENGTH_UOM_ID**) column to construct a complete strength range.

For example for Clinical Formulation ID (**GCN_SEQNO**) 045768, the strength of ingredient Febrinogen (HIC_SEQN value 002066) can be between 75 and 115 mg.

GCN_SEQNO	HIC_SEQN	RANGE_MAX	RANGE_MIN	STRENGTH_UOM_ID
045770	002066	575	375	0
058649	009900	370	148	0
045882	002066	345	225	0
045769	002066	230	150	0
045768	002066	115	75	1

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

REGION_LABELER_ID

Region Labeler

a six-character alphanumeric column that identifies the region associated with a product labeler.

Related Tables

[Product Labeler Table](#)

RELATED_DXID

FML Related DxID

an eight-character numeric column that identifies the Disease Identifiers (**DXID**) related to either the FML Search DxID (**SEARCH_DXID**) in the FML Disease Identifier (**DXID**) Search Table or the FML Search ICD Code (**SEARCH_ICD_CD**) code in the FML ICD Search Table.

Sample Valid Values Table

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_DXID	FML_CLIN_CODE	FML_NAV_CODE
052.7	01	165	01	03
053.20	01	165	01	03
079.89	01	165	01	03
136.9	01	165	01	03
052.9	01	171	01	03
053.20	01	171	01	03
079.89	01	171	01	03
136.9	01	171	01	03

Related Tables

[FML Disease Identifier \(DxID\) Search Table](#)

[FML ICD Search Exclusion Table](#)

[FML ICD Search Table](#)

[SNOMED CT to DXID Search Table](#)

[SNOMED CT to DXID Search Exclusion Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT to DXID Search History Table](#)

RELATED_HIC_SEQN

Related Hierarchical Ingredient Code Sequence Number

a six-character numeric column that provides a Hierarchical Ingredient Code Sequence Number's (HIC_SEQN) related ingredient or ingredients.

Each HIC_SEQN has zero or more related HIC_SEQNs. These related ingredients either share the same base ingredient as the given HIC_SEQN, or are similar enough to cause allergy or duplicate therapy patient safety issues.

Sample Valid Values Table

HIC_SEQN	RELATED_HIC_SEQN
002206	002206
002207	002207
002207	002208
002207	002209

Related Tables

[HIC_SEQN/HIC_SEQN Link Table](#)

REN_FOOTNOTE

DRCM Renal Adjustment Footnote Text

a 255-character alphanumeric column that provides the text of the footnote. A footnote exists for dosage range checking values when the adjustment details are not suitable to be codified. The clinician should review the text of the footnote to adjust dosing.

Related Tables

[DRCM Renal Master Table](#)

REN_HIAGED

DRCM Renal High Age in Days

a five-character numeric column that indicates the highest patient age (in days) to which the dosing information applies, adjusted for renal impairment.

Related Tables

[DRCM Renal Master Table](#)

REN_HICRCL

DRCM Renal High Creatinine Clearance mL/min

a three-character numeric column that provides the highest creatinine clearance level to which dosing information applies, adjusted for renal impairment. The values in this column are expressed in mL/min.

Related Tables

[DRCM Renal Master Table](#)

REN_HIDOSD

DRCM Renally Adjusted High Dose Per Day

a nine-character numeric column that indicates the high drug dose per day specific to the patient age, reason for use, creatinine clearance, dose type, and route of administration. Values in this column are adjusted for renal impairment.

Related Tables

[DRCM Renal Master Table](#)

REN_HIDOSU

DRCM Renally Adjusted High Dose Per Day Units Code

a two-character alphanumeric column that provides the units for the Renally Adjusted High Dose Per Day (REN_HIDOSD).

Sample Valid Values Table

REN_HIDOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY

Related Tables

[DRCM Renal Master Table](#)

REN_HIFREQ

DRCM Renally Adjusted High Frequency of Administration

a five-character numeric column that represents the high end of the frequency of administration, adjusted for renal impairment. Frequency of administration specifies the number of times that a drug is administered to the patient per day. For more information regarding the calculation of frequencies, refer to Frequency of Administration (DRCM/NEOM only).

Related Tables

[DRCM Renal Master Table](#)

REN_LOAGED

DRCM Renal Low Age in Days

a five-character numeric column that indicates the lowest patient age (in days) to which the dosing information applies, adjusted for renal impairment.

Related Tables

[DRCM Renal Master Table](#)

REN_LOCRCL

DRCM Renal Low Creatinine Clearance mL/min

a three-character numeric column that provides the lowest creatinine clearance level to which dosing information applies, adjusted for renal impairment. The values in this column are expressed in mL/min.

Related Tables

[DRCM Renal Master Table](#)

REN_LODOSD

DRCM Renally Adjusted Low Dose Per Day

a nine-character numeric column that indicates the minimum drug dose per day specific to the patient age, reason for use, creatinine clearance, dose type, and route of administration. Values in this column are adjusted for renal impairment.

Related Tables

[DRCM Renal Master Table](#)

REN_LODOSU

DRCM Renally Adjusted Dose Per Day Units Code

a two-character alphanumeric column that provides the units for the Renally Adjusted Low Dose Per Day (REN_LODOSD).

Sample Valid Values Table

REN_LODOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	08 MCG/DAY

Related Tables

[DRCM Renal Master Table](#)

REN_LOFREQ

DRCM Renally Adjusted Low Frequency of Administration

a five-character numeric column that indicates the low end of the frequency of administration, adjusted for renal impairment. Frequency of administration specifies the number of times that a drug is administered to the patient per day. For more information regarding the calculation of frequencies, refer to Frequency of Administration (DRCM/NEOM only).

Related Tables

[DRCM Renal Master Table](#)

REN_MONO_FORMAT_CD

DRCM Renal Monograph Format Code

a four-character numeric column that indicates how to present the renal monograph text.

Valid Values Table

REN_MONO_FORMAT_CD	Description
1	New Line
2	Continuation of Previous Line

Related Tables

[DRCM Renal Adjustment Monograph Line Table](#)

REN_MONO_ID

DRCM Renal Monograph ID

an eight-character numeric column that identifies a renal monograph.

Related Tables

[DRCM Renal Adjustment Monograph Line Table](#)

[DRCM Renal Master Table](#)

REN_MONO_LINE_NUMBER

DRCM Renal Monograph Line Number

an eight-character numeric column that indicates the display order for lines of text in a monograph.

Related Tables

[DRCM Renal Adjustment Monograph Line Table](#)

REN_MONO_LINE_TEXT

DRCM Renal Monograph Line Text

a 255-character alphanumeric column that provides the text of the renal monograph for the line identified in the DRCM Renal Monograph Line Number (**REN_MONO_LINE_NUMBER**) column.

Related Tables

[DRCM Renal Adjustment Monograph Line Table](#)

REN_MONO_SECTION_CD

DRCM Renal Monograph Section Code

a four-character numeric column that indicates the type of content contained in the related renal monograph text column. This allows users to select certain sections of the renal monograph to present according to their business needs.

Valid Values Table

REN_MONO_SECTION_CD	Description
1	Brief Overview
2	Discussion
3	Potential Significant Impact on Patient Care
4	References (Manufacturer's Information)
5	References (Human Study)
6	References (Case Report)
7	References (Meeting Abstract)
8	References (In vitro/Animal Study)
9	References (Review Article)
10	References (AHFS)
11	References (Unclassified)
12	Excretion Profile
13	Volume of Distribution
14	Protein Binding
15	Dosing Adjustment in Organ Dysfunction
16	Supplemental Dosing for Dialysis
17	Comments
18	References
19	Title
20	Opening Statement

Related Tables

[DRCM Renal Adjustment Monograph Line Table](#)

REN_MX1DOS

DRCM Renally Adjusted Maximum Amount Per Single Dose

a nine-character numeric column that indicates the maximum amount of a drug that can be safely administered as one dose, adjusted for renal impairment and a patient's creatinine clearance. If the information is disease-specific, it is used only for that specific reason for use.

If references give a general statement that is not disease-specific, that maximum single dose is used for all appropriate dose types.



Not all drugs have a DRCM Renally Adjusted Maximum Amount Per Single Dose.

Related Tables

[DRCM Renal Master Table](#)

REN_MX1DSU

DRCM Renally Adjusted Maximum Single Dose Units Code

a two-character alphanumeric column that provides the units for the Renally Adjusted Maximum Amount Per Single Dose ([REN_MX1DOS](#))

Sample Valid Values Table

REN_MX1DOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY

Related Tables

[DRCM Renal Master Table](#)

REN_MXDOSD

DRCM Renally Adjusted Maximum Dose Per Day

a nine-character numeric column that indicates the maximum effective drug dose per day specific to the patient age, reason for use, creatinine clearance, dose type, and route of administration. Values in this column are adjusted for renal impairment.

Related Tables

[DRCM Renal Master Table](#)

REN_MXDOSU

DRCM Renally Adjusted Maximum Dose Per Day Units Code

a two-character alphanumeric column that provides the units for the Renally Adjusted Maximum Dose Per Day (REN_MXDOSD).

Sample Valid Values Table

REN_MXDOSU	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY

Related Tables

[DRCM Renal Master Table](#)

REN_NTE_SINGLE_DOSE

DRCM Renally Adjusted Not-to-Exceed Amount Per Single Dose

a nine-character numeric column that specifies the largest single dose of a drug, adjusted for renal impairment.

This is the largest amount of drug that references indicate should be given as a single dose specific to the patient age, reason for use, dose type, route of administration, renal impairment, and creatinine clearance.

Related Tables

[DRCM Renal Master Table](#)

REN_NTE_SINGLE_DOSE_UNIT_CODE

DRCM Renally Adjusted Not-to-Exceed Amount Per Single Dose

a two-character alphanumeric column that provides the units for the Not-to-Exceed Amount Per Single Dose (**REN_NTE_SINGLE_DOSE**).

Sample Valid Values Table

REN_NTE_SINGLE_DOSE_UNIT_CODE	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY

Related Tables

DRCM Renal Master Table

REN_SORT_ORDER

DRCM Renal Sort Order

a three-character numeric column that represents the order in which renally adjusted dosing records should may be sorted based upon DRCM Dosing Adjustment Type Code ([DOSING_ADJ_TYPE_CD](#)). Renal dosage range checking records with DRCM Dosing Adjustment Type Code ([DOSING_ADJ_TYPE_CD](#)) values of:

- 1 (See footnote)
- 2 (Administration is not recommended in this level of organ dysfunction)
- 8 (No adjustment necessary)
- 9 (See monograph)
- 10 (Default)
- 11 (No adjustment information)

shall have a DRCM Renal Sort Order ([REN_SORT_ORDER](#)) value of 1. Filtering by the DRCM Renal Sort Order ([REN_SORT_ORDER](#)) value of 1 shall provide a single renal dosage range checking record for a specific patient age, reason for use, dose type, route of administration, renal impairment, and creatinine clearance. Renal dosage range checking records with DRCM Dosing Adjustment Type Code ([DOSING_ADJ_TYPE_CD](#)) values of:

- 3 (Adjust dose using multiplier)
- 4 (Adjust frequency)
- 5 (Adjust dose using multiplier and adjust frequency)

shall have a DRCM Renal Sort Order ([REN_SORT_ORDER](#)) value greater than 1. Renal dosage range checking values with a DRCM Renal Sort Order ([REN_SORT_ORDER](#)) greater than 1 indicate that other renal dosage range checking values exist for the patient age, reason for use, dose type, route of administration, renal impairment, and creatinine clearance.

Related Tables

[DRCM Renal Master Table](#)

REPL_DAM_ALRGN_GRP

Replacement DAM Specific Allergen Group Code

a six-character numeric column that identifies the replacement value for a replaced DAM Specific Allergen Group Code (**DAM_ALRGN_GRP**). The following example table shows allergen groups with their previous and replacement values and the date the replacement became effective.

Sample Valid Values Table

REPL_DAM_ALRGN_GRP	PREV_DAM_ALRGN_GRP	DAM_ALRGN_GRP REPL_EFF_DT
900116	900218	20040723
900207	900111	20040723
900385	000156	20040723

Related Tables

[DAM Specific Allergen Group Code History Table](#)

REPL_DAM_ALRGN_XSENSE

Replacement DAM Cross-Sensitive Allergen Group Code

a four-character numeric column that identifies the replacement value for a replaced DAM Cross-Sensitive Allergen Group Code ([DAM_ALRGN_XSENSE](#)).

The following example table shows Cross-Sensitive allergen groups with their previous and replacement values and the date the replacement became effective.

Sample Valid Values Table

REPL_DAM_ALRGN_XSENSE	PREV_DAM_ALRGN_XSENSE	DAM_ALRGN_XSENSE_REPL_EFF_DT
0152	0246	20040723
0236	0147	20040723
0413	0065	20040723

Related Tables

[DAM Cross-Sensitive Allergen Group Code History Table](#)

REPL_HIC_SEQN

Replacement Hierarchical Ingredient Code Sequence Number

a six-character numeric column that identifies the replacement value for a replaced Hierarchical Ingredient Code Sequence Number (**HIC_SEQN**).

The following example table shows ingredients with their previous and replacement values, and the date the replacement became effective.

Example—PREV_HIC_SEQN and associated columns

REPL_HIC_SEQN	PREV_HIC_SEQN	HIC_REPL_EFF_DT
000766	000746	19980810
000766	002330	19980810
000846	000734	19970430

Related Tables

[Ingredient Replacement History Table](#)

RESULT

Drug-Food Interaction - Result

a 45-character alphanumeric column that briefly describes the mechanism of the interaction.

This data is formatted in a way that facilitates printing on a standard prescription label or label carrier. Each message contains a maximum of two lines.

Although the first and second lines appear side-by-side in the Drug-Food Interaction Master Table, the second line is to be printed directly under the first line.

Example—RESULT and associated columns

FDCDE	DNAME	FD_SL	RESULT	FDMG1	FDMG2
002	BETA-BLOCKERS	2	FOOD MAY INCREASE SERUM DRUG CONCENTRATIONS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.
005	PHENYTOIN	1	ENTERAL FEEDS MAY DECREASE DRUG ABSORPTION.	STOP NG TUBE FEEDS 2 HRS	BEFORE AND AFTER DOSE.
006	ERYTHROMYCIN	2	FOOD MAY DECREASE DRUG ABSORPTION.	TAKE NON-ENTERIC COATED	FORM ON EMPTY STOMACH.
007	HYDRALAZINE	2	FOOD MAY ALTER ANTIHYPERTENSIVE EFFECTS.	TAKE CONSISTENTLY W/MEALS	OR ON EMPTY STOMACH.

Related Tables

[Drug-Food Interaction Master Table](#)

RESULT_T

Drug-Food Interaction - Result (Translated)

a 70-character alphanumeric column that briefly describes the mechanism of the interaction.

This data is formatted in a way that facilitates printing on a standard prescription label or label carrier. Each message contains a maximum of two lines. Although the first and second lines appear side-by-side in the Drug-Food Interaction Master Table (Translated), the second line is to be printed directly under the first line.

Related Tables

[Drug-Food Interaction Master Table--French](#)

ROUTED_DOSAGE_FORM_MED_ID

MED Routed Dosage Form Medication ID

an eight-character numeric column that identifies the product or generic name, route of administration, and dosage form. It is a permanent identifier that is used for navigational purposes, for profiling patient medications when the strength is unknown, or for ordering prescriptions in an inpatient setting when the dosage form strength is not required. This number is a stable identifier.

One **ROUTED_DOSAGE_FORM_MED_ID** is linked to zero-to-many MED Medication IDs (MEDID).

Sample Valid Values Table

ROUTED_DOSAGE_FORM_MED	MED_ROUTED_DOSAGE_FORM_MED_ID_DESC
00100000	abacavir Tab
00100003	abciximab IV
00100007	acenocoumarol Tab
00100008	acetaminophen Cap
00100009	acetaminophen Rectal Suppository
00100013	acetaminophen-DM Oral Liquid
00100014	acetaminophen-pamabrom Tab
00100015	acetaminophen-parabrom-pyridam Tab
00101318	hydroxyzine HCl Cap
00101519	lidocaine-carbon dioxide Injection
00101625	menthol-Herbal Drugs Lozenges
00102527	trimeprazine tartrate Syrup
00102628	vitamins A & D Tab
00103771	Amcort Topical Cream
00103772	Amerge Tab
00103779	Amikin Injection
00103780	Aminosyn 8.5% with Electrolyte IV
00103781	Aminosyn II 10% IV

Related Tables

[MED Medication Table](#)

[MED Medication Table--French](#)

MED Routed Dosage Form Medication Table

MED Routed Dosage Form Medication Table--French

ROUTED_GEN_DESC

Routed Generic Identifier Description

a 100-character alphanumeric column that provides the text description for a Routed Generic Identifier ([ROUTED_GEN_ID](#)).

Sample Valid Values Table

ROUTED_GEN_ID	ROUTED_GEN_DESC
1048577	DIGITALIS LEAF ORAL
1048578	GITALIN ORAL
1048579	DIGITOXIN ORAL
1048580	DIGOXIN ORAL
1048583	CAFFEINE/DEXTROSE ORAL
1048584	CAFFEINE/MULTIVITAMINS ORAL
1048585	CAFFEINE/ETHYL ALCOHOL ORAL
1048587	CAFFEINE CITRATED ORAL
1048588	CAFFEINE ORAL
1048589	THEOPHYLLINE/POTASSIUM IODIDE ORAL

Related Tables

[Routed Generic Table](#)

ROUTED_GEN_ID

Routed Generic Identifier

an eight-character numeric column that identifies a combination of the product ingredient set and route of administration. It is a numeric identifier that is used for the navigational purposes of directly accessing screening functions from less specific clinical concepts than clinical formulations and NDCs.

One ROUTED_GEN_ID is linked to one-to-many Clinical Formulation IDs ([GCN_SEQNO](#)) and zero-to-many Canadian Drug Identification Numbers ([DIN](#)) and FDB Product Identifiers ([FDB_PRODUCT_ID](#)).

Sample Valid Values Table

ROUTED_GEN_ID	ROUTED_GEN_DESC
1048577	DIGITALIS LEAF ORAL
1048578	GITALIN ORAL
1048579	DIGITOXIN ORAL
1048580	DIGOXIN ORAL
1048583	CAFFEINE/DEXTROSE ORAL
1048584	CAFFEINE/MULTIVITAMINS ORAL
1048585	CAFFEINE/ETHYL ALCOHOL ORAL
1048587	CAFFEINE CITRATED ORAL
1048588	CAFFEINE ORAL
1048589	THEOPHYLLINE/POTASSIUM IODIDE ORAL

Related Tables

[Routed Generic Clinical Formulation Identifier Link Table](#)

[Routed Generic IDC Link Table](#)

[Routed Generic Product ID Link Table](#)

[Routed Generic Status Code Table](#)

[Routed Generic Table](#)

[SIDE Routed Generic Table](#)

ROUTED_GEN_STATUS_CD

Routed Generic Identifier Status Code

a one-character alphanumeric column that indicates the availability of the packaged products associated with a Routed Generic Identifier ([ROUTED_GEN_ID](#)).

The text description of the ROUTED_GEN_STATUS_CODE is provided by the Routed Generic Identifier Status Code Description ([ROUTED_GEN_STATUS_CD_DESC](#)) column.

Valid Values Table

ROUTED_GEN_STATUS_CD	ROUTED_GEN_STATUS_CD_DESC
0	Active
3	Inactive
9	Unassociated

Related Tables

[Routed Generic Table](#)

[Routed Generic Status Code Table](#)

ROUTED_GEN_STATUS_CD_DESC

Routed Generic Identifier Status Code Description

a 30-character alphanumeric column that provides the text description for a Routed Generic Status Code ([ROUTED_GEN_STATUS_CD](#)).

Valid Values Table

ROUTED_GEN_STATUS_CD	ROUTED_GEN_STATUS_CD_DESC
0	Active
3	Inactive
9	Unassociated

Related Tables

[Routed Generic Status Code Table](#)

ROUTED_MED_ID

MED Routed Medication ID

an eight-character numeric column that identifies the product or generic name and route of administration. It is used for navigational purposes or to profile patient medications when the dosage form is unknown or not required. It is also used for entry into some clinical modules. This number is a stable identifier.

One MED Routed Medication ID (**ROUTED_MED_ID**) is linked to zero-to-many MED Routed Dosage Form Medication IDs (**ROUTED_DOSAGE_FORM_MED_ID**).

Sample Valid Values Table

ROUTED_MED_ID	MED_ROUTED_MED_ID_DESC
00100000	abacavir Tab
00100003	abciximab IV
00100007	acenocoumarol Tab
00100008	acetaminophen Cap
00100009	acetaminophen Rectal Suppository
00100013	acetaminophen-DM Oral Liquid
00100014	acetaminophen-pamabrom Tab
00100015	acetaminophen-parabrom-pyridam Tab
00101318	hydroxyzine HCl Cap
00101519	lidocaine-carbon dioxide Injection
00102527	trimeprazine tartrate Syrup
00102628	Vitamins A & D Tab
00103771	Amcort Topical Cream
00103772	Amerge Tab
00103779	Amikin Injection
00103780	Aminosyn 8.5% with Electrolyte IV
00103781	Aminosyn II 10% IV

Related Tables

[DDCM Routed Medication Table](#)

DDIM Routed Medication Table

DFIM Routed Medication Table

DLIM Routed Medication Identifier to Drug Group Table

DPT Routed Medication ID Table

GERI ROUTED_MED_ID Link Table

INDM Routed Medication Table

LACT ROUTED_MED_ID Link Table

MED Routed Dosage Form Medication Table

MED Routed Dosage Form Medication Table--French

MED Routed Medication Table

MED Routed Medication Table--French

PEDI ROUTED_MED_ID Link Table

PREG ROUTED_MED_ID Link Table

SIDE Routed Medication Table

ROUTES_DES

DRCM Route of Administration Description

a 22-character alphanumeric column that contains the text description for DRCM Route of Administration Indicator ([DR2_RT](#)).

Valid Values Table

DR2_RT	ROUTES_DES
004	BUCCAL
030	CERVICAL
006	CONTINUOUS INFUSION
010	ENDOTRACHEAL
012	EPIDURAL
095	HAND BULB NEBULIZER
021	INHALATION
024	INTRA-ARTERIAL
025	INTRA-ARTICULAR
091	INTRACARDIAC
028	INTRA-CAVERNOSAL
033	INTRADERMAL
036	INTRALESIONAL
037	INTRALUMBAR
040	INTRAMUSCULAR
060	INTRANASAL
097	INTRAPERICARDIAL
044	INTRAPERITONEAL
045	INTRAPLEURAL
046	INTRASPINAL
048	INTRATHECAL
050	INTRATRACHEAL
086	INTRA-URETHRAL
052	INTRAVENOUS

054	INTRAVENTRICULAR
090	INTRAVESICAL
023	IPPB
058	MUCOUS MEMBRANE
062	NEBULIZATION -UNSPEC
094	O2 AEROSOLIZATION
063	OPHTHALMIC
064	ORAL
066	OTIC
074	RECTAL
093	RETROBULBAR
078	SUBCONJUNCTIVAL
079	SUBCUTANEOUS
080	SUBLESIONALLY
081	SUBLINGUAL
083	TOPICAL
084	TRANSDERMAL
085	TRANSLINGUAL
092	TRANSTRACHEAL
087	VAGINAL

Related Tables

[DRCM Route Description Table](#)

RT

Route Description

a ten-character alphanumeric column that provides a brief text description associated with a Route of Administration Code (**GCRT** or **GCRT2**).

Alternate forms of the route description are also available in two codes:

- A one-byte route code (**GCRT**) is available for applications where the description is transparent to the user.
- A two-byte route code (**GCRT2**) is available as an abbreviation.

i The two-byte route code is identical to the route abbreviations used in clinical practice for some, but not all, codes. For example, the two-byte route code for "oral" is "PO", yet, the two-byte route code for "rectal" is "RC". These are easily customizable within the user's applications.

Example—RT and associated columns

GCRT	GCRT2	RT	GCRT_DESC
B	BC	BUCCAL	BUCCAL
D	DT	DENTAL	DENTAL
E	EP	EPIDURAL	EPIDURAL (ONLY)
N	IL	IMPLANT	IMPLANTATION
2	IJ	INJECTION	INJECTION(UNSPECIFIED PARENTERAL ROUTES)

Related Tables

Route of Administration Description Table

RT_T

Route Description (Translated)

a 20-character alphanumeric column that provides a brief text description associated with a Route of Administration Code (**GCRT** or **GCRT2**).

Alternate forms of the route description are also available in two codes:

- A one-byte route code (GCRT) is available for applications where the description is transparent to the user.

A two-byte route code (GCRT2) is available as an abbreviation.

- i** The two-byte route code is identical to the route abbreviations used in clinical practice for some, but not all, codes. For example, the two-byte route code for "oral" is "PO", yet, the two-byte route code for "rectal" is "RC". These are easily customizable within the user's applications.

Related Tables

[Route of Administration Description Table--French](#)

S**SCT_CONCEPT_ID****SCT_CONCEPT_ID_TYPE****SCT_CONCEPT_ID_TYPE_DESC****SCT_DESCRIPTION_ID****SCT_TERM****SCT_TYPE_DESC****SCT_TYPE_ID****SEARCH_DXID****SEARCH_ICD_CD****SEARCH_SCT_CONCEPT_ID****SEQUENCE_NO****SIDE****SIDE_A_DDI_CODEX****SIDE_A_GCN_SEQNO****SIDE_B_DDI_CODEX****SIDE_B_GCN_SEQNO****SIDE_DRUG_DESC****SIDE_FREQ****SIDE_HYPER****SIDE_LABCD****SIDE_PHYS****SIDE_SEV****SIDE_SN****SIDE_VISCD****STATUS_CODE****STATUS_CODE_DESC****STR****STR60**

STRENGTH

STRENGTH_STATUS_CODE

STRENGTH_STATUS_DESC

STRENGTH_TYP_CODE

STRENGTH_TYP_DESC

STRENGTH_UOM_ID

STRNUM

STRUN50

SUPPLIER_PRODUCT_FORMAT

SUPPLIER_PRODUCT_NUMBER

SYSTEMIC

STATUS_CODE_DESC_T

STR60_T

STRENGTH_STATUS_DESC_T

STRENGTH_TYP_DESC_T

STRUN50_T

SCT_CONCEPT_ID

SNOMED CT Concept Identifier

an 18-character numeric column that identifies a SNOMED CT concept. SNOMED CT concepts represent clinical ideas; every concept has a unique numeric code known as the concept identifier.

Sample Valid Values Table

SCT_CONCEPT_ID	NLM_TERM
50177009	Has a temperature
30746006	Swollen glands

Related Tables

[DXID to SNOMED CT Best Fit Table](#)

[DXID to SNOMED CT Best Fit History Table](#)

[SNOMED CT Value Set Table](#)

SCT_CONCEPT_ID_TYPE

SNOMED CT Concept Identifier Type

a two-character alphanumeric column that identifies a SNOMED CT Concept type.

Sample Valid Values Table

SCT_CONCEPT_ID	SCT_CONCEPT_ID_TYPE	SCT_CONCEPT_ID_TYPE_DESC
50177009	10	SNOMED CT International Release
30746006	20	SNOMED CT CORE Subset

Related Tables

[DXID to SNOMED CT Best Fit History Table](#)

[SNOMED CT Concept Type Description Table](#)

[SNOMED CT to DXID Search Table](#)

[SNOMED CT to DXID Search Exclusion Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT to DXID Search History Table](#)

SCT_CONCEPT_ID_TYPE_DESC

SNOMED CT Concept Identifier Type Description

a 50-character alphanumeric column that provides the text description for a SNOMED CT Concept Identifier Type ([SCT_CONCEPT_ID_TYPE](#)).

Sample Valid Values Table

SCT_CONCEPT_ID	SCT_CONCEPT_ID_TYPE	SCT_CONCEPT_ID_TYPE_DESC
50177009	10	SNOMED CT International Release
30746006	20	SNOMED CT CORE Subset

Related Tables

[SNOMED CT Concept Type Description Table](#)

SCT_DESCRIPTION_ID

SNOMED CT Description Identifier

an 18-character numeric column that identifies a SNOMED CT description.

Related Tables

[SNOMED CT Value Set Table](#)

SCT_TERM

SNOMED CT Term

a 255-character alphanumeric column that provides the text description for a given SNOMED CT Description Identifier ([SCT_DESCRIPTION_ID](#)).

Related Tables

[SNOMED CT Value Set Table](#)

SCT_TYPE_DESC

SNOMED CT Type Description

a 50-character alphanumeric column that provides a text description of the SNOMED CT Description Type Identifier ([SCT_TYPE_ID](#)).

Valid Values Table

SCT_TYPE_ID	SCT_TYPE_DESC
1	Preferred
2	Synonym
3	Fully Specified Name

Related Tables

[SNOMED CT Type Description Table](#)

SCT_TYPE_ID

SNOMED CT Description Type Identifier

a one-character numeric column that identifies a SNOMED CT description type.

Valid Values Table

SCT_TYPE_ID	SCT_TYPE_DESC
1	Preferred
2	Synonym
3	Fully Specified Name

Related Tables

[SNOMED CT Type Description Table](#)

[SNOMED CT Value Set Table](#)

SEARCH_DXID

FML Search DxID

an eight-character numeric column that identifies the Disease Identifier (DxID) that is used to search for and retrieve all FML Related DxIDs (**RELATED_DXID**), within the context of a particular FDB Disease Decision Support or Dosing module.

Sample Valid Values Table

SEARCH_DXID	RELATED_DXID	FML_CLIN_CODE	CLIN_DRUG_GRP
165	165	01	01
165	165	02	01
165	165	03	01
165	171	03	03
165	214	03	03
165	412	03	03
165	4622	03	02
165	6266	03	03

Related Tables

[FML Disease Identifier \(DxID\) Search Table](#)

SEARCH_ICD_CD

Search ICD Code

a ten-character alphanumeric column that identifies the ICD Code that is used to search for and retrieve all FML Related DxIDs ([RELATED_RXID](#)), within the context of a particular FDB Disease Decision Support or Dosing module.

Sample Valid Values Table

SEARCH_ICD_CD	ICD_CD_TYPE	RELATED_RXID	FML_CLIN_CODE	FML_NAV_CODE
274.9	01	713	01	02
274.9	01	714	01	02
274.9	01	715	01	02
274.9	01	718	01	02
274.9	01	2278	01	02

Related Tables

[FML ICD Search Exclusion Table](#)

[FML ICD Search Table](#)

SEARCH_SCT_CONCEPT_ID

Search SNOMED CT Concept Identifier

an 18-character numeric column that identifies the SNOMED CT Concept Identifier that is used to search for and retrieve all Related DXIDs (**RELATED_RXID**).

Related Tables

[SNOMED CT to DXID Search Table](#)

[SNOMED CT to DXID Search Exclusion Table](#)

[SNOMED CT to DXID Search Exclusion History Table](#)

[SNOMED CT to DXID Search History Table](#)

SEQUENCE_NO

Sequence Number

a three-character numeric column that orders the individual text lines.

Example—SEQUENCE_NO and associated columns for Copyright Table

DATASET_CODE	SEQUENCE_NO	COPYRIGHT_TEXT
DIN	1	Source: Canadian Drug Product Database. Health Canada. http://www.hc-sc.gc.ca/
DIN	2	dhp-mps/prodpharma/databasdon/index-eng.php; Reproduced with permission from the
DIN	3	Minister of Health Canada, 2014.
NHP	1	Source: Canadian Licensed Natural Health Products Database. Health Canada. ht
NHP	2	p://webprod5.hc-sc.gc.ca/lhpd-bdpsn/h/index-eng.jsp. Reproduced with permission
NHP	3	from the Minister of Health Canada, 2014.

Example—SEQUENCE_NO and associated columns for Product Master Attribute Table

FDB_PRODUCT_ID	ATTRIBUTE_ID	SEQUENCE_NO	VALUE_SEQUENCE_NO	ATTRIBUTE_VALUE
522903	48	1	1	Salinex
522903	49	1	1	Salinex 0.9 % nasal spray
522903	52	1	1	80024381

Related Tables

[Copyright Table](#)

[Product Master Attribute Table](#)

SIDE

SIDE Side Effects Code

a five-character numeric column that identifies side effect information for a specified product or Routed Medication ID. SIDE provides a link between the following.

- Clinical Formulation ID (**GCN_SEQNO**) and Disease Identifiers (**DXID**)
- Clinical Formulation ID (**GCN_SEQNO**) and Side Effect Drug Description
- ROUTED_MED_ID and Disease Identifiers (**DXID**)

The following table shows SIDE data linking Clinical Formulation ID (**GCN_SEQNO**) and Disease Identifiers (**DXID**)

Example—**GCN_SEQNO, SIDE, DXID, and associated columns**

LN	GCN_SEQNO	SIDE	DXID	DXID_DESC100
NAFTIN 1% CREAM	007374	00501	00003412	Treatment Site Sequelae
TRIZIVIR TABLET	047121	00508	00000842	Anemia
MAREZINE 50 MG TABLET	004726	00527	00003036	Drowsiness
SANSERT 2 MG TABLET	011660	00542	00003265	Abdominal Pain
TICLID 250 MG TABLET	016375	00550	00003223	Nausea
ADENOCARD IV 3 MG/ML VIAL	013630	00564	00003135	Flushing

The following table shows SIDE data linking Clinical Formulation ID (**GCN_SEQNO**) and **SIDE_DRUG_DESCRIPTION**.

Example—**GCN_SEQNO, SIDE,SIDE_DRUG_DESCRIPTION, and associated columns**

LN	GCN_SEQNO	SIDE	SIDE_DRUG_DESC
NAFTIN 1% CREAM	007374	00501	NAFTIFINE
TRIZIVIR TABLET	047121	00508	ZIDOVUDINE
MAREZINE 50 MG TABLET	004726	00527	CYCLIZINE
SANSERT 2 MG TABLET	011660	00542	METHYSERGIDE
TICLID 250 MG TABLET	016375	00550	TICLOPIDINE
ADENOCARD IV 3 MG/ML VIAL	013630	00564	ADENOSINE

The following table shows SIDE data linking.

Example—ROUTED_MED_ID and Disease Identifiers (DXID) ROUTED_MED_ID, SIDE, DXID, and associated columns

MED_ROUTED_MED_ID_DESC	ROUTED_MED_ID	SIDE	DXID	DXID_DESC100
Naftifine HCl Top	00006055	00501	00003412	Treatment Site Sequelae
Retrovir IV	00001371	00508	00000842	Anemia
Marezine Oral	00006890	00527	00003036	Drowsiness
Methysergide Maleate Oral	00006096	00542	00003235	Abdominal Pain
Ticlid Oral	00011554	00550	00003223	Nausea
Adenosine Misc	00005689	00564	00003135	Flushing
Albuterol Misc	00001263	00565	00003176	Tachycardia

Related Tables

[SIDE GCN_SEQNO/Drug Side Effect Code Relation Table](#)

[SIDE Master Table](#)

[SIDE Routed Generic Table](#)

[SIDE Routed Medication Table](#)

SIDE_A_DDI_CODEX

Drug-Drug Expanded Interaction Code for Side A

a five-character numeric column that provides the Drug-Drug Expanded Interaction Code for the first side of a drug-drug interaction.

Sample Valid Values Table

SIDE_A_DDI_CODEX	Description
1650	Didanosine
1490	Ketorolac
2177	Citalopram (>20 mg)
1024	Propylene Glycol

Related Tables

[Drug-Drug Interaction Monograph Master Table](#)

SIDE_A_GCN_SEQNO

Drug-Drug Interaction Side A Clinical Formulation ID

a six-character numeric column that represents a drug formulation identifier which is related to the first side of a drug-drug interaction pair.

Related Tables

[Drug-Drug Interaction Clinical Formulation Exception Table](#)

SIDE_B_DDI_CODEX

Drug-Drug Expanded Interaction Code for Side B

a five-character numeric column that provides the Drug-Drug Expanded Interaction Code for the second side of a drug-drug interaction.

Sample Valid Values Table

SIDE_B_DDI_CODEX	DESCRIPTION
30350	Stavudine
30510	Anticoagulants
29823	Select CYP2C19 Inhibitors
30976	Metronidazole; Tinidazole

Related Tables

[Drug-Drug Interaction Monograph Master Table](#)

SIDE_B_GCN_SEQNO

Drug-Drug Interaction Side B Clinical Formulation ID

a six-character numeric column that represents a drug formulation identifier which is related to the second side of a drug-drug interaction pair.

Related Tables

[Drug-Drug Interaction Clinical Formulation Exception Table](#)

SIDE_DRUG_DESC

SIDE Side Effects Drug Description

a 100-character alphanumeric column that provides the text description for the drug associated with a SIDE Side Effects Code (**SIDE**).

Example—GCN_SEQNO, SIDE,SIDE_DRUG_DESCRIPTION, and associated columns

LN	GCN_SEQNO	SIDE	SIDE_DRUG_DESC
NAFTIN 1% CREAM	007374	00501	NAFTIFINE
TRIZIVIR TABLET	047121	00508	ZIDOVUDINE
MAREZINE 50 MG TABLET	004726	00527	CYCLIZINE
SANSERT 2 MG TABLET	011660	00542	METHYSERGIDE
TICLID 250 MG TABLET	016375	00550	TICLOPIDINE
ADENOCARD IV 3 MG/ML VIAL	013630	00564	ADENOSINE

Related Tables

[SIDE Side Effects Drug Description Table](#)

SIDE_FREQ

SIDE Frequency of Occurrence Code

a one-character alphanumeric column that indicates the frequency that a side effect occurs with a given drug product. Assigned frequencies do not correlate with percentages. Assignment is done after evaluation of the entire drug side effect profile, as well as placebo-controlled data, when available. Assignment is somewhat subjective because published medical literature is inconsistently reported.

Example—SIDE_FREQ and associated columns

SIDE_FREQ	Description
0	Incidence more frequent
1	Incidence less frequent
2	Incidence rare or very rare

Related Tables

[SIDE Master Table](#)

SIDE_HYPER

SIDE Hypersensitivity Indicator

a one-character alphanumeric column that identifies side effects that are felt to be due to immunological mechanisms or immune-mediated reactions, such as rashes, bronchospasm, or anaphylaxis. Side effects of this type are identified by an 'H' in this column; otherwise the column is empty. This indicator enables the user to selectively screen those specific side effects that fit the criteria of this type.

Example—SIDE_HYPER and associated columns

SIDE	SIDE_SN	FDBDX	SIDE_HYPER
00001	13	08.478100	H
00001	22	12.692721	H
00001	23	12.692900	H
00311	16	12.692900	H

Related Tables

[SIDE Master Table](#)

SIDE_LABCD

SIDE Lab/Diagnostic Test Code

a one-character alphanumeric column that indicates whether or not lab tests are necessary as follow-up for a given drug/side effect pair. It is NOT intended to establish which lab tests should be ordered for a given drug as a baseline or for monitoring.

Valid Values Table

SIDE_LABCD	Description
0	No Lab or Diagnostic Test Recommended
1	Lab or Diagnostic Test Recommended

Related Tables

[SIDE Master Table](#)

SIDE_PHYS

SIDE Physician Code

a one-character alphanumeric column that advises of the need to contact the physician regarding side effects. This indicator is consistent with the SIDE Severity Code assignments.

Valid Values Table

SIDE_PHYS	Description
0	Contact MD only if becomes bothersome
1	MD should be contacted

Related Tables

[SIDE Master Table](#)

SIDE_SEV

SIDE Severity Code

a one-character alphanumeric column that identifies the severity of a specified side effect.

Valid Values Table

SIDE_SEV	Description
0	"less severe" if it is non-threatening (such as constipation)
1	"severe" if it may be life-threatening (such as agranulocytosis)

Related Tables

[SIDE Master Table](#)

SIDE_SN

SIDE Sequence Number

a two-character numeric column that containing the sequence number for each SIDE entry in the Side Effects Module ([SIDE](#)). When added to SIDE, it forms a unique code that is specific to each drug/side effect pair. The sequence number begins at 00 and increments by one for each additional side effect.

Example—[SIDE_SN](#) and associated columns

SIDE	SIDE_SN	FDBDX
00001	00	04.288000
00001	01	05.302700
00001	02	06.333820
00001	03	06.333900
00001	04	06.333920
00001	05	06.362890

Related Tables

[SIDE Master Table](#)

SIDE_VISCD

SIDE Visibility Code

a one-character alphanumeric column that describes the visibility of specified side effect.

Valid Values Table

SIDE_VISCD	Descriptions
0	“Visible” if it is definitely detectable (for example, rash). Visible during routine physical exam.
1	“May be communicated by patient.” In these cases, it is assumed that the patient is responsive and communicative (for example, nausea).
2	“Not visible” if it is definitely not visible (for example, neutropenia), or if it is not detectable by routine physical exam.

Related Tables

[SIDE Master Table](#)

STATUS_CODE

Status Code

a one-character numeric column that describes the availability of a packaged product according to McKesson Canada. The status of a product is created and maintained by McKesson Canada. For more information see "Product Availability" in the [Packaged Product Editorial Policies](#).

Valid Values Table

STATUS_CODE	STATUS_CODE_DESC	Expanded Description
0	Active	McKesson Canada is currently distributing the product.
1	Discontinued by Manufacturer	McKesson Canada has been notified by the manufacturer that the product has been discontinued.
2	Discontinued by Data Supplier	(McKesson Canada) McKesson Canada has discontinued distributing the product.
3	Marked for Deletion	The product will be removed from the database by McKesson Canada within a few weeks.

Related Tables

[IDDF Canada Packaged Product Master Table](#)

[IDDF Canada Packaged Product Status Description Table](#)

[IDDF Canada Packaged Product Status Description Table--French](#)

STATUS_CODE_DESC

Status Code Description

a 50-character alphanumeric column that provides the text description for a Status Code (**STATUS_CODE**). For more information see Product Availability in the Editorial Policies section of Packaged Product.

Valid Values Table

STATUS_CODE	STATUS_CODE_DESC	Expanded Description
0	Active	McKesson Canada is currently distributing the product.
1	Discontinued by Manufacturer	McKesson Canada has been notified by the manufacturer that the product has been discontinued.
2	Discontinued by Data Supplier	(McKesson Canada) McKesson Canada has discontinued distributing the product.
3	Marked for Deletion	The product will be removed from the database by McKesson Canada within a few weeks.

Related Tables

[IDDF Canada Packaged Product Status Description Table](#)

STR

Drug Strength Description

a ten-character alphanumeric column that provides a description of drug potency in units of grams, milligrams, percentage, and other terms.

Strength is most commonly expressed in metric units of measure, however, non-metric unit expressions are possible if consistent with dosing recommendations in product labeling.

- i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the Drug Strength Description ([STR60](#)) column instead of the STR column for ordering and patient records.

Sample Valid Values Table

STR	Description
25MCG/24HR	Active ingredient has a release rate of 25 mcg per 24 hours
10MG	10 mg of active ingredient is present
250MG/100ML	Active ingredient is diluted to a final concentration of 250 mg per 100 mL
25GX3.5"	25 gauge diameter needle, 3 ½ inches in length
5G	Active Ingredient is a total of 5 grams
2MMU	2 million units of active ingredient is present
40MEQ/L	Additive ingredient is 40 milliequivalents per 1 liter
1:10000	Active ingredient is 1 gram per 10,000 milliliters or 10,000 grams

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

STR60

Drug Strength Description - 60

a 60-character alphanumeric column that provides a description of drug potency in units of grams, milligrams, percentage, and other terms. STR60 is associated to each Clinical Formulation ID (**GCN_SEQNO**) to identify that component of the clinical formulation.

Strength is most commonly expressed in metric units of measure, however, non-metric unit expressions are possible if consistent with dosing recommendations in product labeling.

This column will comply with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column instead of the Drug Strength Description (**STR**) column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

Sample Valid Values Table

STR	STR60	Description
25MCG/24HR	25 mcg/24 hour	Active ingredient has a release rate of 25 mcg per 24 hours
10MG	10 mg	10 mg of active ingredient is present
250MG/100ML	250 mg/100 mL	Active ingredient is diluted to a final concentration of 250 mg per 100 mL
25GX3.5"	25 gauge X 3 1/2"	25 gauge diameter needle, 3 ½ inches in length
5G	5 gram	Active Ingredient is a total of 5 grams
2MMU	2 million unit	2 million units of active ingredient is present
40MEQ/L	40 mEq/L	Additive ingredient is 40 milliequivalents per 1 liter
1:10000	1:10,000 (0.1 mg/mL)	Active ingredient is 1 gram per 10,000 milliliters or 10,000 grams

- ⓘ Where unit of measure symbols, such as percent (%), inch ("), and foot ('') are used in the STR60 description text, the parsed strength (**STRUN50**) and volume (**VOLUN50**) description text will not contain these symbols.

Related Tables

[Clinical Formulation ID Table](#)

[Drug Strength Component Table](#)

STRENGTH

Clinical Formulation Ingredient Strength

a 20-character numeric column that contains the strength value of an ingredient in a clinical formulation. Use the value in this column together with the values in the following columns to construct a complete strength expression:

- **STRENGTH_UOM_ID**
- **VOLUME**
- **VOLUME_UOM_ID**
- **TIME_VALUE**
- **TIME_UOM_ID**

Example—STRENGTH and associated columns

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UOM_ID
058554	004283	20	10
058529	000789	40	3
058529	000963	0	0
058530	000789	6	3
058530	000963	0	0

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

STRENGTH_STATUS_CODE

Ingredient Strength Status Code

a one-character numeric column that represents the status of an ingredient.

Valid Values Table

STRENGTH_STATUS_CODE	STRENGTH_STATUS_DESC
1	Not Specified
2	Specified
3	Trace

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

[Strength Status Code Description Table](#)

[Strength Status Code Description Table--French](#)

STRENGTH_STATUS_DESC

Strength Status Description

a 100-character alphanumeric column that describes the value in the Ingredient Strength Status Code ([STRENGTH_STATUS_CODE](#)) column.

Valid Values Table

STRENGTH_STATUS_CODE	STRENGTH_STATUS_DESC
1	Not Specified
2	Specified
3	Trace

Related Tables

[Strength Status Code Description Table](#)

STRENGTH_TYP_CODE

Ingredient Strength Type Code

a one-character numeric column that contains a code that indicates how the ingredient strength is expressed.

Occasionally, strength type cannot be determined and is given a zero code. Strength type is not specified when any of the following occurs:

- Strength type is not defined or is not made obvious in manufacturer-supplied information.
- The ingredient is Herbal.
- It is determined by FDB clinical editors as inappropriate to specify strength type.
- Not specified at this time pending review of product labeling and primary literature.

The description text is provided by the Strength Type Description (**STRENGTH_TYP_DESC**) column within the [Clinical Formulation Ingredient Strength Type Description Table \(RSTRTD0_STRENGTH_TYP_DESC\)](#).

Valid Values Table

STRENGTH_TYP_CODE	STRENGTH_TYP_DESC
0	Not Specified
1	Base
2	Elemental
3	Base plus Salt
4	Component

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

[Clinical Formulation Ingredient Strength Type Description Table](#)

[Clinical Formulation Ingredient Strength Type Description Table--French](#)

STRENGTH_TYP_DESC

Ingredient Strength Type Description

a 100-character alphanumeric column that describes the value in the Ingredient Strength Type Code (**STRENGTH_TYP_CODE**) and the Ingredient Alternate Strength Type Code (**ALT_STRENGTH_TYP_CODE**) column.

When the strength type is not specified, it is given a zero code. The strength type is not specified when any of the following occurs:

- Strength type is not defined or is not made obvious in manufacturer-supplied information.
- The ingredient is Herbal.
- It is determined by FDB clinical editors as inappropriate to specify strength type.
- Not specified at this time pending review of product labeling and primary literature.

Valid Values Table

STRENGTH_TYP_CODE	STRENGTH_TYP_DESC
0	Not Specified
1	Base
2	Elemental
3	Base plus Salt
4	Component

Related Tables

[Clinical Formulation Ingredient Strength Type Description Table](#)

STRENGTH_UOM_ID

Clinical Formulation Ingredient Strength Unit of Measure Identifier

an eight-character numeric column that represents the unit of measure associated with the ingredient strength. Use the value in this column to retrieve the unit of measure from the [Ingredient Strength Unit of Measure Table \(RSTRUOM0_STRENGTH_UOM\)](#).

Example—STRENGTH_UOM_ID and associated columns

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UOM_ID
004704	001719	1.5	1
023472	001265	0.05	1
020347	001770	30	1
016616	001770	11	1
016617	001770	22	1

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

STRNUM

Drug Strength Number

a 12-character numeric column that must be used in conjunction with the following fields to obtain a conventional strength expression for the drug product:

- Drug Strength Unit - 50 (**STRUN50**)
- Drug Strength Volume Number (**VOLNUM**)
- Drug Strength Volume Units - 50 (**VOLUN50**)

The strength of a drug product is usually expressed in the metric system.

 This column contains values for the following products:

- Single-ingredient products
- Multiple ingredient formulations in which only one of the ingredients in the ingredient list is pharmacologically active

For example, when the conventional strength is 250MG/5ML, the values of each column are as follows:

STRNUM	STRUN50	VOLNUM	VOLUN50
00000250.000	MG	0005.000	ML

Related Tables

[Drug Strength Component Table](#)

[Drug Strength Component Table--French](#)

STRUN50

Drug Strength Units - 50

a 50-character alphanumeric column that must be used in conjunction with the following fields to obtain a conventional strength expression for the drug product:

- Drug Strength Number (**STRNUM**)
- Drug Strength Volume Number (**VOLNUM**)
- Drug Strength Volume Units (**VOLUN50**)

This column complies with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements. The strength of a drug product is usually expressed in the metric system.

This column contains values for the following products:

- Single-ingredient products
- Multiple ingredient formulations in which only one of the ingredients in the ingredient list is pharmacologically active

For example, when the conventional strength is 250MG/5ML, the values of each column are as follows:

STRNUM	STRUN50	VOLNUM	VOLUN50
00000250.000	MG	0005.000	ML

Where unit of measure symbols, such as percent (%), inch ("), and foot ('') are used in the STR60 description text, the STRUN50 description text will not contain these symbols. Unit of measure symbols, such as these are not allowed in the STRUN50 column.

Related Tables

[Drug Strength Component Table](#)

SUPPLIER_PRODUCT_FORMAT

Supplier Product Format

a seven-character numeric column that contains **the number of units in the labeled quantity** from which the pharmacist dispenses. SUPPLIER_PRODUCT_FORMAT is used with the Package Size Unit (**PACKAGE_SIZE_UNIT**) column.

The following example shows the Supplier Product Format and Package Size Unit for selected products. The first product (Vitamin C 500 MG Tablet) is packaged as 120 tablets per container.

Example—SUPPLIER_PRODUCT_FORMAT and associated columns

GTIN	LN	SUPPLIER_PRODUCT_FORMAT	PACKAGE_SIZE_UNIT
00063806510173	VITAMIN C 500 MG TABLET	0120.00	EA
00076290102530	SYNTHROID 0.025 MG TABLET	0100.000	EA
00037000062608	HEAD & SHOULDERS SHAMPOO	0001.180	L

Related Tables

[IDDF Canada Packaged Product Master Table](#)

SUPPLIER_PRODUCT_NUMBER

Supplier Product Number

a 10-character alphanumeric column that contains the product number assigned to a packaged product by the supplier or manufacturer.

The following example shows the Global Trade Item Number (GTIN), Label Name (LN), and Supplier Product Number.

Example—SUPPLIER_PRODUCT_NUMBER and associated columns

GTIN	LN	SUPPLIER_PRODUCT_NUMBER
00011588474367	CUTICURA MED ANTIBACT BAR	000047-436
20356091695026	REGRANEX 0.01% GEL	6950224600
00776097147378	QUININE SULFATE 200 MG CAP	000000147B

Related Tables

[IDDF Canada Packaged Product Master Table](#)

SYSTEMIC

Systemic Route Indicator

a one-character alphanumeric column that indicates if the route of administration is systemic, non-systemic, or unknown.

Valid Values Table

SYSTEMIC	Description
S	Systemic
N	Non-systemic
O	Unknown; unable to definitively state if route is systemic or non-systemic

Related Tables

[Route of Administration Description Table](#)

[Route of Administration Description Table--French](#)

STATUS_CODE_DESC_T

Status Code Description (Translated)

a 75-character alphanumeric column that provides the text description for a Status Code (**STATUS_CODE**).

Related Tables

IDDF Canada Packaged Product Status Description Table--French

STR60_T

Drug Strength Description - 60 (Translated)

a 90-character alphanumeric column that provides a description of drug potency in units of grams, milligrams, percentage, and other terms. STR60 is associated to each Clinical Formulation ID (**GCN_SEQNO**) to identify that component of the clinical formulation.

Strength is most commonly expressed in metric units of measure; however, non-metric unit expressions are possible if consistent with dosing recommendations in product labeling.

This column will comply with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column instead of the Drug Strength Description (**STR**) column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

-  Where unit of measure symbols, such as percent (%), inch ("), and foot ('') are used in the STR60 description text, the parsed strength (**STRUN50**) and volume (**VOLUN50**) description text will not contain these symbols.

Related Tables

[Clinical Formulation ID Table--French](#)

[Drug Strength Component Table--French](#)

STRENGTH_STATUS_DESC_T

Strength Status Description (Translated)

a 100-character alphanumeric column that describes the value in the Ingredient Strength Status Code (**STRENGTH_STATUS_CODE**) column.

Related Tables

[Strength Status Code Description Table--French](#)

STRENGTH_TYP_DESC_T

Ingredient Strength Type Description (Translated)

a 100-character alphanumeric column that describes the value in the Ingredient Strength Type Code (**STRENGTH_TYP_CODE**) and the Ingredient Alternate Strength Type Code (**ALT_STRENGTH_TYP_CODE**) column.

When the strength type is not specified, it is given a zero code. The strength type is not specified when any of the following occurs:

- Strength type is not defined or is not made obvious in manufacturer-supplied information.
- The ingredient is Herbal.
- It is determined by FDB clinical editors as inappropriate to specify strength type.
- Not specified at this time pending review of product labeling and primary literature.

Related Tables

[Clinical Formulation Ingredient Strength Type Description Table--French](#)

STRUN50_T

Drug Strength Units - 50 (Translated)

a 75-character alphanumeric column that must be used in conjunction with the following fields to obtain a conventional strength expression for the drug product:

- Drug Strength Number (**STRNUM**)
- Drug Strength Volume Number (**VOLNUM**)
- Drug Strength Volumn Units (**VOLUN50**)

This column complies with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

The strength of a drug product is usually expressed in the metric system.

 This column contains values for the following products:

- Single-ingredient products
- Multiple ingredient formulations in which only one of the ingredients in the ingredient list is pharmacologically active

 Where unit of measure symbols, such as percent (%), inch ("), and foot ('') are used in the STR60 description text, the STRUN50 description text will not contain these symbols. Unit of measure symbols, such as these are not allowed in the STRUN50_T column.

Related Tables

[Drug Strength Component Table--French](#)

T

TC

TC_DESC

TIME_UOM_ID

TIME_VALUE

TXTCDE

TXTCDEC

TC

Therapeutic Class Code, Standard

a two-character numeric column that classifies drugs according to the most common intended use. This therapeutic classification is intended to service those users who need a definitive but not comprehensive therapeutic classification system. Comprehensive therapeutic classification is provided by Therapeutic Class, Specific (HIC3), Therapeutic Class, AHFS (AHFS8), or Therapeutic Class, Generic (GTC).

The TC is obtained via the Clinical Formulation ID ([GCN_SEQNO](#)).

Sample Valid Values Table

TC	TC_DESC
00	MEDICAL SUPPLIES
01	ANTI-ULCER PREPS/GASTROINTESTINAL PREPS
02	EMETICS
03	ANTIDIARRHEALS
04	ANTISPASMODIC AND ANTICHOLINERGIC AGENTS
05	BILE THERAPY
06	LAXATIVES
07	ATARACTICS-TRANQUILIZERS
08	MUSCLE RELAXANTS
09	ANTIPARKINSON
10	CNS STIMULANTS
11	PSYCHOSTIMULANTS-ANTIDEPRESSANTS
12	AMPHETAMINE PREPARATIONS
13	ALL OTHER ANTOBESITY PREPS

Related Tables

[Clinical Formulation ID Table](#)

[Clinical Formulation ID Table--French](#)

[Standard Therapeutic Class Description Table](#)

TC_DESC

Standard Therapeutic Class Description

a 50-character alphanumeric column that provides the text description for a Therapeutic Class Code, Standard (TC).

Sample Valid Values Table

TC	TC_DESC
18	ADRENERGICS
13	ALL OTHER ANTIOBESITY PREPS
12	AMPHETAMINE PREPARATIONS
03	ANTIDIARRHEALS
14	ANTIHISTAMINES
09	ANTIPARKINSON
04	ANTISPASMODIC AND ANTICHOLINERGIC AGENTS
01	ANTI-ULCER PREPS/GASTROINTESTINAL PREPS
07	ATARACTICS-TRANQUILIZERS
05	BILE THERAPY
15	BRONCHIAL DILATORS
10	CNS STIMULANTS
17	COLD AND COUGH PREPARATIONS
16	COUGH PREPARATIONS/EXPECTORANTS
02	EMETICS
06	LAXATIVES
00	MEDICAL SUPPLIES
08	MUSCLE RELAXANTS
11	PSYCHOSTIMULANTS-ANTIDEPRESSANTS
19	TOPICAL NASAL AND OTIC PREPARATIONS

Related Tables

[Standard Therapeutic Class Description Table](#)

TIME_UOM_ID

Clinical Formulation Ingredient Time Unit of Measure Indicator

an eight-character numeric column that represents the unit of measure associated with the value in the **TIME_VALUE** column. Use the code in this column to retrieve the unit of measure from the [Ingredient Strength Unit of Measure Table \(RSTRUOM0_STRENGTH_UOM\)](#).

Example—TIME_UOM_ID and associated columns

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UO M_ID TIME_VAL UE	TIME_VALUE	TIME_UOM_ID
004704	001719	1.5	1	72	24
021606	001245	4	1	24	24
016425	001770	7	1	24	24
023526	001265	0.08	1	24	24
021758	001245	3.6	1	24	24

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

TIME_VALUE

Clinical Formulation Ingredient Strength Time

a seven-character numeric column that contains the time value associated with the ingredient strength.

For example, for Clinical Formulation ID ([GCN_SEQNO](#)) 004704, 1.5 mg of Scopolamine Hydrobromide ([HIC_SEQN](#) 001719) is released over 72 hours.

Use the value in this column together with the unit of measure in the [TIME_UOM_ID](#) column for a complete time expression.

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UOM_ID	TIME_VALUE	TIME_UOM_ID
004704	001719	1.5	1	72	24
021606	001245	4	1	24	24
016425	001770	7	1	24	24
023526	001265	0.08	1	24	24
021758	001245	3.6	1	24	24

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

TXTCDE

Drug-Food Interaction Text Code

a one-character alphanumeric column that identifies a section of the drug-food interaction professional monograph.

Valid Values Table

TXTCDE	Description
A	Mechanism of Action
B	Blank Line
D	Discussion
E	Clinical Effect
L	Significance Level
M	Patient Management
R	References
T	Monograph Title

Related Tables

[Drug-Food Interaction Monograph Text Table](#)

TXTDEC

Drug-Food Interaction Text Code (Consumer)

a one-character alphanumeric column that identifies a section of the drug-food interaction consumer monograph.

Valid Values Table

TXTDEC	Description
A	How the Interaction Occurs
B	Blank Line
E	What Might Happen
L	Medical Warning
M	What You Should Do About This Interaction
R	References
T	Monograph Title
Z	Monograph Disclaimer

Related Tables

[Consumer Food Interaction Monograph Text Table](#)

U

UNIT_DESC_ABBREV

UNIT_DESC_EXPANDED

UNIT_IND

UNIT_QTY_PER_CASE

UNITS_CTYP

UNITS_CTYP_DESC

UNITS_DCC

UNITS_DCC_DESC

UNITS_DESC

UNITS_RUI

UOM_ABBR

UOM_ABBR_T

UOM_DESC

UOM_DESC_T

UOM_ID

UOM_PREFERRED_DESC

UOM_PREFERRED_DESC_T

UPC_PACKAGE_CODE

UPC_PRODUCT_CODE

UPC_VENDOR_CODE

USPCDE

UNIT_DESC_ABBREV

Unit Description Abbreviation

a 30-character alphanumeric column that contains a TJC- and ISMP-compliant, case-sensitive description of a unit of measure.

This column complies with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

- i The UNIT_DESC_EXPANDED column contains unabbreviated information. The information in the UNIT_DESC_EXPANDED column is often longer than the information in this column, so use UNIT_DESC_EXPANDED when unabbreviated information is important and conserving space is not necessary.

Use the Units Description table to navigate to this column from the following units description columns:

- IVMSTRU
- IVMVOLU
- MMA_MXDU
- MMAR_MNDU
- MMAR_MXDU
- MMG_MNDU
- MMG_MXDU
- MMGR_MNDU
- MMGR_MXDU
- NEOM_UNIT_CODE_DESC
- PDM_UNDESC
- POEDESC1
- UNITS_DESC

Sample Valid Values Table

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
APP	application	application
APPFUL	applicatorful	applicatorful
APPFUL/DAY	applictorful/day	applicatorful per day
APPLIC	application	application
APPLIC/DAY	application/day	application per day

APPLICATOR/DAY	applicatorful/day	applicatorful per day
BAR	bar	bar
BAR/DAY	bar/day	bar per day
CM	cm	centimeter
CM/DAY	cm/day	centimeter per day
G	gram	gram
MEQ	mEq	milliequivalent
MG	mg	milligram
ML	mL	milliliter

Related Tables[Units Description Table](#)

UNIT_DESC_EXPANDED

Units Description Expanded

a 60-character alphanumeric column that contains an unabbreviated, mixed-case description of a unit of measure.

This column contains no abbreviations and therefore complies with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

- i The UNIT_DESC_ABBREV column contains some abbreviations but is also TJC- and ISMP-compliant. The information in the UNIT_DESC_ABBREV column is often shorter than the information in this column, so use UNIT_DESC_ABBREV when conserving space is necessary.

Use the Units Description table to navigate to this column from the following units description columns:

- IVMSTRU
- IVMVOLU
- MMA_MXDU
- MMAR_MNDU
- MMAR_MXDU
- MMG_MNDU
- MMG_MXDU
- MMGR_MNDU
- MMGR_MXDU
- NEOM_UNIT_CODE_DESC
- PDM_UNDESC
- POEDESC1
- UNITS_DESC

Sample Valid Values Table

DOSING_MODULE_UNIT_ABBREV	UNIT_DESC_ABBREV	UNIT_DESC_EXPANDED
APP	application	application
APPFUL	applicatorful	applicatorful
APPFUL/DAY	applicitorful/day	applicatorful per day
APPLIC	application	application
APPLIC/DAY	application/day	application per day
APPLICATOR/DAY	applicatorful/day	applicatorful per day

BAR	bar	bar
BAR/DAY	bar/day	bar per day
CM	cm	centimeter
CM/DAY	cm/day	centimeter per day
G	gram	gram
MEQ	mEq	milliequivalent
MG	mg	milligram
ML	mL	milliliter

Related Tables[Units Description Table](#)

UNIT_IND

Unit Indicator

a one-character numeric column that indicates whether a product is packaged as individual units.

The UNIT_IND column is used with the Pack Indicator ([PACK_IND](#)) and Case Indicator ([CASE_IND](#)) columns.

Valid Values Table

UNIT_IND	DESCRIPTION
0	Not packaged as an individual unit
1	Is packaged as an individual unit

Related Tables

[IDDF Canada Packaged Product Master Table](#)

UNIT_QTY_PER_CASE

Unit Quantity Per Case

a five-character numeric column that contains the number of units in a case.

The example below demonstrates the Global Trade Item Number (GTIN), Label Name (LN), and Unit Quantity Per Case.

Example—UNIT_QTY_PER_CASE and associated columns

GTIN	LN	UNIT_QTY_PER_CASE
00024208301073	FLUORESCEIN/BENOXINATE DRPS	00240
00020959700783	HEPALEAN 1000U/ML VIAL	00010
00773007020264	KEFLEX 250 MG/5 ML SUSPENSION	00001

Related Tables

[IDDF Canada Packaged Product Master Table](#)

UNITS_CTYP

DRCM Units Required Calculation Type Code

a one-character numeric column that defines the additional input required to calculate a specific patient dose.

Valid Values Table

UNITS_CTYP	UNITS_CTYP_DESC
0	not applicable
1	Patient weight (kilograms)
2	Body surface area (square meters)
3	Per Lesion
4	Per cm ² of Lesion
5	Per 1.73 m ²
6	Per "x" grams of carbohydrate

The following are examples of how the patient parameter units are used:

- **Per Lesion:** A prescriber orders Betamethasone Acetate/Betamethasone Sodium Phosphate 2 mg/lesion. The application prompts the provider to enter the total number of lesions, which is 3. The application then calculates that the total dose is 6 mg, which is the value then used for dose screening.
- **Per cm² Lesion:** A prescriber orders Aldesleukin 4 million units/cm². The application prompts the prescriber for the total surface area of the lesion. The prescriber responds with 2.75 cm². The system then calculates the total dose as 11 million units, which is the value then used for dose screening.
- **Per 1.73 m²:** A prescriber enters the patient's CrCl as 90 mL/min. The CrCl threshold for a dose screening record is specified as 70 – 90 mL/min/1.73 m². The system prompts the prescriber for the patient's Body Surface Area (BSA), which is entered as 1.5 m². The system then calculates the patient's CrCl as $(1.5 \text{ m}^2 / 1.73 \text{ m}^2) * 90 \text{ mL/min} = 78.03 \text{ mL/min}/1.73 \text{ m}^2$. This is within the threshold, so the system uses the selected record.
- **Per "x" grams of carbohydrate:** A prescriber orders Insulin Aspart Subcutaneous 0.15 units/grams of carbohydrate (gCH2O) with each meal. At meal time, it is determined that the meal the patient is about to consume contains 30 gCH2O. The application is then able to calculate that the patient should receive 4.5 units of Insulin Aspart subcutaneously, and the 4.5 units would be the value used for dose screening.

Related Tables

[DRCM Calculation Required Type Code Description Table](#)

[DRCM Unit Description Table](#)

UNITS_CTYP_DESC

DRCM Units Required Calculation Type Code Description

a 50-character alphanumeric column that provides the text description for Units Required Calculation Type Code (**UNITS_CTYP**).

Valid Values Table

UNITS_CTYP	UNITS_CTYP_DESC
0	not applicable
1	Patient weight (kilograms)
2	Body surface area (square meters)
3	Per Lesion
4	Per cm ² of Lesion
5	Per 1.73 m ²
6	Per "x" grams of carbohydrate

The following are examples of how the patient parameter units are used:

- **Per Lesion:** A prescriber orders Betamethasone Acetate/Betamethasone Sodium Phosphate 2 mg/lesion. The application prompts the provider to enter the total number of lesions, which is 3. The application then calculates that the total dose is 6 mg, which is the value then used for dose screening.
- **Per cm² Lesion:** A prescriber orders Aldesleukin 4 million units/cm². The application prompts the prescriber for the total surface area of the lesion. The prescriber responds with 2.75 cm². The system then calculates the total dose as 11 million units, which is the value then used for dose screening.
- **Per 1.73 m²:** A prescriber enters the patient's CrCl as 90 mL/min. The CrCl threshold for a dose screening record is specified as 70 – 90 mL/min/1.73 m². The system prompts the prescriber for the patient's Body Surface Area (BSA), which is entered as 1.5 m². The system then calculates the patient's CrCl as $(1.5 \text{ m}^2/1.73 \text{ m}^2) * 90 \text{ mL/min} = 78.03 \text{ mL/min}/1.73 \text{ m}^2$. This is within the threshold, so the system uses the selected record.
- **Per "x" grams of carbohydrate:** A prescriber orders Insulin Aspart Subcutaneous 0.15 units/grams of carbohydrate (gCH2O) with each meal. At meal time, it is determined that the meal the patient is about to consume contains 30 gCH2O. The application is then able to calculate that the patient should receive 4.5 units of Insulin Aspart subcutaneously, and the 4.5 units would be the value used for dose screening.

Related Tables

[DRCM Calculation Required Type Code Description Table](#)

UNITS_DCC

DRCM Units Dose Calculation Code

a one-character alphanumeric column that indicates whether the DRCM dose units are represented in terms of the dose amount of the drug or in terms of the number of dosage units.

Valid Values Table

UNITS_DCC	UNITS_DCC_DESC
1	Dose in Dose Amount (for example, mg, mcg)
2	Dose in Dose Units (for example, tab, cap, ml)

Related Tables

[DRCM Dose Calculation Code Description Table](#)

[DRCM Unit Description Table](#)

UNITS_DCC_DESC

DRCM Units Dose Calculation Code Description

a 50-character alphanumeric column that provides the text description of the Units Dose Calculation Code ([UNITS_DCC](#)).

Valid Values Table

UNITS_DCC	UNITS_DCC_DESC
1	Dose in Dose Amount (for example, mg, mcg)
2	Dose in Dose Units (for example, tab, cap, ml)

Related Tables

[DRCM Dose Calculation Code Description Table](#)

UNITS_DESC

DRCM Dose Units Code Description

a 12-character alphanumeric column that provides a text description for the following DRCM units code columns:

- DR2_LODOSU
- DR2_HIDOSU
- DR2_MXDOSU
- DR2_MX1DSU
- DR2_MXLIFU
- DR2_UNITS
- NTE_SINGLE_DOSE_UNIT_CODE
- UNITS_RUI

i The information in this column might include abbreviations considered inappropriate by The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP). To comply with TJC and ISMP requirements, use the **UNIT_DESC_EXPANDED** column instead of this column for ordering and patient records.

Sample Valid Values Table

DR2_UNITS	UNITS_DESC
16	APPFUL/DAY
13	APPLIC/DAY
11	CM/DAY
06	DRP/DAY
14	IN/DAY
20	INH/DAY
08	MCG/DAY
19	MCG/KG
05	MCG/KG/MIN
09	MCG/MIN
01	MG/DAY
17	MG/H

03	MG/KG
02	MG/KG/DAY
18	MG/KG/H
12	MG/L
04	MG/M2/DAY
15	TAB-CAP/DAY
07	U/DAY
10	U/KG

Related Tables[DRCM Unit Description Table](#)

UNITS_RUI

DRCM Results Unit Code

a two-character alphanumeric column that identifies the dose units after the dose is multiplied or divided by the conversion factor.

- i** To define the Results Unit Code, match the code to the DRCM Dose Units Code Description (**UNITS_DESC**) column in the Dosage Range Check Unit Description Table.

Sample Valid Values Table

UNITS_RUI	UNITS_DESC
01	MG/DAY
02	MG/KG/DAY
03	MG/KG
04	MG/M2/DAY
05	MCG/KG/MIN
06	DRP/DAY
07	U/DAY
08	MCG/DAY
09	MCG/MIN
10	U/KG
11	CM/DAY
12	MG/L
13	APPLIC/DAY
14	IN/DAY
15	TAB-CAP/DAY
16	APPFUL/DAY
17	MG/H
18	MG/KG/H
19	MCG/KG
20	INH/DAY

Related Tables

DRCM Severity Level Description Table

DRCM Unit Description Table

UOM_ABBR

Strength Unit of Measure Abbreviation

a ten-character alphanumeric column that contains the common abbreviation of the unit of measure in the **UOM_DESC** column. This column may contain abbreviations that are considered inappropriate by The Joint Commission (TJC). For TJC-compliant abbreviations, use the **UOM_PREFERRED_DESC** column.

Sample Valid Values Table

UOM_ID	UOM_DESC	UOM_ABBR	UOM_PREFERRED_DESC
1	milligram	mg	mg
2	milliliter	mL	mL
3	gram	g	gram
4	microgram	mcg	mcg
6	liter	L	L
7	Percent	%	%
8	millimole	mmol	mmol
9	milliequivalent	mEq	mEq
10	unit	unit	unit
21	milliosmole	mOsm	mOsm
22	millicurie	mCi	mCi
23	milligrams, phenytoin equivalents	mg PE	mg PE
24	hour	hr	hour

Related Tables

[Ingredient Strength Unit of Measure Table](#)

UOM_ABBR_T

Strength Unit of Measure Abbreviation (Translated)

a 20-character alphanumeric column that contains the common abbreviation of the unit of measure in the (**UOM_DESC_T**) column. This column may contain abbreviations that are considered inappropriate by The Joint Commission (TJC). For TJC-compliant abbreviations, use the (**UOM_PREFERRED_DESC_T**) column.

Related Tables

[Ingredient Strength Unit of Measure Table--French](#)

UOM_DESC

Strength Unit of Measure Description

a 50-character alphanumeric column that contains the unabbreviated description of the unit of measure identified in the **UOM_ID** column.

Sample Valid Values Table

UOM_ID	UOM_DESC	UOM_ABBR	UOM_PREFERRED_DESC
1	milligram	mg	mg
2	milliliter	mL	mL
3	gram	g	gram
4	microgram	mcg	mcg
6	liter	L	L
7	Percent	%	%
8	millimole	mmol	mmol
9	milliequivalent	mEq	mEq
10	unit	unit	unit
21	milliosmole	mOsm	mOsm
22	millicurie	mCi	mCi
23	milligrams, phenytoin equivalents	mg PE	mg PE
24	hour	hr	hour

Related Tables

[Ingredient Strength Unit of Measure Table](#)

UOM_DESC_T

Strength Unit of Measure Description (Translated)

a 100-character alphanumeric column that contains the unabbreviated description of the unit of measure identified in the (**UOM_ID**) column.

Related Tables

[Ingredient Strength Unit of Measure Table--French](#)

UOM_ID

Strength Unit of Measure Identifier

an eight-character numeric column that represents the units of measure associated with a measurement.

Sample Valid Values Table

UOM_ID	UOM_DESC	UOM_ABBR	UOM_PREFERRED_DESC
1	milligram	mg	mg
2	milliliter	mL	mL
3	gram	g	gram
4	microgram	mcg	mcg
6	liter	L	L
7	Percent	%	%
8	millimole	mmol	mmol
9	milliequivalent	mEq	mEq
10	unit	unit	unit
21	milliosmole	mOsm	mOsm
22	millicurie	mCi	mCi
23	milligrams, phenytoin equivalents	mg PE	mg PE
24	hour	hr	hour

Related Tables

[Ingredient Strength Unit of Measure Table](#)

[Ingredient Strength Unit of Measure Table--French](#)

UOM_PREFERRED_DESC

Strength Unit of Measure Preferred Description

a 50-character alphanumeric column that contains an abbreviation of the unit of measure that is consistent with the current guidelines of The Joint Commission (TJC). This column may contain the same value as the **UOM_DESC** column or the **UOM_ABBR** column.

Sample Valid Values Table

UOM_ID	UOM_DESC	UOM_ABBR	UOM_PREFERRED_DESC
1	milligram	mg	mg
2	milliliter	mL	mL
3	gram	g	gram
4	microgram	mcg	mcg
6	liter	L	L
7	Percent	%	%
8	millimole	mmol	mmol
9	milliequivalent	mEq	mEq
10	unit	unit	unit
21	milliosmole	mOsm	mOsm
22	millicurie	mCi	mCi
23	milligrams, phenytoin equivalents	mg PE	mg PE
24	hour	hr	hour

Related Tables

[Ingredient Strength Unit of Measure Table](#)

UOM_PREFERRED_DESC_T

Strength Unit of Measure Preferred Description (Translated)

a 100-character alphanumeric column that contains an abbreviation of the unit of measure that is consistent with the current guidelines of The Joint Commission (TJC). This column may contain the same value as the (**UOM_DESC_T**) column or the (**UOM_ABBR_T**) column.

Related Tables

[Ingredient Strength Unit of Measure Table--French](#)

UPC_PACKAGE_CODE

UPC Package Code

a one-character numeric column that identifies the package code portion of the packaged product's Universal Package Code (UPC) or Global Trade Item Number (GTIN). The UPC package code is the first digit in the UPC number system and typically indicates the product's packaging level. Manufacturers use package code value (0 to 8) in combination with the UPC Product Code values to create a unique number for a specific product. See [UPC_PRODUCT_CODE](#) for more information.

For more information, see Global Trade Item Number ([GTIN](#)) in the Editorial Policies section of Packaged Product data.

The following example shows the GTIN, UPC Package Code, UPC Vendor Code (UPC_VENDOR_CODE), and UPC Product Code:

Example—UPC_PACKAGE_CODE and associated columns

GTIN	UPC_PACKAGE_CODE	UPC_VENDOR_CODE	UPC_PRODUCT_CODE
00005639405554	0	0005639	40555
30301780315126	3	0301780	31512
40832728000011	4	0832728	00001

Related Tables

[IDDF Canada Packaged Product Master Table](#)

UPC_PRODUCT_CODE

UPC Product Code

a five-character numeric column that identifies the product code portion of the packaged product's Universal Package Code (UPC) or Global Trade Item Number (GTIN). The UPC product code is the last five-digits in the UPC number system and typically represents a specific product.

For more information, see Global Trade Item Number ([GTIN](#)) in the Editorial Policies section of Packaged Product data.

The following example shows the GTIN, UPC Package Code (UPC_PACKAGE_CODE), UPC Vendor Code (UPC_VENDOR_CODE), and UPC Product Code:

Example—UPC_PRODUCT_CODE and associated columns

GTIN	UPC_PACKAGE_CODE	UPC_VENDOR_CODE	UPC_PRODUCT_CODE
00005639405554	0	0005639	40555
30301780315126	3	0301780	31512
40832728000011	4	0832728	00001

Related Tables

[IDDF Canada Packaged Product Master Table](#)

UPC_VENDOR_CODE

UPC Vendor Code

a seven-character numeric column that identifies the vendor code portion of the packaged product's Universal Package Code (UPC) or Global Trade Item Number (GTIN). The UPC vendor code is the middle seven-digits in the UPC number system and typically represents the manufacturer's code.

For more information, see Global Trade Item Number ([GTIN](#)) in the Editorial Policies section of Packaged Product data.

The following example shows the GTIN, UPC Package Code (UPC_PACKAGE_CODE), UPC Vendor Code, and UPC Product Code (UPC_PRODUCT_CODE)

Example—UPC_VENDOR_CODE and associated columns

GTIN	UPC_PACKAGE_CODE	UPC_VENDOR_CODE	UPC_PRODUCT_CODE
00005639405554	0	0005639	40555
30301780315126	3	0301780	31512
40832728000011	4	0832728	00001

Related Tables

[IDDF Canada Packaged Product Master Table](#)

USPCDE

United States Pharmacopeia Codes

This column is not currently being used.

Related Tables

Patient Education Master Table

V

VALUE_SEQUENCE_NO

VOLNUM

VOLUME

VOLUME_UOM_ID

VOLUN50

VOLUN50_T

VALUE_SEQUENCE_NO

Value Sequence Number

a four-character numeric column that provides the sequence number for an Attribute Value.

Related Tables

[Product Master Attribute Table](#)

VOLNUM

Drug Strength Volume Number

an eight-character numeric column that indicates the volume or weight of the drug product that contains the indicated amounts of active ingredients. This column must be used in conjunction with following columns to obtain a conventional strength expression of the drug product:

- Drug Strength Number (**STRNUM**)
- Drug Strength Units - 50 (**STRUN50**)
- Drug Strength Volume Units - 50 (**VOLUN50**)

The strength of a drug product is usually expressed in the metric system.

 This column contains values for the following products:

- Single-ingredient products
- Multiple ingredient formulations in which only one of the ingredients in the ingredient list is pharmacologically active

For example, when the conventional strength is 250MG/5ML, the values of each column are as follows:

STRNUM	STRUN50	VOLNUM	VOLUN50
00000250.000	MG	0005.000	ML

Related Tables

[Drug Strength Component Table](#)

[Drug Strength Component Table--French](#)

VOLUME

Clinical Formulation Ingredient Volume

a 20-character numeric column that contains the volume or the weight of the clinical formulation that contains the indicated amount of the ingredient. For example, 1000 mL of Clinical Formulation ID (GCN_SEQNO) 058554 contains 20 units of Oxytocin (HIC_SEQN 001307).

Use the value in this column together with the following columns to construct a complete strength expression:

- STRENGTH
- STRENGTH_UOM_ID
- VOLUME_UOM_ID

Example—VOLUME and associated columns

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UOM_ID	VOLUME	VOLUME_UOM_ID
058554	001307	20	10	1000	2
058529	000789	40	3	1000	2
058545	001307	10	10	1000	2
058546	001307	20	10	1000	2
058547	001307	30	10	1000	2

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

VOLUME_UOM_ID

Clinical Formulation Ingredient Volume Unit of Measure Identifier

an eight-character numeric column that represents the unit of measure associated with the volume. Use the value in this column to retrieve the unit of measure from the [Ingredient Strength Unit of Measure Table](#) (RSTRUOM0_STRENGTH_UOM).

Example—VOLUME_UOM_ID and associated columns

GCN_SEQNO	HIC_SEQN	STRENGTH	STRENGTH_UO_M_ID	VOLUME	VOLUME_UOM_ID
058554	001307	20	10	1000	2
058529	000789	40	3	1000	2
058545	001307	10	10	1000	2
058546	001307	20	10	1000	2
058547	001307	30	10	1000	2

Related Tables

[Clinical Formulation Ingredient Strength Component Table](#)

VOLUN50

Drug Strength Volume Units - 50

a 50-character alphanumeric column that must be used in conjunction with the following fields to obtain a conventional strength expression for the drug product:

- Drug Strength Number (**STRNUM**)
- Drug Strength Units - 50 (**STRUN50**)
- Drug Volume Number (**VOLNUM**)

This column complies with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

The strength of a drug product is usually expressed in the metric system.

This column contains values for the following products:

- Single-ingredient products
- Multiple ingredient formulations in which only one of the ingredients in the ingredient list is pharmacologically active

For example, when the conventional strength is 250MG/5ML, the values of each column are as follows:

STRNUM	STRUN50	VOLNUM	VOLUN50
00000250.000	MG	0005.000	ML

Where unit of measure symbols, such as percent (%), inch ("), and foot ('') are used in the STR60 description text, the parsed VOLUN50 description text will not contain these symbols. Unit of measure symbols, such as these are not allowed in the VOLUN50 column.

Related Tables

[Drug Strength Component Table](#)

VOLUN50_T

Drug Strength Volume Units - 50 (Translated)

a 75-character alphanumeric column that must be used in conjunction with the following fields to obtain a conventional strength expression for the drug product:

- Drug Strength Number ([STRNUM](#))
- Drug Strength Units - 50 (Translated) ([STRUN50_T](#))
- Drug Volume Number (Translated) ([VOLNUM](#))

This column complies with The Joint Commission (TJC) and Institute for Safe Medication Practices (ISMP) requirements to avoid inappropriate abbreviations. Use this column for ordering and patient records as part of a plan to comply with TJC and ISMP requirements.

The strength of a drug product is usually expressed in the metric system.

-  Where unit of measure symbols, such as percent (%), inch ("), and foot ('') are used in the STR60_T description text, the parsed VOLUN50_T description text will not contain these symbols. Unit of measure symbols, such as these are not allowed in the VOLUN50_T column.

Related Tables

[Drug Strength Component Table--French](#)