# Implementation Guide for CDA Release 2
# Human Clinical Study Data



Model Driven Health Tools
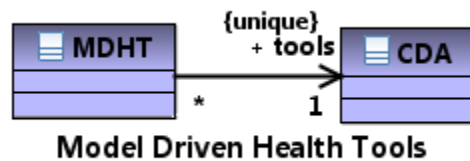
## Draft Document/Pre-ballot

# Contents

# Acknowledgments

This document defines the data requirements for using the HL7 Clinical Document Architecture for reporting the experience of subjects within a clinical trial.

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# Revision History

| Rev | Date | By Whom | Changes |
|-----|------|---------|---------|
| New | March 2012 | Mead Walker | Create a draft document |

# Chapter

# 1

## INTRODUCTION

**Topics:**

- *Overview*
- *Approach*
- *Implementation Guide Scope*
- *Audience*
- *Organization of This Guide*
- *Use of Templates*
- *Conventions Used in This Guide*

## Overview

This implementation guide provides a format for using HL7's Clinical Document Architecture to report on the experience of human subjects within a clinical trial. It is intended that the guide can be used to address the full breadth of the data reporting for clinical trial subjects. In particular, it will cover the functional scope addressed by the CDISC SDTM Implementation Guide

This initial draft focuses on the content included within the DM, SV, AE, and VS domains of the SDTM specification. The diagram outlines the high level structure of the clinical document that is defined.
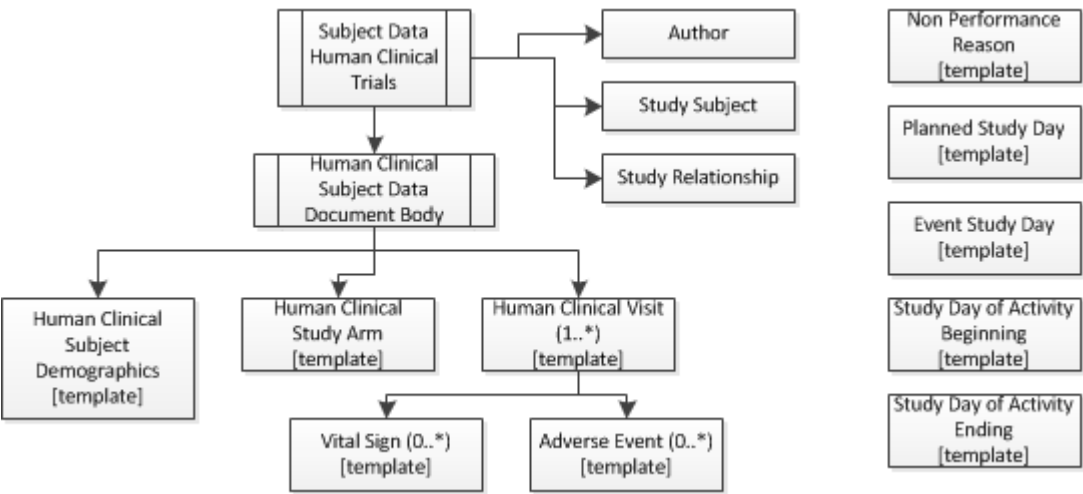


The document is generated from UML models developed in the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project. The data specifications have been formalized into computational models expressed in UML. These models are used by automated tooling to generate this publication, plus validation tools and Java libraries for implementers.

## Approach

Working with specifications generated from formal UML models provides the opportunity to work with the data from the perspective of the underlying model and electronic format and to explore many design issues thoroughly. Taking this as an initial step ensures that the data set developers and standards community can reach consensus prior to the larger commitment of time that would be required to bring the full data set into standard format.

This project supports reusability and ease of data collection through a standard data representation harmonized with work developed by the CDISC Submission Data Standards Team. The content of the Implementation Guide (IG) draws heavily from CDISC's SDTM Implementation Guide. That document was used as a source of data items, and for descriptive material to characterize many of the items. The content is balloted through Health Level Seven (HL7), and will be accepted by FDA as a recognized format for data submissions.

This Implementation Guide specifies a standard for electronic submission of human clinical trial subject data reports in a Clinical Document Architecture (CDA), Release 2 format.

## Implementation Guide Scope

TO DO. Use language from project scope statement

**Vocabulary considerations**

Text needs to be added to address our approach to vocabulary.

**Identifier considerations**

Text needs to be added to address our approach to managing identifiers.

# Audience

The audience for this document includes software developers and implementers who wish to develop specifications for the standards-based and machine processable submission of subject information from human clinical trials.

# Organization of This Guide

The requirements as laid out in the body of this document are subject to change per the policy on implementation guides (see section 13.02" Draft Standard for Trial Use Documents" within the HL7 Governance and Operations Manual, *http://www.hl7.org/documentcenter/public/membership/HL7_Governance_and_Operations_Manual.pdf* ).

## Templates

Templates are organized by document (see Document Templates), by section (see Section Templates), and by clinical statements (see Clinical Statement Templates). Within a section, templates are arranged hierarchically, where a more specific template is nested under the more generic template that it conforms to. See Templates by Containment for a listing of the higher level templates by containment; the appendix Templates Used in This Guide includes a table of all of the templates Organized Hierarchically.

## Vocabulary and Value Sets

Vocabularies recommended in this guide are from standard vocabularies. When SNOMED codes are used, rules defined in Using SNOMED CT in HL7 Version 3 are adhered to. In many cases, these vocabularies are further constrained into value sets for use within this guide. Value set names and OIDs are summarized in the table Summary of Value Sets. Each named value set in this summary table is stored ...(TBD).

# Use of Templates

When valued in an instance, the template identifier (`templateId`) signals the imposition of a set of template-defined constraints. The value of this attribute provides a unique identifier for the templates in question.

## Originator Responsibilities

An originator can apply a `templateId` to assert conformance with a particular template.

In the most general forms of CDA exchange, an originator need not apply a `templateId` for every template that an object in an instance document conforms to. This implementation guide asserts when `templateId`s are required for conformance.

## Recipient Responsibilities

A recipient may reject an instance that does not contain a particular `templateId` (e.g., a recipient looking to receive only CCD documents can reject an instance without the appropriate `templateId`).

A recipient may process objects in an instance document that do not contain a `templateId` (e.g., a recipient can process entries that contain Observation acts within a Problems section, even if the entries do not have `templateId`s).

# Conventions Used in This Guide

## Conformance Requirements

Conformance statements are grouped and identified by the name of the template, along with the templateId and the context of the template (e.g., ClinicalDocument, section, observation), which specifies the element under constraint. If a template is a specialization of another template, its first constraint indicates the more general template. In all cases where a more specific template conforms to a more general template, asserting the more specific template also implies conformance to the more general template. An example is shown below.

**Template name**

```
[<type of template>: templateId <XXXX.XX.XXX.XXX>]
```

Description of the template will be here .....

1. Conforms to <The template name> Template (templateId: XXXX<XX>XXX>YYY).
2. **SHALL** contain [1..1] @classCode = <AAA> <code display name> (CodeSystem: 123.456.789 <XXX> Class) **STATIC** (CONF:<number>).
3. .......

**Figure 1: Template name and "conforms to" appearance**

The conformance verb keyword at the start of a constraint ( **SHALL** , **SHOULD** , **MAY**, etc.) indicates business conformance, whereas the cardinality indicator (0..1, 1..1, 1..*, etc.) specifies the allowable occurrences within an instance. Thus, " **MAY** contain 0..1" and " **SHOULD** contain 0..1" both allow for a document to omit the particular component, but the latter is a stronger recommendation that the component be included if it is known.

The following cardinality indicators may be interpreted as follows:

0..1 as zero to one present
1..1 as one and only one present
2..2 as two must be present
1..* as one or more present
0..* as zero to many present

Value set bindings adhere to HL7 Vocabulary Working Group best practices, and include both a conformance verb ( **SHALL** , **SHOULD** , **MAY,** etc.) and an indication of **DYNAMIC** vs. **STATIC** binding. The use of **SHALL** requires that the component be valued with a member from the cited value set; however, in every case any HL7 "null" value such as other (OTH) or unknown (UNK) may be used.

Each constraint is uniquely identified (e.g., "CONF:605") by an identifier placed at or near the end of the constraint. These identifiers are not sequential as they are based on the order of creation of the constraint.

1. **SHALL** contain [1..1] component/structuredBody (CONF:4082).

    a. This component/structuredBody **SHOULD** contain [0..1] component (CONF:4130) such that it

       a. **SHALL** contain [1..1] Reporting Parameters section (templateId:2.16.840.1.113883.10.20.17.2.1) (CONF:4131).
    b. This component/structuredBody **SHALL** contain [1..1] component (CONF:4132) such that it

       a. **SHALL** contain [1..1] Patient data section - NCR (templateId:2.16.840.1.113883.10.20.17.2.5) (CONF:4133).

**Figure 2: Template-based conformance statements example**

## Keywords

The keywords SHALL, SHALL NOT, SHOULD, SHOULD NOT, MAY, and NEED NOT in this document are to be interpreted as described in the *HL7 Version 3 Publishing Facilitator's Guide*:

- **SHALL**: an absolute requirement
- **SHALL NOT**: an absolute prohibition against inclusion

- **SHOULD/SHOULD NOT**: valid reasons to include or ignore a particular item, but must be understood and carefully weighed
- **MAY/NEED NOT**: truly optional; can be included or omitted as the author decides with no implications

## XML Examples

XML samples appear in various figures in this document in a fixed-width font. Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (…) as shown in the example below. Currently, the XML samples have been created by applying examples based on the original implementation of the CCD, and may not be appropriate for this guide.

```
<ClinicalDocument xmlns='urn:hl7-org:v3'>
  ...
</ClinicalDocument>
```

**Figure 3: ClinicalDocument example**

XPath expressions are used in the narrative and conformance requirements to identify elements because they are familiar to many XML implementers.

# Chapter

# 2

## DOCUMENT TEMPLATES

This section contains the document level constraints for CDA documents that are compliant with this implementation guide.

**Chapter**

# 3

## SECTION TEMPLATES

**Chapter**

# 4

## CLINICAL STATEMENT TEMPLATES

This section of the Implementation Guide details the clinical statement entries referenced in the document section templates. The clinical statement entry templates are arranged alphabetically.

# Chapter

# 5

# OTHER CLASSES

**Topics:**

This section of the Implementation Guide describes other classes that are not CDA Clinical Documents, Sections, or Clinical Statements.

- *Anesthesia Sub Event List*
- *Anesthesia Sub Event List*
- *Anesthesia Sub Event List*
- *Anesthetist Assist*
- *Animal Patient*
- *Antibiotic Sensitivity Observation Event*
- *Antibody*
- *Antibody Identification*
- *Any*
- *Appointment*
- *Approved By*
- *Approver*
- *Approving Physician*
- *Asa Class Event*
- *Asp Clinic Visit Event*
- *Asp Diagnostic Condition*
- *Asp Examination*
- *Asp Patient*
- *Assessment*
- *Assessment Event*
- *Assessment Instrument Response*
- *Assessment Instrument Section*
- *Assessment Response Boolean*
- *Assessment Response Coded*
- *Assessment Response Date*
- *Assessment Response Money*
- *Assessment Response Numeric*
- *Assessment Response Percent*
- *Assessment Response String*
- *Assessment Section*
- *Assistant*
- *Attendant Care*
- *Attender*
- *Attender*
- *Audiometric Test*
- *Author*
- *Author*
- *Author*
- *Authority*
- *Authorization Policy*
- *Autopsy Event*
- *BCR Event*
- *Baricity Event*
- *Barium Enema*
- *Basic Policy*
- *Bed*

- *Bed Location*
- *Behavioral Health Assessment*
- *Behavioral Health Assessment Domain*
- *Behavioral Health Assessment/ Placement Tool*
- *Behavioral Health Electronic Health System*
- *Behavioral Health Summary Report*
- *Beneficiary*
- *Benefit Stage*
- *Benefits Package*
- *Billable Service*
- *Billing Event*
- *Billing Response*
- *Billing Sequence*
- *Billing Submission*
- *Biological Entity*
- *Biological Entity Specimen Collection*
- *Birth Address*
- *Birth Certificate*
- *Blood Bank Record*
- *Blood Bank Test*
- *Blood Component*
- *Blood Component Request*
- *Blood Pressure Observation*
- *Bodily Fluid Administration*
- *Bodily Fluid Product*
- *Boolean Question*
- *Bronchoscopy*
- *Camera Equipment Room*
- *Cancel Act*
- *Cancer Case*
- *Cancer Death Event*
- *Cancer Diagnosis Event*
- *Cancer History*
- *Cancer Patient Summary*
- *Cancer Protocol*
- *Cancer Staging*
- *Cancer Surgery*
- *Cancer Treatment*
- *Cancer Treatment Evaluation*
- *Cancer Treatment List Entry*
- *Cand P Exam Event*
- *Cand P Exam Request*
- *Capitation Arrangement*

- *Cardiac Surgery Evaluation*
- *Cardiac Surgery Event*
- *Care Agency*
- *Care Plan*
- *Care Plan Guideline*
- *Care Plan Team Member*
- *Care Protocol*
- *Cause Of Death*
- *Cause Of Death List Entry*
- *Cell Reinfusion*
- *Cell Salvage*
- *Cell Saver Event*
- *Census Event*
- *Certificate Of Medical Necessity*
- *Chart Review*
- *Chemotherapy*
- *Chest X Ray*
- *Cigarette Smoking*
- *Citizen*
- *Clearing House*
- *Clincal Assessment Ratio Observation*
- *Clincial Assessment Panel*
- *Clinic Stop*
- *Clinical Assessment Boolean Value*
- *Clinical Assessment Coded Value Set*
- *Clinical Assessment Num Units Value*
- *Clinical Assessment Numeric Value*
- *Clinical Assessment String Value*
- *Clinical Condition*
- *Clinical Document Event*
- *Clinical Document Section*
- *Clinical Information*
- *Clinical Observation*
- *Clinical Procedure Record*
- *Clinical Service*
- *Co Agent*
- *Co Insurance*
- *Co Payment*
- *Code*
- *Coded Ordinal*
- *Coded Question*
- *Collected Specimen*

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- *Comment Event*
- *Complication Event*
- *Composite Policy*
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- *Consent Author*
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- *Consenter*
- *Constraint Policy*
- *Consult Promise*
- *Consult Request*
- *Consult Result*
- *Contact Log Entry*
- *Contact Party*
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- *Co-pilot*
- *Coupon Redemption*
- *Coverage*
- *Covered Benefit*
- *Covered Patient*
- *Cs Extension Evaluation*
- *Ct Of Abdomen Pelvis*
- *Ct Scan Of Thorax*
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- *Daily Event Journal Entry*
- *Data Enterer*
- *Data Enterer*
- *Data Enterer*
- *Date*
- *Death Certificate*
- *Deductible*
- *Defined Patient Event*
- *Delegation Policy*
- *Dental Activity System Reporting*
- *Dental Classification*
- *Dental Material*
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- *Dental Treatment Plan*
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- *Diagnosis*
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- *Diagnosis List Entry*
- *Diagnosis Related Group*
- *Diagnosis Weighted Payment*
- *Diagnostic Imaging Event*
- *Diagnostic Summary*
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- *Dialysis Event*
- *Diet Journal Entry*
- *Diet List*
- *Diet Modification*
- *Diet Request*
- *Dietetics Consult Request*
- *Dietetics Order Action*
- *Dietetics Request*
- *Disability Observation*
- *Discharge Event*
- *Disease Risk*
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- *Dispensed Drug*
- *Division*
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- *Document Group*
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- *Dose Administrator*
- *Dose Measurer*
- *Double*
- *Drug Class*
- *Drug Coverage Status*
- *Drug Formulary*
- *Drug Ingredient*
- *Drug Pricing*
- *Drug Provision*
- *Drug Substitution*
- *Drug Use Evaluation*
- *Drug Use History*
- *Dss Unit*
- *Dyspnea*
- *Early Late Tray Request*
- *Education*
- *Educational Institution*
- *Electrode Position Event*
- *Eligbility Response*
- *Eligibiity Inquiry*
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- *Emergency Encounter*
- *Employee*
- *Employee*
- *Employment Status*

- *Encounter Event*
- *Enrollment Inquiry*
- *Enrollment Response*
- *Entered By*
- *Entitlement Program Administrator*
- *Entity*
- *Epidural*
- *Epidural Administration Event*
- *Equipment Measurement Event*
- *Equipment Measurement Result*
- *Equipment Sterilization Event*
- *Equipment Timing Event*
- *Etiology Observation*
- *Evaluation Event*
- *Event Capture*
- *Examination Event*
- *Exercise Journal Entry*
- *Experimental Unit*
- *Extension Evaluation*
- *FDA Person*
- *Facility Treating Specialty*
- *Family History*
- *Family Social History*
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- *Fee For Service Arrangement*
- *Fee Schedule*
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- *Related Medication Promise*
- *Related Order*
- *Related Order Action*
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- *Related Procedure*
- *Related Prosthetics Promise*
- *Related Report*
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- *Renew Act*
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- *Reportable Malignancy*
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- *Responsible Party*
- *Responsible Party*
- *Restraint Position Event*

- *Results Section*
- *Return*
- *Reviewer*
- *Risk Factor*
- *Room Location*
- *Ruled Incompetent*
- *Rx History*
- *Rx History Request*
- *Rx History Response*
- *Sci Administration*
- *Screening Tool*
- *Script Due*
- *Secondary Performer*
- *Secondary Provider*
- *Secondary Resident Interpreter*
- *Secondary Staff Interpreter*
- *Security Role*
- *Service Delivery Location*
- *Service Department*
- *Service Episode*
- *Service History*
- *Service Provision*
- *Set Of Orders*
- *Short Stay*
- *Sigmoidoscopy*
- *Skin Prep Event*
- *Skin Test Observation*
- *Skin Test Procedure*
- *Social History*
- *Social History Section*
- *Social Network*
- *Social Work Case*
- *Social Work Patient*
- *Social Work Placement*
- *Soft Tissue Exam*
- *Special Meals*
- *Specialty*
- *Specimen*
- *Specimen Assessment*
- *Specimen Collection Event*
- *Specimen Collection Promise*
- *Specimen Collection Request*
- *Specimen Container*
- *Specimen Handling*
- *Specimen Storage*
- *Specimen Transportation*
- *Spinal Cord Assessment*
- *SpinalCordAssessmentGoal*

- *Spinal Cord Assessment Question*
- *Spinal Cord Episode Of Care*
- *Spinal Cord Event*
- *Spinal Cord Impairment*
- *Spinal Cord Medical Centers Visted*
- *Spinal Cord Registration*
- *Stain Result*
- *Standing Order*
- *Standing Order*
- *Standing Order Food Item*
- *State*
- *Student*
- *Subject*
- *Subject Of Record*
- *Subscore*
- *Subscriber*
- *Subsequent Therapy Comment*
- *Substance*
- *Substance Abuse Assessment*
- *Substance Administration Criteron*
- *Substance Of Choice*
- *Suicidal Ideation Observation*
- *Suicide Attempt Or Completion*
- *Suicide Risk*
- *Supervisor Anesthetist*
- *Supplemental Feeding*
- *Supplemental Feeding Item*
- *Supplemental Feeding Request*
- *Supporter*
- *Surgeon Category*
- *Surgeon Function*
- *Surgery Assessment*
- *Surgery Assessment Question*
- *Surgery Assessment Result Boolean*
- *Surgery Assessment Result Coded*
- *Surgery Assessment Result Numeric*
- *Surgery Assessment Result Physical Quantity*
- *Surgery Assessment Result String*
- *Surgery Device*
- *Surgery Specialty*
- *Surgery Supervision Act*

- *Surgical Event*
- *Surgical Severity*
- *Suspected Agent*
- *Suspend Act*
- *System A*
- *Target Substance*
- *Technologist*
- *Telcom Patient*
- *Telecom Due*
- *Telecommunications*
- *Test Exception*
- *Tested Specimen*
- *Time Interval*
- *Time Quantity*
- *Titer*
- *Tourniquet Event*
- *Transcriber*
- *Transcription Event*
- *Transcriptionist*
- *Transfusion Data Enterer*
- *Transfusion Event*
- *Transfusion Reaction*
- *Transfusion Reaction Data Enterer*
- *Transportation Event*
- *Treatment*
- *Treatment Condition*
- *Treatment Plan Service*
- *Tribal Citizen*
- *Tribe*
- *Tubefeeding Product*
- *Tubefeeding Request*
- *Tumor Evaluation*
- *Tumor Status*
- *US Uniformed Services Person*
- *Us Mailing Address*
- *User*
- *User Identity*
- *User Role*
- *VA Code*
- *VA Person*
- *Vaccination Event*
- *Vaccine*
- *Vaccine Group*
- *Vaccine Information Statement*
- *Vehicle*
- *Vendor*
- *Verification*

- *Verifier*
- *Verifier*
- *Verifier*
- *Verify Status Enterer*
- *Veteran*
- *Veteran Dependent*
- *Victim Of Abuse Or Neglect Record*
- *Victim Of Intimate Partner Or Domestic Violence*
- *Violent Behavior Risk*
- *Virtual Encounter*
- *Visit Location*
- *Vital Sign Observation Event*
- *Vital Sign Qualifier*
- *Ward*
- *Witness*
- *Witness*
- *Womens Health Case Summary*
- *Womens Health Patient Notification*
- *Womens Health Patient Refusal*
- *Womens Health Procedure*
- *Womens Health Procedure Result*
- *Workers Comp Billable Event*
- *Workers Comp Claim*
- *Workstation Location*
- *_AB Oand RH Otyping*
- *_ Anatomic Measurement*
- *_ Antibody Identification*
- *_ Autopsy Document Reference*
- *_ Autopsy Event*
- *_ Bacteriology*
- *_ Billing Individual*
- *_ Biochemical*
- *_ Chemistry*
- *_ Coagulation*
- *_ Compatibility Testing*
- *_ Cyto Pathology*
- *_ Cytogenetics*
- *_ Diagnostic Immunology*
- *_ Electon Microscopy*
- *_ Endocrinology*
- *_ Flow Cytometry*
- *_ General Immunology*
- *_ Genetics*
- *_ Hematology*

- _ *Histo Compatibility*
- _ *Histopathology*
- _ *Immunohematology*
- _ *Lab*
- _ *Lab Report*
- _ *Medical Transport*
- _ *Medication Administration Component*
- _ *Medication Administration Event*
- _ *Medication Administration Promise*
- _ *Medication List*
- _ *Microbiology*
- _ *Molecular*
- _ *Mycobateriology*
- _ *Mycology*
- _ *Parasitology*
- _ *Pathology*
- _ *Prn Effectiveness Observation*
- _ *Rendering Individual*
- _ *Routine Chemistry*
- _ *Specialty*
- _ *Supplier*
- _ *Surgical Pathology*
- _ *Syphilis Serology*
- _ *Test Or Panel Ordered*
- _ *Test Performed*
- _ *Toxicology*
- _ *Unexpected Antibody Detection*
- _ *Urinalysis*
- _ *Virology*

## Abnormal Flag

    **1.**

## Abstract

This class has information related to abstract status. The abstract is a summary of pertinent information about the patient, the cancer, the treatment, and outcome

**1.** Contains exactly one [1..1] **abstractStatus** with data type *Code*

- Indicates the status of the abstract data entry. Possible values are Incomplete; Minimal data; Partial; Complete; etc.

**2.** Contains exactly one [1..1] **author**, where its type is *Author*

## Abstract Durable Encounter

**1.** Extends *Encounter Event*

**2.** Contains zero or one [0..1] **admissionDate** with data type *Point In Time*

- "This field contains the admit date/time. It is to be used if the event date/time is different than the admit date and time, i.e., a retroactive update. This field is also used to reflect the date/time of an outpatient/emergency patient registration." - HL7 Version 2.8, PV1-44

**3.** Contains exactly one [1..1] **admissionReason** with data type *String*

- "Contains the short description of the reason for patient admission." - HL7 Version 2.8, PV2-3

**4.** Contains zero or one [0..1] **admissionType** with data type *Code*

- "indicates the circumstances under which the patient was or will be admitted. ...use the official Universal Billing (UB) 04 2008 numeric codes found on form locator 14." - HL7 Version 2.8, PV1-4

**5.** Contains zero or one [0..1] **needsPreAdmitTest** with data type *Boolean*

- "Indicates whether the patient must have pre admission testing done in order to be admitted." - HL7 Version 2.8, PV1-12

**6.** Contains exactly one [1..1] **preAdmitAccount** with data type *String*

- "Uniquely identifies the patient's pre admit account. Some systems will continue to use the pre admit number as the billing number after the patient has been admitted." - HL7 Version 2.8, PV1-5

**7.** Contains zero or one [0..1] **discharge**, where its type is *Discharge Event*

## Abstract Encounter

**1.** Contains exactly one [1..1] **confidentiallyCode** with data type *Code*

- Contains a set of values that control the disclosure of information about this patient

**2.** Contains exactly one [1..1] **comments** with data type *String*

- Any remarks concerning this encounter.

**3.** Contains exactly one [1..1] **duration** with data type *Time Interval*

- "The time interval starting with the administrative onset of the encounter (e.g. admission, registration, patient arrival) and ending with the patient's departure (e.g. discharge). Note_1: for active encounters the end of the

effectiveTime range is the anticipated end date-time. Note_2: all messages, except the "nullify" message, require at least a starting time." (HL7). This is the start and end date/times of the Encounter.

4. Contains exactly one [1..1] **id** with data type *Id*

   • Unique identifier for this Encounter

5. Contains exactly one [1..1] **priority** with data type *Code*

   • "Contains the priority of the visit." - HL7 Version 2.8, PV2-25 Possible values include (from HL7 Table 217): Emergency; Urgent; Elective

6. Contains exactly one [1..1] **status** with data type *Code*

   • A value specifying the state of this patient encounter (based on the RIM Act class state machine), for example, active, aborted, completed

7. Contains zero or more [0..*] **diagnosisList**, where its type is *Diagnosis List Entry*

8. Contains exactly one [1..1] **patient**, where its type is *Patient*

   • The patient who is the subject of the Episode of Care.

9. Contains zero or more [0..*] **relatedEncounter**, where its type is *Related Encounter*

## Accession

1. Contains exactly one [1..1] **accessionDate** with data type *Point In Time*

   • The timestamp for the time the lab accessioned the lab order.

2. Contains exactly one [1..1] **accessionId** with data type *Id*

   • Identification of test(s) ordered. Used for identity of filler in the act of accepting a laboratory test, and entering the test into the laboratory's workload. An identifier assigned to the accepted laboratory test(s) identifying the samples, specimens, and results. "This field contains accession identifier(s) associated with the specimen...." - HL7 Version 2.8, SPM.30

## Accessory Event

Contains the Accessory that is required or used by a surgical device.

1. Contains exactly one [1..1] **accessoryUsed** with data type *Code*

   • Identifies the accessory being used for a surgical device.

2. Contains zero or more [0..*] **accessory**, where its type is *Surgery Device*

   • An accessory that has a secondary, supplementary, or subordinate function to the surgical device.

## Activity Log

This class contains a log of actions that have been taken on this outside film record.

1. Contains exactly one [1..1] **activityType** with data type *Code*

   • Indicates the type of action that was taken on this exam record during processing of this exam.. Possible values are EXAM ENTRY; EDIT BY CASE NO.; EDIT BY PATIENT; DIAGNOSIS ENTRY BY CASE NO.; EXAM STATUS TRACKING; CANCELLED; COMPLETE STATUS OVERRIDE; UPDATE STATUS; NO PURGING SPECIFIED; etc.

2. Contains exactly one [1..1] **comment** with data type *String*

   • The comments of the Technologist as the exam is edited - Information, pertinent to the editing of the exam.

3. Contains exactly one [1..1] **date** with data type *Point In Time*

- The date/time that the action was taken.

## Actual Outcome

1.  Contains exactly one [1..1] **dateTime** with data type *Point In Time*
2.  Contains exactly one [1..1] **outcome** with data type *String*
3.  Contains exactly one [1..1] **author**, where its type is *Author*

## Additional Orders List

A record of the sequence of the Additional Dietary Orders.

1.  Contains exactly one [1..1] **sequence** with data type *Integer*

- The sequence of the requested Additional Dietary Orders for this patient.

## Additive

1.  Contains exactly one [1..1] **productInstance**, where its type is *Medicinal Product Instance*
2.  Contains exactly one [1..1] **amount** with data type *Physical Quantity*

## Address

A physical address at which the person resides or may be contacted. 7/8/10: Renamed from MailingAddress to Address. Moved county from Person to here.

1.  Contains exactly one [1..1] **addressType** with data type *Address Type*

- Indicates the kind of address that is contained within this class. Examples include primaryHome, Work, etc. Note that in HL7 V3, this concept is part of the Address datatype (the 'use code'). This concept is made explicit in this Address class, because this is a platform-independent model - non V3 implementations will need other mechanisms to deal with the type.

2.  Contains exactly one [1..1] **effectiveDateRange** with data type *Date*

- The time period for which the address is a valid location for the person or organization. The datatype is a TimeInterval, which includes both a start date and end date, either of which may be empty.

3.  Contains exactly one [1..1] **line1** with data type *String*

- The first line of a mailing address. Unlike HL7, we have chosen not to break up the parts of each line.
- The first line of the street address. While this street address could be broken into several constituent parts, for the purpose of this logical model, the whole line is treated as a single concept.

4.  Contains zero or one [0..1] **line2** with data type *String*

- The second line of a mailing address. Unlike HL7, we have chosen not to break up the parts of each line.
- The second line of the street address. While this street address could be broken into several constituent parts, for the purpose of this logical model, the whole line is treated as a single concept.

5.  Contains zero or one [0..1] **line3** with data type *String*

- The third line of a mailing address. Unlike HL7, we have chosen not to break up the parts of each line.
- The first line of the street address. While this street address could be broken into several constituent parts, for the purpose of this logical model, the whole line is treated as a single concept. Note that the third line is rarely used.

6. Contains exactly one [1..1] `city` with data type *String*

   - An Address Part (ADXP) that contains the name of the city, town, village, or other community or delivery center.
   - "The name of the city, town, village, or other community or delivery center." - HL7 V3

7. Contains zero or one [0..1] `county` with data type *Code*

   - A region created by territorial division for the purpose of local government. In the United States, a county (or parish in Louisiana) is the largest administrative district within a state. This property is used primarily for statistical and pricing information (i.e., the same service may be more expensive in an affluent section of the country than in a less-affluent portion).

8. Contains exactly one [1..1] `postalCode` with data type *String*

   - An Address Part (ADXP) that contains a postal code designating a region defined by the postal service.
   - A code designating a region defined by the postal service

9. Contains zero or one [0..1] `country` with data type *Code*

   - An Address Part (ADXP) that contains the Country of the address.
   - A state or nation

## Adequater

1. Contains exactly one [1..1] `comment` with data type *String*
2. Contains exactly one [1..1] `time` with data type *Point In Time*

## Administrative Closure Act

This class contains attributes associated with the closure of a document by an Administrative Action. Whether the document was closed manually by an administrative person (in order to satisfy authentication requirements), or automatically by scanning a paper document bearing the signature of the patient (e.g., Consents, Advanced Directives, etc.) and not requiring the signature of an author.

1. Contains exactly one [1..1] `comment` with data type *String*

   - Contains any remarks about the administrative closure.

2. Contains exactly one [1..1] `dateTime` with data type *Point In Time*

   - The date/time that the document was closed by administrative action.

3. Contains exactly one [1..1] `mode` with data type *Code*

   - Indicates whether the document was closed manually by an administrative person (in order to satisfy authentication requirements), or automatically by scanning a paper document bearing the signature of the patient (e.g., Consents, Advanced Directives, etc.) and not requiring the signature of an author. Possible values include Manual or Scanned document

4. Contains exactly one [1..1] `reason` with data type *Code*

   - Provides a reason why the document was administratively closed.

5. Contains exactly one [1..1] `author`, where its type is *Individual Provider*

   - Identifies the person who closed the document.

## Administrative Encounter Event

A (perhaps artificial) grouping of encounters for administrative or financial purposes. There is no specific requirement that the encounters have anything particular in common.

1. Contains exactly one [1..1] **id** with data type *Id*

   - The unique identifier for the administrative grouping encounters.

2. Contains zero or more [0..*] **encounter**, where its type is *Encounter Event*

   - An interaction between a patient and a practitioner at a given location under the auspices of a given organization for the purpose of providing healthcare-related service(s).

## Admitter

"The practitioner who is responsible for admitting a patient to a patient encounter"- HL7 V3

1. Extends *Practitioner Participation Lite*

## Advance Directive

"An advance health care directive, also known as living will, personal directive, advance directive, or advance decision, are instructions given by individuals specifying what actions should be taken for their health in the event that they are no longer able to make decisions due to illness or incapacity, and appoints a person to make such decisions on their behalf." - wikipedia

1. Contains exactly one [1..1] **category** with data type *Code*

   - Categorizes the Advance Directive. Possible categorizations include Do Not Resuscitate, etc.

2. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*

   - The time period over which the Advance Directive is effective. Note that the end date is typically blank for active Advance Directives.

3. Contains exactly one [1..1] **status** with data type *Code*

   - Indicates the state of the Advance Directive record, as defined in the state-transition model in the HL7 RIM. Examples include Active, Pending, Terminated, etc.

4. Contains zero or one [0..1] **image** with data type *Image*

   - If the Advance Directive was originally a signed paper form and was scanned, this property will contain the scanned image.

5. Contains exactly one [1..1] **paperLocator** with data type *String*

   - Provides information to locate the original paper form, if applicable.

6. Contains exactly one [1..1] **comments** with data type *String*

   - Contains any remarks about the Advance Directive.

## Adverse Reaction Reporting Event

When adverse event or suspected event is originally reported to a caregiver. Adverse Event: Any incident where the use of a medication (drug or biologic), at any dose, a medical device (including in vitro diagnostics) or a special nutritional product (e.g., dietary supplement, infant formula or medical food) is suspected to have resulted in an adverse outcome in a patient.

1. Contains exactly one [1..1] **id** with data type *Id*

   - "A unique identifier for the Act." (HL7 3.0)

2. Contains exactly one [1..1] **comments** with data type *String*

   - Any comments or notes made in reference to the adverse event or suspected event.

3. Contains exactly one [1..1] **congenitalAnomaly** with data type *Boolean*

4. Contains exactly one [1..1] **dateReported** with data type *Point In Time*

   • Date when the adverse reaction or suspected reaction reported.
5. Contains exactly one [1..1] **dateDoctorNotified** with data type *Date*
6. Contains exactly one [1..1] **dateReportedToFda** with data type *Date*
7. Contains exactly one [1..1] **dateReportedToMfr** with data type *Date*
8. Contains exactly one [1..1] **dateReportedToVaers** with data type *Date*
9. Contains exactly one [1..1] **daysHospitalized** with data type *Integer*
10. Contains exactly one [1..1] **didPatientDieFromEvent** with data type *Boolean*
11. Contains exactly one [1..1] **didPatientRecover** with data type *Boolean*
12. Contains exactly one [1..1] **eventDate** with data type *Date*
13. Contains exactly one [1..1] **isReporterACareProvider** with data type *Boolean*

    • If the person reporting the Adverse Event is a Health Care Provider? Possible Values Include: Yes, No etc.
14. Contains exactly one [1..1] **otherRelatedHistory** with data type *String*
15. Contains exactly one [1..1] **patientConsentDate** with data type *Date*
16. Contains exactly one [1..1] **requiredErOrMdVisit** with data type *Boolean*
17. Contains exactly one [1..1] **requiredHospitalization** with data type *Boolean*
18. Contains exactly one [1..1] **resultedInPermanentDisability** with data type *Boolean*
19. Contains exactly one [1..1] **resultedInProlongedHospitalization** with data type *Boolean*
20. Contains exactly one [1..1] **requiredIntervention** with data type *Boolean*
21. Contains exactly one [1..1] **sendToFda** with data type *Boolean*
22. Contains exactly one [1..1] **sendToMfr** with data type *Boolean*
23. Contains exactly one [1..1] **severity** with data type *Code*
24. Contains exactly one [1..1] **wasDiscloseIdToMfr** with data type *Boolean*
25. Contains exactly one [1..1] **wasDoseRelated** with data type *Boolean*
26. Contains exactly one [1..1] **wasEventLifeThreatening** with data type *Boolean*
27. Contains exactly one [1..1] **wasReactionTreatedWithRx** with data type *Boolean*
28. Contains exactly one [1..1] **wasRelatedToNewDrug** with data type *Boolean*
29. Contains exactly one [1..1] **wasRelatedToTherapeuticFailure** with data type *Boolean*
30. Contains exactly one [1..1] **wasSeriousADR** with data type *Boolean*
31. Contains exactly one [1..1] **wasUnexpectedADR** with data type *Boolean*
32. Contains zero or more [0..*] **concommittantDrugs**, where its type is *Concommittant Drugs*
33. Contains zero or more [0..*] **intoleranceObservation**, where its type is *Intolerance Condition*

    • Related reactions for the event.
34. Contains zero or more [0..*] **relevantLabData**, where its type is *Relevant Lab Data*
35. Contains zero or more [0..*] **suspectedAgent**, where its type is *Suspected Agent*
36. Contains exactly one [1..1] **witness**, where its type is *Individual Provider*

## Agent

"1. a person who acts on behalf of another person, group, business, government, etc; representative 2. a person or thing that acts or has the power to act" - Collins

1. Contains exactly one [1..1] **person**, where its type is *Person*

   • The person playing the role of agent

## Air Flight

This class represents an example 'Act' class declaration as indicated by the stereotype Act . The HL7 Version Reference Information Model specifies the attributes of any classes intended to as 'a record of something that is being

done, has been done, can be done, or is intended or requested to be done. For example, in this case an Act class is used to document an air flight.

1. Contains exactly one [1..1] **flightSchedule**, where its type is *Flight Schedule*

   - This ActRelationship describes the relationship between FlightSchedule and AirFlight. ActRelationship is a directed association between a source Act and a target Act (in this case it is a bi-directional association) as specified by the HL7 V3 RIM. The relationships associated with an Act are considered properties of the source act object. This means that the author of an Act-instance is also considered the author of all of the act relationships that have this Act as their source, (though not necessarily of the target Acts of those relationships). There are no exceptions to this rule. The meaning and purpose of an ActRelationship is specified in the ActRelationship.typeCode attribute. Every ActRelationship instance is like an arrow with a point (headed to the target) and a butt (coming from the source). The functions that source and target Acts play in that association are defined for each ActRelationship type differently. For instance, in a composition relationship, the source is the composite and the targets are the components. In a reason-relationship the source is any Act and the target is the reason or indication for the source-Act.

   - This represents an association of an AirFlight to a FlightSchedule. The association will appear as a property of a class (AirFlight) and named for the far end of the association.

2. Contains zero or one [0..1] **effectiveTime** with data type *Point In Time*

   - This is an example attribute declaration. As seen here the attribute name is 'effectiveTime' and the type of that attribute is 'PointInTime'. PointInTime is a concrete/implementable class defined in the FHIM Datatypes package. The Class notation identifies that PointInTime is a UML class. FHIM domain models reuse the data types defined the HL7 Abstract Data Type specification. The stereotype TS specifies that the PointInTime class uses the extensions required for an HL7 TS abstract data type. The [0..1] notation specifies the cardinality/multiplicity allowed for the effectiveTime attribute by specifying the minimum and maximum number of occurrences for this attribute (e.g. minimum 0 and maximum 1 in this case). To specify that an attribute or association can repeat any number of time, the * notation is used for example [0..*] would specify that a an attribute may be omitted or it may be repeated without a predefined limit. The Default is a cardinality is [1..1] if not otherwise specified.

## Airline

This class represents an entity which is defined as 'a physical thing, group of physical things or an organization capable of participating in Acts while playing a specific role'. The Organization stereotype is a specialization of an Entity class and represents a formalized group of persons or other organizations with a common purpose and the infrastructure to carry out that purpose.

1.

## Alert Definition

1. Contains zero or more [0..*] **surrogateRecipient**, where its type is *Alert Surrogate Recipient*
2. Contains exactly one [1..1] **recipient**, where its type is *Individual Provider*
3. Contains zero or more [0..*] **alertInstance**, where its type is *Alert Event Instance*

## Alert Event Instance

1. Contains zero or one [0..1] **patient**, where its type is *Patient*
2. Contains exactly one [1..1] **daysForReviewer** with data type *Integer*
3. Contains exactly one [1..1] **daysForSupervisor** with data type *Integer*
4. Contains exactly one [1..1] **daysForSurrogate** with data type *Integer*
5. Contains exactly one [1..1] **forwardingComment** with data type *String*

6. Contains exactly one [1..1] **dateTime** with data type *Date*
7. Contains exactly one [1..1] **id** with data type *String*
8. Contains exactly one [1..1] **text** with data type *String*
9. Contains exactly one [1..1] **isNewAlert** with data type *Boolean*
10. Contains exactly one [1..1] **alertData** with data type *String*

## Alert Recipient Log

1. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
2. Contains exactly one [1..1] **recipient**, where its type is *Individual Provider*

## Alert Surrogate Recipient

1. Contains exactly one [1..1] **startDate** with data type *Point In Time*
2. Contains exactly one [1..1] **endDate** with data type *Point In Time*
3. Contains zero or one [0..1] **recipient**, where its type is *Individual Provider*

## Alert Tracking Event

This class contains attributes related to track the content and interactions with an alert. e.g. When the alert was generated, package id, Status, each user that the alert was sent to. Note that this class may not be supported by HDR but rather from other repository.

1. Contains zero or one [0..1] **associatedPackage** with data type *String*

   • Identifies the Package Associated to the alert. 1-30 characters in length.

2. Contains zero or one [0..1] **dataForProcessing** with data type *String*

   • This is a String of data elements returned to the application when the alert is selected for processing.

3. Contains zero or one [0..1] **dateCreated** with data type *Point In Time*

   • Date and time that the alert was created.

4. Contains zero or one [0..1] **dateAlertProcessed** with data type *Point In Time*

   • Indicates the date when the processing of the alert was completed.

5. Contains zero or one [0..1] **displayText** with data type *String*

   • Text diplayed for alert.

6. Contains exactly one [1..1] **name** with data type *String*

   • Name of Alert

7. Contains zero or one [0..1] **status** with data type *Code*

   • Indicates the the status of the alert. Possible values are UNREAD-REMOVED BY DATE; COMPLETELY READ; PARTIALLY READ - REMOVED; etc.

8. Contains exactly one [1..1] **author**, where its type is *Individual Provider*
9. Contains zero or more [0..*] **recipientLog**, where its type is *Alert Recipient Log*

## Alerts Section

This class corresponds to a document section intended to contain the alerts, allergies, and adverse reactions. This class provides context required for behavioral health interoperability.

1. Contains zero or more [0..*] **suicideAlert**, where its type is *Suicide Risk*
2. Contains zero or one [0..1] **violentBehaviorRisk**, where its type is *Violent Behavior Risk*

## All Lab Results

1. Contains zero or one [0..1] **referenceRange**, where its type is *Reference Range*

## Ambulatory Patient Group

APG is similar to DRG, except it's outpatient. Uses the diagnosis and a grouping of procedures to calculate an average for the service being provided

1. Extends *Diagnosis Weighted Payment*

## Amendment Act

Records the amendmenet of a clinical document.

1. Contains exactly one [1..1] **comment** with data type *String*

   • Contains any remarks about the amendment.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   • The date/time that the document was closed by amended.
3. Contains exactly one [1..1] **reason** with data type *Code*

   • Provides a reason why the document was amended.
4. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

   • Identifies the person who ammended the document.

## Ancillary Registration Event

The process by which the Veterans Affairs documents ancillary information to enroll the veteran in the Spinal Cord domain.

The process by which the Veterans Affairs documents ancillary information to enroll the veteran in the Spinal Cord domain.

1. Contains exactly one [1..1] **additionalVamcCare** with data type *Code*

   • CContains codeSet that identifies where in the VA where additional care was provided to the veteran
   • Contains the codeSet that identifies where in the VA where additional care was provided to the veteran
2. Contains exactly one [1..1] **id** with data type *Id*

   • Contains uniquie identifier for this ancillary Registration event.
   • Contains uniquie identifier for this ancillary Registration event.
3. Contains exactly one [1..1] **initialRehabDischargeDate** with data type *Point In Time*

   • Contains the date veteran was discharged from rehabilitation.
   • Contains the date veteran was discharged from rehabilitation.
4. Contains exactly one [1..1] **initialRehabSite** with data type *Code*

   • Contains the code set that identifies the veterans initial rehabilitation site
   • Contains the code set that identifies the veterans initial rehabilitation site

**5.** Contains exactly one [1..1] **nonVamcCare** with data type *String*

- Contains information in textual format about the Non Va Medical center that provided care for the Spinal Cord Injury patient.
- Contains information in textual format about the Non Va Medical center that provided care for the Spinal Cord Injury patient.

**6.** Contains exactly one [1..1] **remarks** with data type *String*

- Contains remarks to enhance care or outcome for veteran
- Contains remarks to enhance care or outcome for veteran

## Ancillary Service

A facility or provider, other than the patient's physician, that provides healthcare services to patients. For example, a laboratory, or a radiologist who reads a radiograph for the patient's physician.

**1.** Extends *Service Delivery Location*

## Ancillary Service Event

An interaction between a patient and a practitioner in which the practitioner does not exercise independent judgement. For example, a lab test. The lab technician may generate results, but the physician issues the diagnosis.

**1.** Extends *Abstract Encounter*

## Anesthesia Administrative Event

Manage a drug used to produce anesthesia.

**1.** Contains exactly one [1..1] **careDuration** with data type *Time Interval*

- Contains the date and time for the duration of the Anesthesia event during the surgery.

**2.** Contains exactly one [1..1] **id** with data type *Id*

- Uniquely identifies the anesthesia administration event.

**3.** Contains exactly one [1..1] **status** with data type *Code*

- The value specifying the state of this patient surgical encounter (based on the RIM Act class state machine), for example, active, aborted, completed

**4.** Contains exactly one [1..1] **postNoteDate** with data type *Point In Time*

- Date and Time of the post note.

## Anesthesia Event

A drug used to produce anesthesia. causing a loss of normal sensation or feeling. The loss of sensation and usually of consciousness without loss of vital functions artificially produced by the administration of one or more agents that block the passage of pain impulses along nerve pathways to the brain Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.

**1.** Contains exactly one [1..1] **inductionComplete** with data type *Point In Time*

- Date and Time the induction was completed.

**2.** Contains exactly one [1..1] **duration** with data type *Time Interval*

- Contains the duration of the anesthesia event.

3. Contains exactly one [1..1] **catheterRemovedDate** with data type *Point In Time*

   • Date and Time the catheter was removed. from the patient.

4. Contains exactly one [1..1] **anesthetistCategory** with data type *Code*

   • A Code set that identifies the category to which the Anesthesist belongs.

5. Contains exactly one [1..1] **supervisionLevel**, where its type is *Surgery Supervision Act*

   • Level of supervisory for the anesthesia event.

   • Level of supervisory for the anesthesia event.

6. Contains exactly one [1..1] **dispositionLocation**, where its type is *Service Delivery Location*

   • Transferring the Care from Anesthesist

   • Transferring the Care from Anesthesist

7. Contains at least one [1..*] **admin**, where its type is *Anesthesia Administrative Event*

   • To manage the Anesthesia administered.

8. Contains exactly one [1..1] **anesthesiaVentilator**  , where its type is *Surgery Device*

   • A device that circulates fresh air and expels stale or foul air. Medicine. A respirator.

9. Contains zero or one [0..1] **asaClass**, where its type is *Asa Class Event*

   • Contains the patient's physiologic status. Conforming to American Society of Anesthesiologists classification

10. Contains at least one [1..*] **anesthesiaAgent**, where its type is *Skin Prep Event*

    • Identifies the type of agent used to wash and prepare the anesthesia site

11. Contains at least one [1..*] **anesthesiaAssessment**, where its type is *Surgery Assessment*

    • A test or instrument, often a questionaire, used to evaluate or assess the patient's health, within the context of the anesthesia event.

12. Contains exactly one [1..1] **inductionCompleteDate** with data type *Point In Time*

    • Date and Time the induction was completed.

13. Contains exactly one [1..1] **precedent**, where its type is *Anesthesia Sub Event*

    • An order, arrangement, or significance in which the anestheis is done

14. Contains at least one [1..*] **anesthesiaDevice**, where its type is *Device*

    • A contrivance or an invention serving a particular purpose, especially a machine used to perform one or more relatively simple tasks." (The American Heritage Stedman's Medical Dictionary)

15. Contains zero or more [0..*] **anesthesiaComment**, where its type is *Comment Event*

    • Contains anesthesia comments regarding the Surigcal event.

## Anesthesia Sub Event

A drug used to produce anesthesia. causing a loss of normal sensation or feeling.

1. Contains zero or one [0..1] **approach** with data type *Code*

   • "The detailed anatomical site where the medication enters or is applied to the subject." (HL7 3.0)

2. Contains zero or one [0..1] **route** with data type *Code*

   • Contains a code identifying the route of the endotracheal tube to the trachea. Lieke values: O:ORAL, N:NASAL, T:TRACHEOSTOMY., etc.

3. Contains exactly one [1..1] **technique** with data type *Code*

   • Contains the anesthesia technique used during this encounter corresponding to the American Board of Anesthesiologists universal list of anesthesia techniques. Such values as a G:GENERAL, M:MONITORED ANESTHESIA CARE, S:SPINAL, E:EPIDURAL, O:OTHER, L:LOCAL, N:NO ANESTHESIA, etc.

4.  Contains exactly one [1..1] **dateExtubated** with data type *Point In Time*

    - This is the exact date and time that the endotracheal tube is pulled for the final time after the surgery. Enter NS if the date and time is unknown, and RI if the patient remains intubated >30 days after surgery.

5.  Contains zero or one [0..1] **intubation**, where its type is *Intubation Event*

    - The introduction of a tube into a hollow organ (as the trachea or intestine) to keep it open or restore its patency if obstructed

6.  Contains zero or one [0..1] **baricityCode**, where its type is *Baricity Event*

    - The weight of one substance compared to the weight of an equal volume of another substance at the same temperature.

7.  Contains exactly one [1..1] **anesthesiaTechnique**, where its type is *Epidural*

    - The skill and procedure with which a surgical operation or experiment, for example, is carried out. Source: The American Heritage Stedman's Medical Dictionary

## Anesthesia Sub Event List

A drug used to produce anesthesia. causing a loss of normal sensation or feeling.

1.  Contains exactly one [1..1] **precedence** with data type *Integer*

    - The sequence in which actions are associated.

## Anesthesia Sub Event List

A drug used to produce anesthesia. causing a loss of normal sensation or feeling.

1.  Contains exactly one [1..1] **precedence** with data type *Integer*

    - The sequence in which actions are associated.

## Anesthesia Sub Event List

A drug used to produce anesthesia. causing a loss of normal sensation or feeling.

1.  Contains exactly one [1..1] **precedence** with data type *Integer*

    - The sequence in which actions are associated.

## Anesthetist Assist

1.  Contains exactly one [1..1] **comment** with data type *String*
2.  Contains exactly one [1..1] **time** with data type *Point In Time*

## Animal Patient

A specialization of the Patient role containing information specific to non-human patients.

1.  Extends *Patient*
2.  Contains exactly one [1..1] **subject**, where its type is *Non Person Living Subject*

    - Identifies the animal which is playing the role of patient (AnimalPatient).

## Antibiotic Sensitivity Observation Event

This class represents a drug challenge. A drug challenge tests the susceptibility of a culture of the identified organism to an antibiotic.

1. Extends *Reportable Result*
2. Contains exactly one [1..1] **interpretation** with data type *Code*
   - An indication of the susceptibility of the identified organism to the test antibiotic. Possible values include: Intermediate, Moderately Susceptible, Resistant, Susceptible. In addition, Not Tested may occasionally used when an antibiotic that would commonly be tested was not for some reason.
3. Contains zero or one [0..1] **minimumInhibitoryConcentration** with data type *Real*
   - The minimum inhibitory dilution of the serum or body fluid, which inhibits reproduction of the patient's infecting organism. Fluid is drawn from the patient who is undergoing antibiotic therapy. Samples of the fluid is diluted between 1:2 and 1:16 and a sample of the infecting organism is cultured in each of the diluted samples.
4. Contains exactly one [1..1] **antibiotic**, where its type is *Ingredient*

## Antibody

1. Contains exactly one [1..1] **int** with data type *Integer*

## Antibody Identification

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **antibody**, where its type is *Antibody*

## Any

This *abstract* class is used to represent a datatype that is not known at the logical model level, but rather will be substituted with a (set of) real data type(s) when transformed to a given platform.
1.

## Appointment

"An arrangement to meet a person or be at a place at a certain time" - Dictionary.com The scheduled time of the Encounter.

1. Contains exactly one [1..1] **appointmentTime** with data type *Point In Time*
   - The date and time for the appointment of the scheduled visit.
2. Contains exactly one [1..1] **appointmentType** with data type *Code*
   - Identifies the Type of visit. Possible values include: IHS; Contract; Tribal; VA; 638 program; VA; etc.
3. Contains zero or one [0..1] **performer**, where its type is *Individual Provider*

## Approved By

1. Contains exactly one [1..1] **comment** with data type *String*

2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Approver

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Approving Physician

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Asa Class Event

Contains the patient's physiologic status. Conforming to American Society of Anesthesiologists classification
1. Contains exactly one [1..1] **asaClass** with data type *Code*
   • Contains the patient's physiologic status. Conforming to American Society of Anesthesiologists classification

## Asp Clinic Visit Event

Contains all data specific to each patient encounter. This includes the patient, the providers and students involved the diagnostic and procedure codes, the date and time of the visit, and the CDR cost account. (file 509850.6)
1. Contains exactly one [1..1] **date** with data type *Point In Time*
   • The date of ASP patient's clinic visit.
2. Contains exactly one [1..1] **nbrOfMinutes** with data type *Integer*
   • The TOTAL number of minutes that were used during this ASP clinic visit.
3. Contains exactly one [1..1] **aspDiagnosisList**, where its type is *Diagnosis List Entry*
   • Identification of an A&SP condition through a method of consistent analysis.
4. Contains exactly one [1..1] **aspPatient**, where its type is *Asp Patient*
5. Contains exactly one [1..1] **aspProcedureList**, where its type is *Procedure List Entry*
6. Contains zero or one [0..1] **audiologyTest**, where its type is *Audiometric Test*
7. Contains zero or one [0..1] **clinic**, where its type is *Service Delivery Location*
   • The name of the Clinic for Audiology and Speech Pathology, or Telephone/Rehab and Support. Equivalent to File 44.
8. Contains exactly one [1..1] **clinicStop**, where its type is *Clinic Stop*
9. Contains exactly one [1..1] **primaryPerformer**, where its type is *Individual Provider*
10. Contains zero or more [0..*] **secondaryPerformer**, where its type is *Individual Provider*
11. Contains zero or one [0..1] **verifier**, where its type is *Individual Provider*
12. Contains zero or one [0..1] **aspExamination**, where its type is *Asp Examination*

## Asp Diagnostic Condition

Contains pointers to a small subset of ICD-9CM codes which pertain to Audiology and Speech Pathology. Entries in this file are pointed to by the Diagnostic Code field in the A&SP Clinic Visit file. (file
1. Contains exactly one [1..1] **dateEntered** with data type *Point In Time*
   • The date the DIAGNOSTIC CONDITION was entered for the A&SP patient

2. Contains exactly one [1..1] **diagnosis**, where its type is *Diagnosis*
   - Identification of an A&SP condition through a method of consistent analysis.

## Asp Examination

1. Contains exactly one [1..1] **medicalHistory** with data type *String*
   - Provides the textual description of the subjective complaints like if the hearing loss is present, if the tinnitus is present etc.
2. Contains exactly one [1..1] **diagnosisSummary** with data type *String*
   - Provides a textual summary of audiologic test results.
3. Contains exactly one [1..1] **physicalExam** with data type *String*
   - Provides a textual description of the objective findings on pure tone threashold, speech recognition score etc. to evaluate the hearing loss.
4. Contains exactly one [1..1] **diagnosticAndClinicalTests** with data type *String*
   - Provides results of all diagnostic and clinical tests conducted in the examination report.

## Asp Patient

Contains identifying, demographic, and other clinical information for all patients seen in the Audiology and Speech Pathology clinics. The entries in this file are pointers to the Patient file #2. (file 509850.2)

1. Contains exactly one [1..1] **aspFileNbr** with data type *String*
   - An existing LOCAL file number associated with this Audiology and Speech Pathology patient.
2. Contains exactly one [1..1] **initialVisitDate** with data type *Point In Time*
   - The date of this patient's first visit to the Audiology and/or Speech Pathology clinic at this site.
3. Contains zero or one [0..1] **diagnosticCondition**, where its type is *Asp Diagnostic Condition*
   - Identifies ICD-9CM diagnostic condition code for the A&SP patient. Equivalent to a pointer to File 509850.2.
4. Contains exactly one [1..1] **patient**, where its type is *Patient*

## Assessment

This class describes any type of assessment (e.g. behavioral health issues) that is administered to a patient. Standardized assessment tools create scores and subscores used to determine the optimal placement and treatment plans for a patient. Standardized assessment tools facilitate the collection of accurate information in a reliable and consistent manner provide clinicians and treatment agencies with increased accountability and to identify patient progress over time and help adjust treatment plans.

1. Contains exactly one [1..1] **code** with data type *Code*
   - This attribute specifies the code identifying the main concept associated with the assessment. The code includes a text description of the concept along with the standard-based code.
2. Contains zero or one [0..1] **overallScore** with data type *Integer*
   - This attribute represents the overall score computed by the assessment tool based on the patient's answers to assessment questions. The value of the score is used to create a care/treatment plan to meet the needs of the client/patient.
3. Contains exactly one [1..1] **applicability** with data type *Code*
   - This attribute is intended to specify the whether the assessment is used for clinical, research, or program evaluation.

4. Contains zero or one [0..1] **assessmentPlacementTools**, where its type is *Behavioral Health Assessment/ Placement Tool*

   • Assessments are created using specific tools. While the assessment may identify the type of tools used, the tool used and its characteristics are out of scope.

5. Contains zero or more [0..*] **subscore**, where its type is *Subscore*

   • This attribute represents the subscore score computed by the assessment tool based on the patient's answers to assessment questions. A subscore may be associated with a specific domain or concept that is evaluated through the assessment (e.g. depression may receive a subscore in an overall mental health assessment).

## Assessment Event

A test or instrument, often a questionaire, used to evaluate or assess a patient's mental health, within the context of a healthcare encounter.

1. Contains exactly one [1..1] **assessmentInstrument** with data type *Code*

   • Code indicating the assessment tool performed as part of this clinical service.

2. Contains exactly one [1..1] **dateTimeAdmiinstered** with data type *Point In Time*

   • The date and time the assessment was performed.

3. Contains exactly one [1..1] **id** with data type *Id*

   • A unique identifier for the assessment event.

4. Contains exactly one [1..1] **remarks** with data type *String*

   • Contains comments regarding the responses to the group of related assessment questions.

5. Contains exactly one [1..1] **totalScore** with data type *Real*

   • The total of the numeric values associated with each response in the assessment.

6. Contains zero or more [0..*] **assesmentSection**, where its type is *Assessment Instrument Section*

   • A group of responses to assessment questions.

7. Contains exactly one [1..1] **patient**, where its type is *Patient*

8. Contains zero or one [0..1] **interviewer**, where its type is *Primary Performer*

9. Contains exactly one [1..1] **responsibleProvider**, where its type is *Responsible Party*

10. Contains exactly one [1..1] **dateTimeCompleted** with data type *Point In Time*

    • The date and time the assessment was performed.

11. Contains zero or one [0..1] **dataEnterer**, where its type is *Data Enterer*

12. Contains zero or more [0..*] **comments**, where its type is *Comment Event*

## Assessment Instrument Response

<HTML><HEAD> <META content="MSHTML 6.00.2900.3492" name=GENERATOR></HEAD> <BODY>The response given by a patient to a mental health assessment. </BODY></HTML>

1. Contains exactly one [1..1] **assessmentQuestion** with data type *Code*

   • Code indicating the question asked as part of the assessment tool performed.

2. Contains zero or one [0..1] **responseScore** with data type *Real*

## Assessment Instrument Section

A container for the responses to a section of the assessment.

1.  Contains zero or one [0..1] `sectionId` with data type *String*

    •   The unique identifier for the group of related responses.
2.  Contains zero or more [0..*] `response`, where its type is *Assessment Instrument Response*

    •   The response to an assessment question.
3.  Contains zero or one [0..1] `sectionScore` with data type *Real*

    •   The total of the numeric values associated with each response in the assessment.

## Assessment Response Boolean

Contains the response to a True/False assessment question.

1.  Extends *Assessment Instrument Response*
2.  Contains exactly one [1..1] `value` with data type *Boolean*

    •   The response to a True/False assessment question.

## Assessment Response Coded

Contains the response to an assessment question that can be expressed as a code; e.g., for turbidity, "cloudy" is a valid result. Similarly, for color, "Brown" is a valid result.

1.  Extends *Assessment Instrument Response*
2.  Contains exactly one [1..1] `value` with data type *Code*

    •   The value of a response to an assessment question that can be expressed as a code; e.g., for turbidity, "cloudy" is a valid result. Similarly, for color, "Brown" is a valid result.

## Assessment Response Date

Contains the response to a Date assessment question, for example, "when was the last time you had a alcoholic beverage?"

1.  Extends *Assessment Instrument Response*
2.  Contains exactly one [1..1] `value` with data type *Point In Time*

    •   The response to a True/False assessment question.

## Assessment Response Money

Contains the response to an assessment question that can be expressed as a monetary amount.

1.  Extends *Assessment Instrument Response*
2.  Contains exactly one [1..1] `value` with data type *Monetary Amount*

    •   Contains the response to an assessment question that can be expressed as a monetary amount.

## Assessment Response Numeric

Contains the response to an assessment question requiring a numeric answer.

1.  Extends *Assessment Instrument Response*

**2.** Contains exactly one [1..1] **value** with data type *Real*

- The response to an assessment question requiring a numeric answer.

## Assessment Response Percent

Contains the response to an assessment question that can be expressed as a percentage.

**1.** Extends *Assessment Instrument Response*
**2.** Contains exactly one [1..1] **value** with data type *Real*

- Contains the response to an assessment question that can be expressed as a percentage..

## Assessment Response String

Contains the response to an assessment question requiring a textual answer.

**1.** Extends *Assessment Instrument Response*
**2.** Contains exactly one [1..1] **value** with data type *String*

- The response to an assessment question requiring a textual answer.

## Assessment Section

This Class contains information that is pertinent to Assessment grouping or Section on the Assessment tool.

This Class contains information that is pertinent to Assessment grouping or Section on the Assessment tool.

**1.** Contains exactly one [1..1] **assessmentSection** with data type *Code*

- Contains the code set that identifies the section with in the Assessment form. SWLS Occupation and Education, Social, Attendant Care and Chart sf subscale.
- Contains the code set that identifies the section with in the Assessment form. SWLS , ASIA, FIN,FAM,CHARTSF etc.

**2.** Contains zero or one [0..1] **weight** with data type *Integer*

- Contains the weight for a particular assessment question in the sections
- Contains the weight for a particular assessment question in the sections

**3.** Contains zero or one [0..1] **score** with data type *Integer*

- Score for the section.
- Contains the weight for a particular assessment question in the sections

**4.** Contains exactly one [1..1] **bmi** with data type *Integer*

- Contains the body Mass index score
- Contains the body Mass index score

**5.** Contains at least one [1..*] **interruptTransferDate** with data type *Point In Time*

- Contains the date/s when attendant care is interrupted for the veteran
- Contains the date/s when attendant care is interrupted for the veteran

**6.** Contains exactly one [1..1] **interruptReturnDate** with data type *Point In Time*

- Contains the Returns date/s after attendant care is interrupted for the veteran
- Contains the Returns date/s after attendant care is interrupted for the veteran

**7.** Contains exactly one [1..1] **motorScoreLeft** with data type *Integer*

- Contains total leftside score of Motor ASIA assessment for the veteran

- Contains total leftside score of Motor ASIA assessment for the veteran
8. Contains exactly one [1..1] **motorScoreRight** with data type *Integer*

   - Contains total right side score of Motor ASIA assessment for the veteran
   - Contains total right side score of Motor ASIA assessment for the veteran
9. Contains exactly one [1..1] **sensoryLtScoreRight** with data type *Integer*

   - Contains total right side score of Light Touch ASIA assessment for the veteran
   - Contains total right side score of Motor ASIA assessment for the veteran
10. Contains exactly one [1..1] **sensoryLtScoreLeft** with data type *Integer*

   - Contains total left side score of Light Touch ASIA assessment for the veteran
   - Contains total left side score of Motor ASIA assessment for the veteran
11. Contains exactly one [1..1] **sensoryPPScoreRight** with data type *Integer*

   - Contains total right side score of pin prick ASIA assessment for the veteran
   - Contains total right side score of pin prick ASIA assessment for the veteran
12. Contains exactly one [1..1] **sensoryPPScoreLeft** with data type *Integer*

   - Contains total left side score of pin prick ASIA assessment for the veteran
   - Contains total left side score of pin prick ASIA assessment for the veteran

## Assistant

The HL7 Version 3 definition for the RoleLink stereotype is a connection between two roles expressing a dependency between those roles and permitting the authorization or nullification of a dependent role based on status changes in its causal or directing role.' This association class describes a type of relationship between roles (not between people or other entities). People (or other Entities) are primarily related by the player/scoper relationships for player's Role and more generally through their interactions (i.e. their participations in acts). The associations of RoleLink are source (Co-pilot) and target (Pilot). An association class is rendered by a dashed line from the association to the class rectangle. Each link in the association is an object of the association class.

1.

## Attendant Care

This Class contains information regarding attendant care for the spinal cord injury patient.

This Class contains information regarding attendant care for the spinal cord injury patient.

1. Contains exactly one [1..1] **attendantCareInterruptionDate** with data type *Point In Time*

   - Contains the date the assistant care for the veteran was interrupted.
   - Contains the date the assistant care for the veteran was interrupted.
2. Contains exactly one [1..1] **attendantLossDate** with data type *Point In Time*

   - Indicates dates when attendant loss resulted in an admission
   - Indicates dates when attendant loss resulted in an admission
3. Contains zero or one [0..1] **hours** with data type *Integer*

   - Contains the number hours paid for assistant care for the veteran
   - Contains the number hours paid for assistant care for the veteran
4. Contains exactly one [1..1] **hoursUnpaid** with data type *Integer*

   - Contains the number unpaid hours for assistant care for the veteran
   - Contains the number unpaid hours for assistant care for the veteran
5. Contains exactly one [1..1] **numberOfDays** with data type *Integer*

- Contains the total number of days assistant care for the veteran
- Contains the total number of days assistant care for the veteran

## Attender

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Attender

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Audiometric Test

1. Contains exactly one [1..1] **audiometricTestingDate** with data type *Point In Time*

   - The DATE OF AUDIOMETRIC TESTING when actual testing was done or the DATE OF AUDIOMETRIC TESTING from a past visit when testing is not done on the current date.
2. Contains exactly one [1..1] **leftThreshold2000Hz** with data type *Integer*

   - Indicates the pure tone threshold (Left) at 2000Hz for this patient.
3. Contains exactly one [1..1] **leftThreshold3000Hz** with data type *Integer*

   - Indicates the pure tone threshold (Left) at 3000Hz for this patient.
4. Contains exactly one [1..1] **leftNu6Score** with data type *Integer*

   - Indicates the patient's (Left) word recognition score for NU-6 Material.
5. Contains exactly one [1..1] **leftCidW22Score** with data type *Integer*

   - Indicates the patient's (Left) word recognition score for CID W-22 material.
6. Contains exactly one [1..1] **leftThreshold4000Hz** with data type *Integer*

   - Indicates the pure tone threshold (Left) at 4000Hz for this patient.
7. Contains exactly one [1..1] **leftThresholdAverage** with data type *Integer*

   - This is the average pure tone threshold for this patient's Left ear. This indicates the average of the 1000, 2000, 3000 and 4000Hz scores for the Left ear.
8. Contains exactly one [1..1] **leftThreshold1000Hz** with data type *Integer*

   - Indicates the pure tone threshold (Left) at 1000Hz for this patient.
9. Contains exactly one [1..1] **leftThreshold500Hz** with data type *Integer*

   - Indicates the patient's pure tone threshold (Left) at 500Hz. Used in determining whether or not a ratable hearing loss exists.
10. Contains exactly one [1..1] **leftCncScore** with data type *Integer*

    - Indicates the patient's (Left) word recognition score for Maryland CNC material.
11. Contains exactly one [1..1] **rightThreshold4000Hz** with data type *Integer*

    - Indicates the pure tone threshold (Right) at 4000Hz for this patient.
12. Contains exactly one [1..1] **rightNu6Score** with data type *Integer*

    - Indicates the patient's (Right) word recognition score for NU-6 Material.

13. Contains exactly one [1..1] **rightThreshold1000Hz** with data type *Integer*

    • Indicates the pure tone threshold (Right) at 1000Hz for this patient.

14. Contains exactly one [1..1] **rightThreshold500Hz** with data type *Integer*

    • Indicates the patient's pure tone threshold (Right) at 500Hz. Used in determining whether or not a ratable hearing loss exists.

15. Contains exactly one [1..1] **rightThreshold3000Hz** with data type *Integer*

    • Indicates the pure tone threshold (Right) at 3000Hz for this patient.

16. Contains exactly one [1..1] **rightCidW22Score** with data type *Integer*

    • Indiates the patient's (Right) word recognition score for CID W-22 material.

17. Contains exactly one [1..1] **rightCncScore** with data type *Integer*

    • Indicates the patient's (Right) word recognition score for Maryland CNC material.

18. Contains exactly one [1..1] **rightThreshold2000Hz** with data type *Integer*

    • Indicates the pure tone threshold (Right) at 2000Hz for this patient.

19. Contains exactly one [1..1] **rightThresholdAverage** with data type *Integer*

    • This is the average pure tone threshold for this patient's right ear. This indicates the average of the 1000, 2000, 3000 and 4000Hz scores for the right ear.

## Author

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

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1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Authority

This abstract class is used to designate the authority that issues the policy. Authority is an organization (either Jurisdictional or Provider) that is responsible for the Privacy Policy. This is the authority that grants authorization described in the privacy policy. This class is consistent with the 'Security Authority' specified by the ISO/IEC 15816 standard as 'The entity accountable for the administration of a security policy within a security domain.

1. Contains zero or one [0..1] **domain** with data type *Code*

    • The registered domain name of the healthcare organization that issues a specific privacy policy, used to uniquely identify the Authority.

2. Contains zero or more [0..*] **jurisdiction**, where its type is *Jurisdiction*

    • Represents a territorial authority organization that may be issuing privacy policies for a territory.

**3.** Contains zero or more [0..*] `organizationalProvider`, where its type is *Organizational Provider*

- Specifies a healthcare organization that which will promulgate privacy policies for use within its organization.

## Authorization Policy

This class is used to describe an authorization policy that may be exchanged across domains. An AuthorizationPolicy instance specifies 'permitted actions' according to ISO 22600-2. A positive/negative authorization policy defines the actions ( 'OperationType ') that a subject is permitted/forbidden to perform on a target. Actions encoded using the 'OperationType ' class represent the operations defined in the interface of a target object contrary to obligations/ refrain policies, which are interpreted by the subject while the object might be open in this perspective. The following are the attributes of an AuthorizationPolicy:

**1.** Extends *Basic Policy*
**2.** Contains exactly one [1..1] `levelOfAssurance` with data type *Integer*

- Level of Assurance (LoA) refers to the degree of certainty that (1) a resource owner has that a person's physical self has been adequately verified before credentials are issued by a registration authority, and (2) a user indeed owns the credentials they are subsequently presenting to access the resource. The requirements for the level of certainty at both ends of that set of transactions should be driven by a risk assessment based on the value of the resources being protected. LoA is relevant to authentication, authorization, and access control in an SOA environment. Relevant references: 'InCommon Credential Assessment Profile r0.3', 'NIST 800-63: Electronic Authentication Guideline', and 'NIST 800-53: Recommended Security Controls for Federal Information Systems'. Access may only be granted when authentication mechanisms of at least a given strength are used. That is indicated using the Level of Assurance.

**3.** Contains exactly one [1..1] `enablesAuthorization` with data type *Boolean*

- This attribute is used to specify if the policy enables or declines an authorization. If this attribute is set to 'true' the policy authorizes the actions and conditions pertaining to the resources referenced by the policy. Otherwise the authorization is declined.

## Autopsy Event

This class contains information about autopsy of cancer related death.

**1.** Contains exactly one [1..1] `autopsy` with data type *Code*

- Indicates a code (if known) whether a post-mortem examination was performed on the patient. Possible values are Patient alive; Autopsy performed; No autopsy performed; Patient expired, unknown if autopsy per formed; etc.

**2.** Contains exactly one [1..1] `autopsyDate` with data type *Point In Time*

- The date and time of autopsy.

**3.** Contains exactly one [1..1] `autopsySequenceNbr` with data type *String*

- The autopsy sequence number, usually stated as A-90-XXXX.

## BCR Event

This Class contains information about BCR treatment and support for the spinal cord injury of the veteran.

This Class contains information about BCR treatment and support for the spinal cord injury of the veteran.

**1.** Contains exactly one [1..1] `bcrCertifiedDate` with data type *Point In Time*

- Contains the date veteran was certified for bowel care.
- Contains the date veteran was certified for bowel care.

2. Contains exactly one [1..1] **bcrInd** with data type *Boolean*

   - Indicates whether veteran is reimbursed for bowel care
   - Indicates whether veteran is reimbursed for bowel care

3. Contains exactly one [1..1] **bcrProvider** with data type *String*

   - Contains code set that identifies the veterans bowel care provider
   - Contains code set that identifies the veterans bowel care provider

# Baricity Event

The weight of one substance compared to the weight of an equal volume of another substance at the same temperature.

1. Contains exactly one [1..1] **baricityCode** with data type *Code*

   - Contains a code corresponding to the baricity of the anesthesia drug fluid vehicle in relationship to the spinal fluid. Suggested Like values: 1:HYPERBARIC, 2:HYPOBARIC, 3:ISOBARIC.., etc.

# Barium Enema

The administration of barium in enema form for radiographic study of the lower intestinal tract. Also called contrast enema. [Source: The American Heritage Stedman's Medical Dictionary]

1. Contains exactly one [1..1] **bariumEnema** with data type *Code*

   - The results of the diagnostic test BARIUM ENEMA. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.

2. Contains exactly one [1..1] **dateOfBariumEnema** with data type *Point In Time*

   - The date off the diagnostic test BARIUM ENEMA.

# Basic Policy

This is the base class for a variety of policy types. It extends the abstract Policy class and provides additional attributes. This class may be used to instantiate specific policies. ISO-22600 specifies a security policy as 'plan or course of action adopted for providing computer security'. BasicPolicy a specialization of the abstract Policy class and thus inherits all its attributes. It also defines additional attributes and associations:

1. Extends *Policy*

2. Contains exactly one [1..1] **purposeOfUse** with data type *Code*

   - This attribute is used to specify the purpose to permit a specific type of action/operation according to the policy. The vocabulary analysis section provides additional illustrative values for the concept embodied by this attribute.

3. Contains zero or more [0..*] **allowableAccessTime** with data type *Time Interval*

   - An access may be allowed only during specific time periods of the day (e.g., 9 am to 5 pm).

4. Contains exactly one [1..1] **route** with data type *Code*

   - This attribute specifies whether access to protected information may only be granted for a specified route of access. For example, access may be restricted to remote users using a Virtual Private Network (VPN). The route is a context qualifier as specified by ISO/IEC 10164-9.

5. Contains zero or more [0..*] **operationType**, where its type is *Operation*

   - This association refers to the operation associated with the policy.

6. Contains zero or more [0..*] **informationReference**, where its type is *Information Reference*

- This association references the attributes of the information referenced in the policy.

# Bed

1. Contains exactly one [1..1] **id** with data type *Id*
2. Contains exactly one [1..1] **serialNbr** with data type *String*
3. Contains exactly one [1..1] **manufacturer** with data type *String*
4. Contains exactly one [1..1] **software** with data type *String*

# Bed Location

Identifies a bed at which services may be provided to a patient. This is equivalent to file 405.4 in VistA.

1. Extends *Location*
2. Contains exactly one [1..1] **description** with data type *String*

   - A description or comment concerning the bed at which services may be provided to a patient.
3. Contains exactly one [1..1] **isInService** with data type *Boolean*

   - Indicates whether the bed is in a condition and location to accomodate a patient.

# Behavioral Health Assessment

This is class describes a Behavioral Health Assessment containing both mental health and substance abuse related questions.

1. Extends *Assessment*
2. Contains exactly one [1..1] **patient**, where its type is *Patient Behavioral Health*

   - This directed association describes the relationship between a client/patient and their behavioral health assessments.
3. Contains zero or more [0..*] **problemArea**, where its type is *Behavioral Health Assessment Domain*

   - This association is used to identify the logical problem areas (e.g., FamilySocialHistoryArea, DrugUseHistoryArea, MedicationsArea, etc.) contained in the assessment.

# Behavioral Health Assessment Domain

This class is container for a set of questions and answers needed to evaluate behavioral health issues. This class description is consistent with the 'HL7 Implementation Guide for CDA Release 2: CDA Framework for Questionnaire Assessments, Release 1 '.

1. Contains zero or more [0..*] **codedQuestion** with data type *Coded Question*

   - This attribute corresponds to the set of questions that require a coded response.
2. Contains zero or more [0..*] **trueFalseQuestion** with data type *Boolean Question*

   - This attribute corresponds to the set of questions that require a true or false (boolean) response.
3. Contains zero or more [0..*] **numericQuestion** with data type *Integer Question*

   - This attribute corresponds to the set of questions that require a numeric (integer) response.
4. Contains zero or more [0..*] **frequencyQuestion** with data type *Frequency Question*

   - This attribute corresponds to the set of questions that require a frequency response.

5. Contains zero or more [0..*] **quantityQuestion** with data type *Quantity Question*

   - This attribute corresponds to the set of questions that require a quantity response.

6. Contains zero or more [0..*] **outcome**, where its type is *Outcome*

   - This is a directed association describing the relationship between an assessment and the outcome measurements related to that assessment.

# Behavioral Health Assessment/ Placement Tool

This class identifies the tool used to create Behavioral Health Assessments rather than the assessment data that results from applying the tool. Assessment/Placement Tools are used initiate treatment planning and guide the continuum of care (e.g. ASI, ASAM, PPCII, and GAIN).

1.

# Behavioral Health Electronic Health System

This system is conceptually equivalent to any information system (open-source or commercial-off-the-shelf - COTS) used by behavioral health providers. This system is expected to conform to the HL7 Behavioral Health Functional Profile.

1.

# Behavioral Health Summary Report

This class specifies the summary report intended to exchange selected information relevant across specialties. It may not include the details of an assessment but it will contain many data elements that are based on the information collected through the assessment and generated from its processing.

1. Extends *Clinical Document Event*
2. Contains zero or more [0..*] **personDemographics**, where its type is *Patient Behavioral Health*
3. Contains exactly one [1..1] **confidentialityCode** with data type *Code*

   - This attribute is used to specify that the content of this clinical document is sensitive because it contains Behavioral Health information. This attribute corresponds to the Act.confidentialityCode in the HL7 Version 3 RIM but is constrained to specify sensitivity and for the purpose of data segmentation.

4. Contains zero or more [0..*] **behavioralHealthSection**, where its type is *Results Section*
5. Contains zero or more [0..*] **alertsSection**, where its type is *Alerts Section*
6. Contains zero or one [0..1] **functionalStatusSection**, where its type is *Functional Status Section*
7. Contains zero or one [0..1] **socialHistorySection**, where its type is *Social History Section*
8. Contains zero or one [0..1] **problemSection**, where its type is *Problem Section*

# Beneficiary

The person to whom the proceeds of a life or health insurance policy are payable when the insured dies.

1.

# Benefit Stage

1. Contains exactly one [1..1] **amount** with data type *Monetary Amount*

2. Contains exactly one [1..1] **benefitStageType** with data type *Code*

## Benefits Package

Equivalent to an commercial insurance policy. A policy is a written document that serves as evidence of an insurance contract, including all details of the insurance coverage, policyholder, the insured, and the insurer.

1. Contains zero or more [0..*] **beneficiary**, where its type is *Beneficiary*

   • beneficiary.

2. Contains at least one [1..*] **coverage**, where its type is *Coverage*

   • coverage.

## Billable Service

1. Contains exactly one [1..1] **doesPatientAssignBenefits** with data type *Boolean*
2. Contains exactly one [1..1] **doesProviderAcceptAssignment** with data type *Boolean*
3. Contains exactly one [1..1] **medicaidTransactionId** with data type *Id*
4. Contains exactly one [1..1] **otherCoverageCode** with data type *Code*
5. Contains exactly one [1..1] **serviceDate** with data type *Point In Time*
6. Contains exactly one [1..1] **submissionClarificationCode** with data type *Code*
7. Contains exactly one [1..1] **transactionId** with data type *String*
8. Contains zero or one [0..1] **billableService**, where its type is *Procedure*
9. Contains zero or more [0..*] **billingSequence**, where its type is *Billing Sequence*
10. Contains exactly one [1..1] **financialArrangement**, where its type is *Financial Arrangement*
11. Contains zero or one [0..1] **placeOfService**, where its type is *Place Of Service*
12. Contains zero or one [0..1] **serviceDeliveryLocation**, where its type is *Service Delivery Location*
13. Contains zero or more [0..*] **workersCompBillableAct**, where its type is *Workers Comp Billable Event*
14. Contains zero or more [0..*] **priorAuthorizationRequest**, where its type is *Prior Authorization Request*
15. Contains zero or more [0..*] **certificateOfMedicalNecessity**, where its type is *Certificate Of Medical Necessity*
16. Contains zero or one [0..1] **eligibilityOverride**, where its type is *Eligibility Override*
17. Contains zero or more [0..*] **patientCaseManagement**, where its type is *Patient Case Management*
18. Contains exactly one [1..1] **patient**, where its type is *Covered Patient*

## Billing Event

1. Contains exactly one [1..1] **amountPaid** with data type *Monetary Amount*
2. Contains exactly one [1..1] **amountSubmitted** with data type *Monetary Amount*
3. Contains zero or more [0..*] **billingResponse**, where its type is *Billing Response*
4. Contains zero or more [0..*] **billingSubmission**, where its type is *Billing Submission*
5. Contains zero or more [0..*] **previousPaymentEvent**, where its type is *Previous Payment Event*
6. Contains zero or more [0..*] **processor**, where its type is *Processor*

## Billing Response

1. Contains exactly one [1..1] **costDeterminationBasis** with data type *Code*
2. Contains exactly one [1..1] **dispensingFee** with data type *Monetary Amount*

3. Contains exactly one [1..1] **flatSalesTaxAmount** with data type *Monetary Amount*
4. Contains exactly one [1..1] **incentiveAmount** with data type *Monetary Amount*
5. Contains exactly one [1..1] **ingredientCost** with data type *Monetary Amount*
6. Contains exactly one [1..1] **medicaidPaidAmount** with data type *Monetary Amount*
7. Contains exactly one [1..1] **patientPaidAmount** with data type *Monetary Amount*
8. Contains exactly one [1..1] **percentageSalesTaxAmount** with data type *Monetary Amount*
9. Contains exactly one [1..1] **percentageSalesTaxBasis** with data type *Code*
10. Contains exactly one [1..1] **percentageSalesTaxRate** with data type *Real*
11. Contains exactly one [1..1] **professionalServiceFee** with data type *Monetary Amount*
12. Contains exactly one [1..1] **usualAndCustomaryCharge** with data type *Monetary Amount*
13. Contains zero or more [0..*] **otherAmount**, where its type is *Other Amount*

## Billing Sequence

1. Contains exactly one [1..1] **sequenceNbr** with data type *Integer*
2. Contains exactly one [1..1] **billingEvent**, where its type is *Billing Event*

## Billing Submission

1. Contains exactly one [1..1] **costDeterminationBasis** with data type *Code*
2. Contains exactly one [1..1] **dispensingFee** with data type *Monetary Amount*
3. Contains exactly one [1..1] **flatSalesTaxAmount** with data type *Monetary Amount*
4. Contains exactly one [1..1] **incentiveAmount** with data type *Monetary Amount*
5. Contains exactly one [1..1] **ingredientCost** with data type *Monetary Amount*
6. Contains exactly one [1..1] **medicaidPaidAmount** with data type *Monetary Amount*
7. Contains zero or one [0..1] **narrative** with data type *String*
8. Contains exactly one [1..1] **patientPaidAmount** with data type *Monetary Amount*
9. Contains exactly one [1..1] **percentageSalesTaxAmount** with data type *Monetary Amount*
10. Contains exactly one [1..1] **percentageSalesTaxBasis** with data type *Code*
11. Contains exactly one [1..1] **percentageSalesTaxRate** with data type *Real*
12. Contains exactly one [1..1] **professionalServiceFee** with data type *Monetary Amount*
13. Contains exactly one [1..1] **usualAndCustomaryCharge** with data type *Monetary Amount*
14. Contains zero or more [0..*] **otherAmount**, where its type is *Other Amount*

## Biological Entity

This class represents an organism, whether it is currently alive or not. This class is equivalent to the HL7 V3 Living Subject class.

1. Extends *Entity*
2. Contains zero or one [0..1] **age** with data type *Physical Quantity*

   - The length of time that an organism has lived. Note that this property will typically be derived or calculated as needed, and as such may not always be present as a separate concept. Added 7/8/10 for vMR.
3. Contains zero or one [0..1] **ageAtDeath** with data type *Physical Quantity*

   - The length of time that a now-deceased organism had lived. Note that this property will typically be derived or calculated as needed, and as such may not always be present as a separate concept. Added 11/23/2010 for Problem List.
4. Contains zero or one [0..1] **biologicalSex** with data type *Code*

- The genetic sex of a living subject. Note that the biological sex is different from administrative gender which is defined for administrative purposes. Also note that "gender" is dependent on the behavioral, cultural, or psychological traits typically associated with one sex, rather than on the underlying genetic sex of the entity. This attribute reflects the actual genetic sex of the patient, regardless of whether that sex may have been altered. For example, a neutered dog or a person who has undergone a sex change operation will still have the same underlying chromosomes.

5. Contains exactly one [1..1] **dateOfBirth** with data type *Point In Time*
   - The date and time of the birth or hatching of the living subject. "This field contains the patient's date and time of birth." - HL7 Version 2.8, PID-7

6. Contains zero or one [0..1] **dateOfDeath** with data type *Point In Time*
   - "This field contains the date and time at which the patient death occurred." - HL7 Version 2.8, PID-29

7. Contains zero or more [0..*] **id** with data type *Id*
   - An identifier that uniquely identifies the individual. "This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient (e.g., medical record number, billing number, birth registry, national unique individual identifier, etc.)." - HL7 Version 2.8, PID-3

8. Contains zero or one [0..1] **isDeceased** with data type *Boolean*
   - "This field indicates whether the patient is deceased." - HL7 Version 2.8, PID-30

9. Contains zero or one [0..1] **sexPhenotype** with data type *Code*
   - Modifies the biological sex of an entity to cover any alterations made, such as neutering.

10. Contains zero or one [0..1] **multipleBirthOrder** with data type *Integer*
    - "When a patient was part of a multiple birth, a value (number) indicating the patient's birth order is entered in this field." - HL7 Version 2.8, PID-25 If the biological entity was born along with other siblings, this property indicates the order the entity was born. For example, for a set of twins, this property indicates which twin was born first, and which was born second.

11. Contains zero or one [0..1] **wasMultipleBirth** with data type *Boolean*
    - "This field indicates whether the patient was part of a multiple birth." - HL7 Version 2.8, PID-24 If the biological entity was born along with other siblings, this property indicates the order the entity was born. For example, for a set of twins, this property indicates which twin was born first, and which was born second. An indication as to whether the person was born along with other siblings as part of a single pregnancy. This property is primarily used to distinguish records for newborn infants who have not yet have been given names. This property may also be used in research situations to distinguish individuals who were part of a multi-child pregnancy.

12. Contains zero or one [0..1] **asPatient**, where its type is *Patient*
    - A role of a person or animal as a recipient of health care services from a healthcare provider. Note that if the person or animal is a research subject, a different association (asResearchSubject) is used.

13. Contains zero or more [0..*] **asResearchSubject**, where its type is *Research Subject*
    - A physical entity which is the primary unit of operational and/or administrative interest in a study. For example, a person who is registered in a study as a recipient of an investigational product or as a control. May also include individuals who are being screened for studies, or individuals participating in observational or other studies. Other examples may include a pacemaker, a fuse that can be used in medical devices, a cow, a farm, a pen of pigs, a tissue sample from a tissue bank, etc. NOTE: StudySubjects within a study are all of the same type. An entity registered in a study is not part of another entity registered in the same study.

14. Contains zero or more [0..*] **causeOfDeathListEntry**, where its type is *Cause Of Death List Entry*
    - An ordered list of the condition(s) that caused or contributed to the death of the organism. When more than one value exists, the ordered list shall begin with the Immediate Cause of death followed by the Cause Leading to the Immediate cause, followed by the Next Antecedent cause of death, ending with the Underlying cause of death. For Humans: The U.S. Standard Certificate of Death (Rev 11/2003) requires the entry of "the chain of events-diseases, injuries, or complications-that directly caused the death", beginning with the "immediate cause (final disease or condition resulting in death)" and ending with the "underlying cause (disease or injury that initiated the events resulting in death)." Note the CDC Center for Vital Statistics is required to report this

information to the World Health Organization (WHO). The WHO requires that this data be reported using ICD-10 codes. For Non-humans: The coding system to be used for non-humans has not been determined at this time. Added 11/23/2010 for Problem List.

## Biological Entity Specimen Collection

1. Extends *Specimen Collection Event*
2. Contains exactly one [1..1] **bodySite** with data type *Code*
3. Contains exactly one [1..1] **collectionSite** with data type *Code*
   - "This field differs from SPM-8-Specimen Source Site in those cases where the source site must be approached via a particular site (e.g., anatomic location). For example, in the case where a liver biopsy is obtained via a percutaneous needle, the collection site would be the point of entry of the needle. For venous blood collected from the left radial vein, the collection site could be "antecubital fossa"." - HL7 Version 2.8, SPM.10
4. Contains exactly one [1..1] **sourceSite** with data type *Code*
   - "Specifies the source from which the specimen was obtained. For example, in the case where a liver biopsy is obtained via a percutaneous needle, the source would be liver. " - HL7 Version 2.8, SPM.8
5. Contains exactly one [1..1] **sourceSiteModifier** with data type *Code*
   - "This field contains modifying or qualifying description(s) about the specimen source site. The use of this attribute is to modify, qualify or further specify, the entity described by SPM-8 Specimen Source Site. This is particularly useful when the code set used in SPM-8 does not provide the precision required to fully describe the site from which the specimen originated. For example, if the specimen source site was precisely described as left radial vein but the code set employed only provided radial vein, this attribute could be employed to add the modifier left. " - HL7 Version 2.8, SPM.9

## Birth Address

A simplified version of a Postal Address which contains only a city, state, and country, all of which are optional. This is used to record a person's place of birth, used for identificaton and statistical purposes.

1. Contains zero or one [0..1] **city** with data type *String*
   - An Address Part (ADXP) that contains the name of the city, town, village, or other community or delivery center.
   - "The name of the city, town, village, or other community or delivery center." - HL7 V3
2. Contains zero or one [0..1] **state** with data type *String*
   - An Address Part (ADXP) that contains a sub-unit of a state or province. A sub-unit of a country with limited sovereignty in a federally organized country.
   - An Address Part (ADXP) that contains the state or province. A state or provinces is a sub-unit of a country with limited sovereignty in a federally organized country.
3. Contains zero or one [0..1] **country** with data type *Code*
   - An Address Part (ADXP) that contains the Country of the address.
   - A state or nation

## Birth Certificate

1. Contains exactly one [1..1] **apgarScore5Minutes** with data type *Coded Ordinal*
   - US Standard Certificate Of Birth Field 51 Contains the Apgar score (which is a simple and repeatable method to quickly and summarily assess the health of newborn children immediately after birth) 5 minutes after the birth of the infant. "The test is generally done at one and five minutes after birth, and may be repeated later if

the score is and remains low. Scores 3 and below are generally regarded as critically low, 4 to 6 fairly low, and 7 to 10 generally normal." - Wikipedia.

2. Contains zero or one [0..1] **apgarScore10Minutes** with data type *Coded Ordinal*

  - US Standard Certificate Of Birth Field 51 Contains the Apgar score (which is a simple and repeatable method to quickly and summarily assess the health of newborn children immediately after birth) 10 minutes after the birth of the infant. This property is required if the 5 minute Apgar score is less than 6. "The test is generally done at one and five minutes after birth, and may be repeated later if the score is and remains low. Scores 3 and below are generally regarded as critically low, 4 to 6 fairly low, and 7 to 10 generally normal." - Wikipedia.

3. Contains exactly one [1..1] **attendantId** with data type *Id*
4. Contains exactly one [1..1] **attendantName** with data type *Person Name*

  - US Standard Certificate Of Birth Field 27 Indicates the name of the attending clinician.

5. Contains exactly one [1..1] **attendantTitleCategory** with data type *Code*

  - US Standard Certificate Of Birth Field 27 Indicates the title of the attending clinician. Choices include: MD, DO, CNM/CM, Other Midwife, or Other (if Other is chosen, attendantTitleOther is used to specify.

6. Contains exactly one [1..1] **attendantTitleOther** with data type *String*

  - US Standard Certificate Of Birth Field 27 Indicates the title of the attending clinician. If attendantTitleCategory is "Other", then this property is used to specify. Otherwise this property is not used.

7. Contains exactly one [1..1] **birthPlaceAddress** with data type *Address*

  - US Standard Certificate Of Birth Field 06 and 07 The address of the location (i.e., institution, home, in the car on the way to the hospital) at which the infant was born.

8. Contains exactly one [1..1] **birthPlaceCategory** with data type *Code*

  - US Standard Certificate Of Birth Field 26 Categorizes the place at which the birth occured. Possible values include: Hospital; Freestanding birthing center; Home birth*; Clinic/Doctor's office; or Other**. * = if Home birth is chosen, wasHomeDeliveryPlanned is used to indicate whether a home delivery was planned. ** = if other is chosen, birthPlaceOther provides a free text in which to describe the location.

9. Contains exactly one [1..1] **birthPlaceFacility** with data type *String*

  - US Standard Certificate Of Birth Field 05 The name of the facility at which the infant was born. If not a facility (e.g., at home), the street address goes in field 5 on the report, but would be retreived from the BirthPlaceAddress property; this property would be unused.

10. Contains exactly one [1..1] **birthPlaceFacilityId** with data type *Id*

  - US Standard Certificate Of Birth Field 17 Identifies the faclity at which the child was born. Should be the National Provider Identifier for the facility.

11. Contains exactly one [1..1] **birthPlaceOther** with data type *String*

  - US Standard Certificate Of Birth Field 26 Provides further details in free text regarding the place at which the birth occured. Used only when birthPlaceCategory is "Other".

12. Contains exactly one [1..1] **birthWeight** with data type *Physical Quantity*

  - US Standard Certificate Of Birth Field 49 The weight of the infant at birth. Can be expressed in either pounds/ounces or grams. The use of grams is preferred.

13. Contains exactly one [1..1] **certifierName** with data type *Person Name*

  - US Standard Certificate Of Birth Field 11 Indicates the name of the person who certified the birth of the infant.

14. Contains exactly one [1..1] **certifierTitleCategory** with data type *Code*

  - US Standard Certificate Of Birth Field 11 Indicates the title of the person who certified the birth of the infant. Choices include: MD, DO, Hospital Administrator, CNM/CM, Other Midwife, or Other (if Other is chosen, certifierTitleOther is used to specify.

15. Contains exactly one [1..1] **certifierTitleOther** with data type *String*

  - US Standard Certificate Of Birth Field 11 Indicates the title of the person who certified the birth of the infant. If certifierTitleCategory is "Other", then this property is used to specify. Otherwise this property is not used.

16. Contains exactly one [1..1] **dateCertified** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 12 Indicates the date that the infant's birth was certified.

17. Contains exactly one [1..1] **dateFiledByRegistrar** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 13 Indicates the date that the birth certificate was filed by the registrar.

18. Contains exactly one [1..1] **dateLastNormalMensesBegan** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 39 Indicates the date on which the infant's mother last experienced the beginning of a normal menstrual cycle.

19. Contains exactly one [1..1] **dateOfFirstPrenatalVisit** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 29a Provides the date of the first pre-natal care visit for the pregnancy resulting in this birth. Note that Box 29a also has a "No Prenatal care" checkbox, which is not modeled; it is assumed that this box can be calculated based on whether or not numberOfPrenatalVisits = 0.

20. Contains zero or one [0..1] **dateOfLastLiveBirth** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 35c Indicates the date on which the last child was born alive (e.g., not stillborn) to this infant's mother before this infant was born (i.e., not including this child).

21. Contains exactly one [1..1] **dateOfLastOtherPregnancyOutcome** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 36b Indicates the date on which the last "other pregnancy outcome (spontaneous or induced losses or ectopic pregnancies)" occurred.

22. Contains exactly one [1..1] **dateOfLastPrenatalVisit** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 29b Provides the date of the last pre-natal care visit for the pregnancy resulting in this birth.

23. Contains exactly one [1..1] **didMotherReceiveWicFood** with data type *Boolean*

   - US Standard Certificate Of Birth Field 34 Indicates whether the mother received Women and Infant Children (WIC) food assistance for herself during this pregnancy.

24. Contains exactly one [1..1] **fatherHispanicOriginCategory** with data type *Code*

   - US Standard Certificate Of Birth Field 24 Indicates whether the infant's father is of Hispanic origin, and if so, further categorizes her ethnicity. Possible values include: No, not Spanish/Hispanic/Latino; Yes, Mexican, Mexican American, Chicano; Yes, Puerto Rican; Yes, Cuban; and Yes, other Spanish/Hispanic/Latino. If "Yes, other Spanish/Hispanic/Latino" is chosen, then the fatherHispanicOriginOther is used to further specify.

25. Contains exactly one [1..1] **fatherHispanicOriginOther** with data type *String*

   - US Standard Certificate Of Birth Field 24 If fatherHispanicOriginCategory is "Yes, other Spanish/Hispanic/Latino", then this free text property is used to further specify the infant's father's ethnicity.

26. Contains exactly one [1..1] **fathersBirthAddress** with data type *Birth Address*

   - US Standard Certificate Of Birth Field 10c The birthplace (limited to State, Territory, or Foreign Country) of the infant's mother.

27. Contains exactly one [1..1] **fathersCurrentLegalName** with data type *Person Name*

   - US Standard Certificate Of Birth Field 10a The legal name of the infant's father at the time of the infant's birth.

28. Contains exactly one [1..1] **fathersDateOfBirth** with data type *Point In Time*

   - US Standard Certificate Of Birth Field 10b The infant's father's date of birth.

29. Contains exactly one [1..1] **fathersEducationLevel** with data type *Code*

   - US Standard Certificate Of Birth Field 23 Categorizes the degree or level of school completed by the infant's father at the time of delivery. Possible values include: 8th grade or less; 9th-12th grade, no diploma; High school graduate or GED completed; Some college credit, but no degree; Associate degree (e.g., AA, AS); Bachelor's degree (e.g., BA, AB, BS); Master's degree (e.g., MA, MS, MEng, MSW, MBA); Doctorate (e.g., PhD, EdD), or Professional degree (e.g., MD, DDS, DVM, LLB, JD).

30. Contains exactly one [1..1] **fathersRaceCategory** with data type *Code*

   - US Standard Certificate Of Birth Field 25 Indicates the race(s) that the infant's father considers himself to be. Possible values include: White; Black, or African American; American Indian or Alaska Native**; Asian

Indian; Chinese; Filipino; Japanese; Korean; Vietnamese; Other Asian\*\*; Native Hawaiian; Guamanian or Chamorro; Samoan; Other Pacific Islander\*\*; Other\*\*. \*\*If Alaska Native is chosen, the fathersRaceOther free text field is used to specify the name of his enrolled or principal tribe; if Other Asian, Other Pacific Islander, or Other is chosen, the fathersRaceOther free text field is used to provide further specificity.

31. Contains exactly one [1..1] **fathersRaceOther** with data type *String*
    - US Standard Certificate Of Birth Field 25 Provides further specificity for the infant's father's race. Used only if fathersRaceCategory is Alaska Native, Other Asian, Other Pacific Islander, or Other.
32. Contains exactly one [1..1] **fathersSsn** with data type *String*
    - US Standard Certificate Of Birth Field 19 The Social Security Number of the infant's father.
33. Contains exactly one [1..1] **hasPaternityAcknowledgementBeenSigned** with data type *Boolean*
    - US Standard Certificate Of Birth Field 15 If the isMotherMarried property is false, i.e., the infant's mother was not married at birth, conception, or any time in between, this property indicates whether the father has signed a paternity acknowlegement.
34. Contains exactly one [1..1] **infantTransferredToFacility** with data type *String*
    - US Standard Certificate Of Birth Field 56 If the infant was transferred to another facility within 24 hours of delivery (i.e., wasInfantTransferred = true), this property is used to identify the receiving facility. Not used when wasInfantTransferred = false.
35. Contains exactly one [1..1] **isInfantBreastFed** with data type *Boolean*
    - US Standard Certificate Of Birth Field 58 Indicates whether the infant was being breastfed at the time of discharge.
36. Contains exactly one [1..1] **isInfantLiving** with data type *Code*
    - US Standard Certificate Of Birth Field 57 Indicates whether the infant is living at the time the report (i.e., the US Standard Certificate Of Birth) was completed.
37. Contains exactly one [1..1] **isMotherMarried** with data type *Boolean*
    - US Standard Certificate Of Birth Field 15 Indicates whether the infant's mother was married at birth, conception, or any time in between.
38. Contains exactly one [1..1] **isMothersMailingAddressSameAsResidence** with data type *Boolean*
    - US Standard Certificate Of Birth Field 14 Indicates whether the mother's mailing address and the mother's residence address at the time of the infant's birth are the same or different.
39. Contains exactly one [1..1] **isMothersResidenceInsideCityLimits** with data type *Boolean*
    - US Standard Certificate Of Birth Field 09g Indicates whether the mother's residence at the time of the infant's birth is within city limits.
40. Contains exactly one [1..1] **motherHispanicOriginCategory** with data type *Code*
    - US Standard Certificate Of Birth Field 21 Indicates whether the infant's mother is of Hispanic origin, and if so, further categorizes her ethnicity. Possible values include: No, not Spanish/Hispanic/Latina; Yes, Mexican, Mexican American, Chicana; Yes, Puerto Rican; Yes, Cuban; and Yes, other Spanish/Hispanic/Latina. If "Yes, other Spanish/Hispanic/Latina" is chosen, then the motherHispanicOriginOther is used to further specify.
41. Contains exactly one [1..1] **motherHispanicOriginOther** with data type *String*
    - US Standard Certificate Of Birth Field 21 If motherHispanicOriginCategory is "Yes, other Spanish/Hispanic/Latina", then this free text property is used to further specify the infant's mother's ethnicity.
42. Contains exactly one [1..1] **mothersBirthAddress** with data type *Birth Address*
    - US Standard Certificate Of Birth Field 08d The birthplace (limited to State, Territory, or Foreign Country) of the infant's mother.
43. Contains exactly one [1..1] **mothersCurrentLegalName** with data type *Person Name*
    - US Standard Certificate Of Birth Field 08a The legal name of the infant's mother at the time of the infant's birth.
44. Contains exactly one [1..1] **mothersDateOfBirth** with data type *Point In Time*
    - US Standard Certificate Of Birth Field 08b The infant's mother's date of birth.

**45.** Contains exactly one [1..1] **mothersEducationLevel** with data type *Code*

- US Standard Certificate Of Birth Field 20 Categorizes the degree or level of school completed by the infant's mother at the time of delivery. Possible values include: 8th grade or less; 9th-12th grade, no diploma; High school graduate or GED completed; Some college credit, but no degree; Associate degree (e.g., AA, AS); Bachelor's degree (e.g., BA, AB, BS); Master's degree (e.g., MA, MS, MEng, MSW, MBA); Doctorate (e.g., PhD, EdD), or Professional degree (e.g., MD, DDS, DVM, LLB, JD).

**46.** Contains exactly one [1..1] **mothersHeight** with data type *Physical Quantity*

- US Standard Certificate Of Birth Field 31 Indicates the infant's mother height (displayed in feet/inches).

**47.** Contains exactly one [1..1] **mothersMaidenName** with data type *Person Name*

- US Standard Certificate Of Birth Field 08c The legal name of the infant's mother at the time of her birth. Note that this might be derived from the infant's Person record, as this is used as a Person Demographic property for purposes of Identity Management.

**48.** Contains exactly one [1..1] **mothersMailingAddress** with data type *Address*

- US Standard Certificate Of Birth Field 14 The mailing address of the mother at the time of the infant's birth. Used if different than the mothersResidenceAddress

**49.** Contains exactly one [1..1] **mothersMedicalRecordId** with data type *String*

- US Standard Certificate Of Birth Field 40 Uniquely identifies the mother's medical record within the institution's set of records. Note that this is modeled as a string, as this is all that is called for by the form, but it might be more properly modeled as an Id.

**50.** Contains exactly one [1..1] **mothersPrePregnancyWeight** with data type *Physical Quantity*

- US Standard Certificate Of Birth Field 32 Indicates the weight, in pounds, that the infant's mother normally weighed before this pregnancy.

**51.** Contains zero or more [0..*] **mothersRaceCategory** with data type *Code*

- US Standard Certificate Of Birth Field 22 Indicates the race(s) that the infant's mother considers herself to be. Possible values include: White; Black, or African American; American Indian or Alaska Native**; Asian Indian; Chinese; Filipino; Japanese; Korean; Vietnamese; Other Asian**; Native Hawaiian; Guamanian or Chamorro; Samoan; Other Pacific Islander**; Other**. **If Alaska Native is chosen, the mothersRaceOther free text field is used to specify the name of her enrolled or principal tribe; if Other Asian, Other Pacific Islander, or Other is chosen, the mothersRaceOther free text field is used to provide further specificity.

**52.** Contains exactly one [1..1] **mothersRaceOther** with data type *String*

- US Standard Certificate Of Birth Field 22 Provides further specificity for the infant's mother's race. Used only if mothersRaceCategory is Alaska Native, Other Asian, Other Pacific Islander, or Other.

**53.** Contains exactly one [1..1] **mothersResidenceAddress** with data type *Address*

- US Standard Certificate Of Birth Field 09a-f The address of the mother's residence at the time of the infant's birth.

**54.** Contains exactly one [1..1] **mothersSsn** with data type *String*

- US Standard Certificate Of Birth Field 18 The Social Security Number of the infant's mother.

**55.** Contains exactly one [1..1] **mothersWeightAtDelivery** with data type *Physical Quantity*

- US Standard Certificate Of Birth Field 33 Indicates the weight, in pounds, that the infant's mother weighed just before delivery.

**56.** Contains exactly one [1..1] **motherTransferedFromFacility** with data type *String*

- US Standard Certificate Of Birth Field 28 If the mother was transferred from another facility for maternal medical or fetal indications for delivery (i.e., wasMotherTransferred = true), this property is used to identify the transferring facility. Not used when wasMotherTransferred = false.

**57.** Contains zero or one [0..1] **multipleBirthOrder** with data type *Integer*

- US Standard Certificate Of Birth Field 53. Note that this property can probably be derived, as it is stored as part of the infant's Person record. "When a patient was part of a multiple birth, a value (number) indicating the patient's birth order is entered in this field." - HL7 Version 2.8, PID-25 If the biological entity was born along

with other siblings, this property indicates the order the entity was born. For example, for a set of twins, this property indicates which twin was born first, and which was born second.

58. Contains exactly one [1..1] **newbornsMedicalRecordId** with data type *String*

- US Standard Certificate Of Birth Field 48 Uniquely identifies the newborn's medical record within the institution's set of records. Note that this is modeled as a string, as this is all that is called for by the form, but it might be more properly modeled as an Id.

59. Contains zero or one [0..1] **numberOfChildrenNowDead** with data type *Integer*

- US Standard Certificate Of Birth Field 35b Indicates the number, of the children born alive to this infant's mother before this infant was born, that have since died. Note that Box 35b has a checkbox titled "None", which is not modeled - it is assumed that this checkbox can be calculated based on whether or not numberOfPreviousLiveBirths = 0).

60. Contains zero or one [0..1] **numberOfChildrenNowLiving** with data type *Integer*

- US Standard Certificate Of Birth Field 35a Indicates the number, of the children born alive to this infant's mother before this infant was born, that are still alive. Note that Box 35a has a checkbox titled "None", which is not modeled - it is assumed that this checkbox can be calculated based on whether or not numberOfPreviousLiveBirths = 0).

61. Contains zero or one [0..1] **numberOfOtherPregnanceOutcomes** with data type *Integer*

- US Standard Certificate Of Birth Field 36a Indicates the number of "other pregnancy outcomes (spontaneous or induced losses or ectopic pregnancies)" Note that Box 36a has a checkbox titled "None", which is not modeled - it is assumed that this checkbox can be calculated based on whether or this property is equal to 0.

62. Contains exactly one [1..1] **numberOfPrenatalVisits** with data type *Integer*

- US Standard Certificate Of Birth Field 30 Provides the number of pre-natal care visits for the pregnancy resulting in this birth. Note that Box 29a also has a "No Prenatal care" checkbox, which is not modeled; it is assumed that this box can be calculated based on whether or not numberOfPrenatalVisits = 0.

63. Contains exactly one [1..1] **numberOfPreviousLiveBirths** with data type *Integer*

- US Standard Certificate Of Birth Field 35 Indicates the number of children born alive (e.g., not stillborn) to this infant's mother before this infant was born (i.e., not including this child).

64. Contains exactly one [1..1] **obstetricEstimateOfGestation** with data type *Time Quantity*

- US Standard Certificate Of Birth Field 50 Contains an estimate of gestational age of the infant, in weeks.

65. Contains exactly one [1..1] **plurality** with data type *Integer*

- US Standard Certificate Of Birth Field 53 The number of fetuses delivered live or dead at any time in the pregnancy regardless of gestational age or if the fetuses were delivered at different dates in the pregnancy. ( Reabsorbed fetuses, those which are not delivered (expulsed or extracted from the mother) should not be counted.)

66. Contains exactly one [1..1] **principalPaymentSourceCategory** with data type *Code*

- US Standard Certificate Of Birth Field 38 Identifies the principal source of payment for this delivery. Possible values include: Private Insurance; Medicaid; Self-pay; or Other. If Other is chosen, the principalPaymentSourceOther property provides a free text in which the payment source could be specified.

67. Contains exactly one [1..1] **principalPaymentSourceOther** with data type *String*

- US Standard Certificate Of Birth Field 38 If the principalPaymentSourceCategory property contains "Other", this property provides a free text in which the payment source could be specified. Not used if the principalPaymentSourceCategory property is anything other than "Other".

68. Contains exactly one [1..1] **wasHomeDeliveryPlanned** with data type *Boolean*

- US Standard Certificate Of Birth Field 26 If the birth took place at home (i.e., birthPlaceCategory="Home Birth"), this property indicates whether such a home delivery was planned.

69. Contains exactly one [1..1] **wasInfantTransferred** with data type *Boolean*

- US Standard Certificate Of Birth Field 56 Indicates whether the infant was transferred to another facility within 24 hours of delivery. If the answer is yes, the infantTransferredToFacility property is used to identify the receiving facility.

70. Contains exactly one [1..1] **wasMotherTransferred** with data type *Boolean*

   - US Standard Certificate Of Birth Field 28 Indicates whether the mother was transferred from another facility for maternal medical or fetal indications for delivery. If the answer is yes, the motherTransferedFromFacility property is used to identify the transferring facility.

71. Contains zero or one [0..1] **wasMultipleBirth** with data type *Boolean*

   - US Standard Certificate Of Birth Field 52. Note that this property can probably be derived, as it is stored as part of the infant's Person record. "This field indicates whether the patient was part of a multiple birth." - HL7 Version 2.8, PID-24 If the biological entity was born along with other siblings, this property indicates the order the entity was born. For example, for a set of twins, this property indicates which twin was born first, and which was born second. An indication as to whether the person was born along with other siblings as part of a single pregnancy. This property is primarily used to distinguish records for newborn infants who have not yet have been given names. This property may also be used in research situations to distinguish individuals who were part of a multi-child pregnancy.

72. Contains exactly one [1..1] **wasSsnRequested** with data type *Boolean*

   - US Standard Certificate Of Birth Field 16 Indicates whether a Social Security Number has been requested for the child.

73. Contains [0..4] **cigaretteSmoking**, where its type is *Cigarette Smoking*

   - US Standard Certificate Of Birth Field 37 Describes whether and how much the infant's mother smoked before and/or during pregnancy. The US Standard Certificate Of Birth Field 37 lists four time periods: Three months before pregnancy; first three months of pregnancy; second three months of pregnancy; and third trimester of pregnancy. It then asks for the average number of cigarettes OR packs of cigarettes smoked per day for each of these time periods.

74. Contains zero or more [0..*] **infection**, where its type is *Infection*

   - US Standard Certificate Of Birth Field 42 Contains a list of infections present and/or treated during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Gonorrhea; Syphilis; Chlamydia; Hepatitis B; Hepatitis C; None of the above.

75. Contains zero or more [0..*] **laborAndDeliveryCharacteristic**, where its type is *Labor And Delivery Characteristic*

   - US Standard Certificate Of Birth Field 45 Contains a list of observations regarding the labor and delivery of the infant. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Induction of labor; Augmentation of labor; Non-vertex presentation; Steroids (glucocorticoids) for fetal long maturation received by the mother prior to delivery; Antibiotics received by the mother during labor; Clinical chorioamnionitis diagnosed during labor or maternal temperature >= 38C (100.4F); Moderate/heavy meconium staining of the amniotic fluid; Fetal intolerance of labor such that one or more of the following actions were taken: in-utero resuscitative measures, further fetal assessment, or operative delivery; Epidural or spinal anesthesia during labor; None of the above.

76. Contains zero or more [0..*] **maternalMorbidity**, where its type is *Maternal Morbidity*

   - US Standard Certificate Of Birth Field 47 Contains a list of complications associated with labor and delivery. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Maternal transfusion; Third or fourth degree perineal laceration; ruptured uterus; Unplanned hysterectomy; Admission to intensive care unit; Unplanned operating room procedure following delivery; None of the above.

77. Contains zero or more [0..*] **newbornAbnormalCondition**, where its type is *Newborn Abnormal Condition*

   - US Standard Certificate Of Birth Field 54 Contains a list of abnormal conditions of the newborn. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Assisted ventilation required immediately following delivery; Assisted ventilation required for more than six hours; NICU admission; Newborn given surfactant replacement therapy; Antibiotics received by the newborn for suspected neonatal sepsis; Seizure or serious neurologic dysfunction; Significant birth injury (skeletal

fractures(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which require intervention); None of the above.

**78.** Contains zero or more [0..*] **newbornCongenitalAnomaly**, where its type is *Newborn Congenital Anomaly*

- US Standard Certificate Of Birth Field 55 Contains a list of congenital anomalies of the newborn. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of anomalies listed above", so if that one is chosen, there should not be any others chosen. Possible values include: Anencephaly; Meningomyelocele/Spinal bifida; Cyanotic congenital heart disease; Congenital diaphramic hernia; Omphalocele; Gastroschisis; Limb reduction defect (excluding congenital amputation and dwarfing syndromes); Cleft lip with or without cleft palate; Cleft palate alone; Down Syndrome, Karyotype confirmed; Down Syndrome, Karyotype pending; Suspected chromosomal disorder, Karyotype confirmed; Suspected chromosomal disorder, Karyotype pending; Hypospadias; None of anomalies listed above.

**79.** Contains zero or more [0..*] **obstetricProcedure**, where its type is *Obstetric Procedure*

- US Standard Certificate Of Birth Field 43 Contains a list of obstetric procedures performed during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Cervical cerclage; Tocolysis; External cephalic version, Successful; External cephalic version, Failed; None of the above.

**80.** Contains zero or more [0..*] **onsetOfLabor**, where its type is *Onset Of Labor*

- US Standard Certificate Of Birth Field 44 Contains a list of adverse events associated with the onset of labor. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Premature rupture of the membranes (prolonged, > 12 hours); Precipitous labor; Prolonged labor; None of the above.

**81.** Contains zero or more [0..*] **riskFactor**, where its type is *Risk Factor*

- US Standard Certificate Of Birth Field 41 Contains a list of risk factors that were encountered during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Diabetes, Pre-pregnancy (diagnosis prior to this pregnancy); Diabetes, Gestational (diagnosis in this pregnancy); Hypertension, Prepregnancy (chronic); Hypertension, Gestational (PIH, preclampsia); Hypertension, Eclampsia; Previous preterm birth; Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age / intrauterine growth restricted birth); Pregnancy resulted from infertility treatment, Fertility-enhancing drugs, Artificial insemination or intrauterine insemination; Pregnancy resulted from infertility treatment, Assisted reproductive technology (e.g., in vitro fertilization (IVF) gamete intrafallopian transfer (GIFT)); Mother had a previous cesarean delivery - if yes, how many**; None of the above. **=if "Mother had a previous cesarean delivery" is chosen, a subclass of RiskFactor is used to contain the number of previous cesarean deliveries.

**82.** Contains zero or more [0..*] **methodOfDelivery**, where its type is *Method Of Delivery*

- US Standard Certificate Of Birth Field 46 Contains a list of observations regarding the delivery of the infant. Possible values include: Was delivery with forceps attempted by unsuccessful? - Yes; Was delivery with forceps attempted by unsuccessful? - No; Was delivery with vacuum extraction attempted by unsuccessful? - Yes; Was delivery with vacuum extraction attempted by unsuccessful? - No; Fetal presentation at birth, Cephalic; Fetal presentation at birth, Breech; Fetal presentation at birth, Other; Final route and method of delivery, Vaginal/Spontaneous; Final route and method of delivery, Vaginal/Forceps; Final route and method of delivery, Vaginal/Vacuum; Final route and method of delivery, Cesarean, trial of labor attempted; Cesarean, trial of labor not attempted.

# Blood Bank Record

**1.** Contains exactly one [1..1] **aboGroupCode** with data type *String*
**2.** Contains exactly one [1..1] **comments** with data type *String*
**3.** Contains exactly one [1..1] **isRhPositive** with data type *Boolean*

4. Contains zero or more [0..*] **patient**, where its type is *Patient*
5. Contains zero or more [0..*] **antibodiesIdentified**, where its type is *Antibody Identification*
6. Contains zero or more [0..*] **rbcAntigensAbsent**, where its type is *Antibody Identification*
7. Contains zero or more [0..*] **rbcAntigensPresent**, where its type is *Antibody Identification*
8. Contains zero or more [0..*] **transfusionReaction**, where its type is *Transfusion Reaction*
9. Contains zero or more [0..*] **bloodComponentRequest**, where its type is *Blood Component Request*
10. Contains zero or more [0..*] **transfusionEvent**, where its type is *Transfusion Event*

## Blood Bank Test

1. Contains exactly one [1..1] **accessionId** with data type *String*
2. Contains exactly one [1..1] **aboInterpretationCode** with data type *String*
3. Contains exactly one [1..1] **antibodyScreenComment** with data type *String*
4. Contains exactly one [1..1] **antiComplement** with data type *String*
5. Contains exactly one [1..1] **antiIgg** with data type *String*
6. Contains exactly one [1..1] **dateReportCompleted** with data type *Date*
7. Contains exactly one [1..1] **dateSpecimenReceived** with data type *Date*
8. Contains exactly one [1..1] **dateSpecimenTaken** with data type *Date*
9. Contains exactly one [1..1] **directAhg** with data type *String*
10. Contains exactly one [1..1] **directAhgInterpretation** with data type *Code*
11. Contains exactly one [1..1] **directAhgTestComment** with data type *String*
12. Contains exactly one [1..1] **isAntibodyScreenPositive** with data type *Boolean*
13. Contains exactly one [1..1] **aboTestComment** with data type *String*
14. Contains exactly one [1..1] **rhInterpretation** with data type *Code*
15. Contains exactly one [1..1] **rhTestComment** with data type *String*
16. Contains exactly one [1..1] **specimenComment** with data type *String*
17. Contains exactly one [1..1] **aboTypingTechnician**, where its type is *Individual Provider*
18. Contains exactly one [1..1] **dataEnterer**, where its type is *Individual Provider*
19. Contains zero or more [0..*] **eluateAntibody**, where its type is *Antibody Identification*
20. Contains exactly one [1..1] **rbcAntigensAbsent**, where its type is *Antibody Identification*
21. Contains zero or more [0..*] **rbcAntigensPresent**, where its type is *Antibody Identification*
22. Contains exactly one [1..1] **rhTypingTechnician**, where its type is *Individual Provider*
23. Contains zero or more [0..*] **serumAntibody**, where its type is *Antibody Identification*
24. Contains zero or more [0..*] **phlebotomist**, where its type is *Individual Provider*
25. Contains exactly one [1..1] **requestor**, where its type is *Individual Provider*
26. Contains exactly one [1..1] **ward**, where its type is *Ward*
27. Contains zero or more [0..*] **specimen**, where its type is *Specimen*

## Blood Component

1. Contains exactly one [1..1] **id** with data type *Id*

## Blood Component Request

1. Contains exactly one [1..1] **dateNeeded** with data type *Date*
2. Contains exactly one [1..1] **nbrOfUnits** with data type *Integer*
3. Contains exactly one [1..1] **wasPreviousReaction** with data type *Boolean*
4. Contains exactly one [1..1] **isPreOpRequest** with data type *Boolean*
5. Contains exactly one [1..1] **requestDate** with data type *Date*
6. Contains exactly one [1..1] **requestReason** with data type *String*
7. Contains exactly one [1..1] **requester**, where its type is *Individual Provider*

**8.** Contains exactly one [1..1] **bloodComponent**, where its type is *Blood Component*

**9.** Contains zero or one [0..1] **facilityTreatingSpecialty**, where its type is *Facility Treating Specialty*

## Blood Pressure Observation

The value of the Vital Sign Observation expressed as a collection of other Vital Sign Observations. For example, Blood Pressure is expressed as a Diastolic and a Systolic measurement.

**1.** Extends *Vital Sign Observation Event*

**2.** Contains exactly one [1..1] **diastolic** with data type *Physical Quantity*

- <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 28.5pt; mso-height-source: userset" height=38> <TD class=xl24 style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 28.5pt; BACKGROUND-COLOR: transparent" width=590 height=38><FONT face=Arial size=2>Diastolic blood pressure refers to the pressure of blood in the artery when the heart relaxes between beats. It is the bottom (and lower) number in a blood pressure reading.</FONT><BR><BR><BR></TD></TR></TBODY></TABLE></BODY></HTML>
- A measurement is recorded by two numbers. The first (systolic pressure) is measured after the heart contracts and is highest.

**3.** Contains exactly one [1..1] **systolic** with data type *Physical Quantity*

- <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 51pt" height=68> <TD class=xl24 style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 51pt; BACKGROUND-COLOR: transparent" width=590 height=68><FONT face=Arial size=2>Systolic blood pressure refers to the pressure of blood in the artery when the heart contracts. It is the top (and higher) number in a blood pressure reading.</FONT><BR><BR></TD></TR></TBODY></TABLE></BODY></HTML>
- The second (diastolic pressure) is measured before the heart contracts and lowest.

## Bodily Fluid Administration

Adminstration of bodily fluids blood products etc.

**1.** Contains exactly one [1..1] **fluidType** with data type *Code*

- Identifies each the types of replacement fluids given intravascularly during the operative procedure.

**2.** Contains exactly one [1..1] **quantity** with data type *Physical Quantity*

- Contains the gastric output (cc's) during the operative procedure

**3.** Contains at least one [1..*] **typeFluid**, where its type is *Bodily Fluid Product*

- Identifies each the types of replacement fluids given intravascularly during the operative procedure.

## Bodily Fluid Product

The liquid parts of the body ie Blood etc.

**1.** Contains exactly one [1..1] **supplierId** with data type *Id*

- Contains the unique identification number or code provided by the supplier of this replacement fluid.

**2.** Contains exactly one [1..1] **vaId** with data type *Id*

- Contains the unique identification characters assigned by the local blood bank for type specific blood components.

## Boolean Question

This class represents a question that requires a true of false answer. Both the question and the answer are identified. Ideally, the question code would identify the issue or assertion confirmed or denied by the answer.

**1.** Extends *Question*

**2.** Contains exactly one [1..1] **question**

- This attribute is used to define the code associated with the Behavioral Health assessment question that requires a yes/no response.

**3.** Contains exactly one [1..1] **answer** with data type *Boolean*

- This attribute represents a response as a boolean (true/false) response to a specific assessment question. If a response is not provided, the null value may be qualified by an ASKU (asked but unknown) null flavor.

## Bronchoscopy

An examination used for inspection of the interior of the tracheo-bronchial tree, performance of endobronchial diagnostic tests, taking of specimens for biopsy and culture and removal of foreign bodies. [Source: On-line Medical Dictionary, 1997-98 Academic Medical Publishing & CancerWEB ]

**1.** Contains exactly one [1..1] **bronchoscopy** with data type *Code*

- Indicates the results of the diagnostic test BRONCHOSCOPY. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.

**2.** Contains exactly one [1..1] **dateOfBronchoscopy** with data type *Point In Time*

- The date of the diagnostic test BRONCHOSCOPY.

## Camera Equipment Room

Represents the primary camera/equipment/room where the imaging exam was performed as known by the originating VistA system. Equivalent to File 78.6

**1.** Contains exactly one [1..1] **id** with data type *Id*

- A unique identifier for the camera/equipment room. (File 78.6).

## Cancel Act

Contains information about the cancellation of an Action or record. This class is especially used for Orders.

**1.** Contains exactly one [1..1] **comment** with data type *String*

- Any comments or remarks regarding the cancelation of the Activity or Order.

**2.** Contains exactly one [1..1] **dateTime** with data type *Point In Time*

- The date/time the Activity (e.g., Order) was cancelled.

**3.** Contains exactly one [1..1] **reason** with data type *Code*

- The reason the Activity (e.g., Order) was cancelled.

**4.** Contains exactly one [1..1] **author**, where its type is *Individual Provider*

- Indicates the practitioner who created the cancellation. In other words, the practitioner who canceled the action.

## Cancer Case

This class contains the information for the patient that has cancer such as patient history, examination, and results of laboratory data.

1. Contains exactly one [1..1] **id** with data type *Id*

   - A unique identifier for the Act. (HL7 3.0)

2. Contains exactly one [1..1] **accessionNumber** with data type *String*

   - A unique identifier for the patient consisting of the year in which the patient was first seen at the reporting facility and the consecutive order in which the patient was abstracted.

3. Contains exactly one [1..1] **accessionYear** with data type *String*

   - ACCESSION YEAR is the year the patient was first seen at the reporting institution for diagnosis and/or treatment of this primary; NOT the year the registrar accession the case. ACCESSION YEAR relates only to one primary tumor. A patient with multiple primaries can have a different ACCESSION YEAR on each bstract. This is used to produce an accession register. The accession register identifies all primaries first treated or seen at the reporting institution for a given year.

4. Contains exactly one [1..1] **afipSubmission** with data type *Code*

   - Indicates whether the pathology was sent to the Armed Forces Institute of Pathology (AFIP) for a second opinion. Possible values are No; Yes; Unknown;

5. Contains exactly one [1..1] **associationWithHiv** with data type *Code*

   - Indicates the presence/absence of HIV. Possible values are Yes; No; Unknown; etc.

6. Contains exactly one [1..1] **classCategory** with data type *Code*

   - Identifies the category of case, either Analytic or Nonanalytic. Possible values are NONANALYTIC; 'ANALYTIC; etc.

7. Contains exactly one [1..1] **classOfcase** with data type *Code*

   - Classifies cases recorded in the database. Possible values are Dx here, 1st tx ew; Dx here, 1st tx here; Dx ew, 1st tx here; Dx ew, 1st tx ew; Dx/1st tx before ref date; Dx at autopsy; Dx/1st tx in MD office; Pathology report only; Death cert; Unknown; etc.

8. Contains exactly one [1..1] **dateCaseCompleted** with data type *Point In Time*

   - The date that: (1) the abstractor decided that the case report was complete, and (2) the case passed all edits that were applied.

9. Contains exactly one [1..1] **dateOfCancerConference** with data type *Point In Time*

   - Indicates the date on which the case was first presented at a cancer conference. The number of cancer conferences, sites presented, types of presentations, and dates can be analyzed and reported for administration, quality control, and Commission on Cancer survey preparation. Update this item if a patient is presented at a subsequent cancer conference.

10. Contains exactly one [1..1] **presetationAtCancerConference** with data type *Code*

    - Documents case presentation at a cancer conference and the type or format of presentation. The number of cancer conferences, sites presented, and types of presentation can be analyzed and reported for administrative use, quality control, and survey preperation. Possible values are Not presented; Prospective (diagnostic); Prospective (treatment); Prospective (follow-up); Prospective (combinations); Prospective, NOS; Retrospective; Follow-up; Presentation, NOS; Unknown;

11. Contains exactly one [1..1] **reportingSourceType** with data type *Code*

    - This a code used by central registries that identifies the source of documents used to abstract the cancer being reported. Possible values are Hospital inpatient, hospital outpatient clinic; Laboratory only (hospital

or private); Physician office/private practitioner; Nursing/convalescent home, hospice; Autopsy only; Death certificate only; etc.

12. Contains exactly one [1..1] **sequenceNumber** with data type *String*

- Indicates the sequence of all reportable neoplasms over the lifetime of the patient. - Codes 00-35 and 99 indicate reportable neoplasms of malignant or in situ behavior, which the CoC requires to be reported. - Codes 60-88 indicate other neoplasms that the state registry or the hospital cancer committee has defined as reportable (cases reportable-by-agreement). - Code 00 only if the patient has a single reportable primary. If the patient develops a subsequent reportable primary tumor, change the code for the first tumor from 00 to 01, and number subsequent tumors sequentially. - Code 60 only if the patient has a single primary reportable by agreement only. If the patient develops a subsequent primary tumor reportable-by-agreement, change the code for the first tumor from 60 to 61, and assign codes to subsequent tumors reportable-by-agreement sequentially.

13. Contains exactly one [1..1] **summaryStageSeer** with data type *Code*

- Indicates a site-specific description of the extent of disease at diagnosis. Possible values are In situ; Localized; Regional by direct extension; Regional to lymph nodes; Regional by extension & to nodes; Regional, NOS; Distant metastasis/systemic disease; Unknown; etc.

14. Contains exactly one [1..1] **textHistologyTitle** with data type *String*

- Description of histologic type, behavior, and grade in natural language.(Text)

15. Contains exactly one [1..1] **textPrimarySiteTitle** with data type *String*

- Description of primary site in natural language.(Text)

16. Contains exactly one [1..1] **cancerCase**, where its type is *Cancer Patient Summary*

- Cancer related Case

17. Contains at least one [1..*] **cancerDiagnosis**, where its type is *Cancer Diagnosis Event*

- The act or process of identifying or determining the nature and cause of a disease or injury.

18. Contains zero or more [0..*] **cancerStaging**, where its type is *Cancer Staging*

- Cancer Staging

19. Contains at least one [1..*] **cancerTumor**, where its type is *Tumor Evaluation*

- Evaluation of an abnormal growth, of tissue.

20. Contains zero or more [0..*] **lymphNode**, where its type is *Lymph Node Evaluation*

- Masses of lymphoid tissue

21. Contains zero or more [0..*] **metastasis**, where its type is *Metastasis Evaluation*

- Transmission of pathogenic microorganisms or cancerous cells.

22. Contains exactly one [1..1] **palliativeProcedure**, where its type is *Palliative Procedure*

- The relieving or soothing the symptoms of the patient's disease or disorder.

23. Contains at least one [1..*] **radiationtreatmentFollowup**, where its type is *Radiation Treatment Evaluation*

- Radiation Treatment ralated followup

24. Contains zero or one [0..1] **reportingHospital**, where its type is *Service Delivery Location*

- Identifies the hospital which is reporting this cancer case. This field contains the value of the INSTITUTION ID NUMBER field from the ONCOLOGY SITE PARAMETERS file. Possible values are 6020009 ROYAL VICTORIA HOSPITAL; 6020012 ST MARY'S HOSPITAL; 6020015 MONTREAL GENERAL HOSPITAL ; 6030010 KWAJALEIN; 6040005 AGUADILLA GENERAL HOSPITAL; etc.

25. Contains at least one [1..*] **tumorStatus**, where its type is *Tumor Status*

- Cancer Tumor Status.

26. Contains exactly one [1..1] **subsequentTherapyComment**, where its type is *Subsequent Therapy Comment*

- Subsequent Therapy related comments

27. Contains at least one [1..*] **dxWorkup**, where its type is *Diagnostic Workup*

- Follow-up after diagnosis of cancer.
28. Contains exactly one [1..1] **abstract**, where its type is *Abstract*

- Summary of pertinent information about the patient
29. Contains zero or more [0..*] **previousCancerHistory**, where its type is *Cancer History*

- prior history of any reportable malignancy.
30. Contains at least one [1..*] **nonRadiationTreatmentFollowup**, where its type is *Cancer Treatment Evaluation*

- Non Radiation Treatment ralated followup
31. Contains at least one [1..*] **treatmentAssessment**, where its type is *Patient Treatment Assessment*

- Patient's pre treatment assessment.
32. Contains zero or one [0..1] **protocol**, where its type is *Cancer Protocol*

- Cancer Treatment Protocol.
33. Contains exactly one [1..1] **dataEnterer**, where its type is *Data Enterer*
34. Contains zero or one [0..1] **followingPhysician**, where its type is *Attender*
35. Contains zero or one [0..1] **primarySurgeon**, where its type is *Primary Performer*
36. Contains zero or more [0..*] **cancerTreatmentList**, where its type is *Cancer Treatment List Entry*

- The act or process of identifying a single course of treatment regimen, for the patient's cancer.
37. Contains zero or more [0..*] **recurrenceList**, where its type is *Recurrence List Entry*

## Cancer Death Event

This class contains informatin about cancer related death.

1. Contains exactly one [1..1] **isCauseOfDeathCancer** with data type *Code*

- causeOfDeathCancer
2. Contains exactly one [1..1] **icdCauseOfDeath** with data type *Code*

- icdCauseOfDeath
3. Contains exactly one [1..1] **placeOfDeath** with data type *Code*

- This is the place of death. These codes include states of the United States as well as foreign countries. Possible values are SEER Geocodes.
4. Contains exactly one [1..1] **dateOfDeath** with data type *Point In Time*

- The date and tine of death.
5. Contains zero or one [0..1] **careCenterAtDeath**, where its type is *Service Delivery Location*

- Care center at death .
6. Contains zero or one [0..1] **autopsy**, where its type is *Autopsy Event*

- Autopsy of cancer related death

## Cancer Diagnosis Event

This class contains the information from the act or process of identifying or determining the nature and cause of a disease or injury through evaluation of patient history, examination, and review of laboratory data, of various malignant neoplasms characterized by the proliferation of anaplastic cells that tend to invade surrounding tissue and metastasize to new body sites.

1. Contains exactly one [1..1] **dateOfDiagnosis** with data type *Point In Time*

- Indicates the date of initial diagnosis by a physician for the tumor being reported.

2.  Contains exactly one [1..1] **dateOfFirstContact** with data type *Point In Time*

    - Date of first contact with the reporting facility for diagnosis and/or treatment of this cancer. If this is an autopsy-only or death certificate-only case, then the date of death.

3.  Contains exactly one [1..1] **diagnosticConfirmation** with data type *Code*

    - Diagnostic Confirmation specifies the best method of diagnostic confirmation of the cancer being reported at any time in the patient history. Possible values are Positive Histology; Positive Cytology; Positive Microscopic, method NOS; Positive lab test; Direct visualization; Radiography/other imaging techniques; Clinical diagnosis only (other than 5, 6, or 7); Unknown if microscopically confirmed; etc.

4.  Contains exactly one [1..1] **primarySite** with data type *Code*

    - Identifies the Primary Site [The ICD-O topography code for the site of origin.] Possible values are ICDO-3 TOPGRAPHY CODES

5.  Contains exactly one [1..1] **siteGroup** with data type *Code*

    - IThis is theSite/Group that best defines the neoplasm. Possible values are Va generated list of anatomic sites in VHIM definition.

6.  Contains exactly one [1..1] **dxFacility**, where its type is *Service Delivery Location*

    - Identifies the name of the facility where diagnosis was first made.

7.  Contains zero or one [0..1] **facilityReferredFrom**, where its type is *Service Delivery Location*

    - Identifies the facility that referred the patient to the reporting facility.

8.  Contains zero or one [0..1] **facilityReferredTo**, where its type is *Service Delivery Location*

    - Identifies the facility to which the patient was referred for further care after discharge from the reporting facility.

9.  Contains zero or one [0..1] **histology**, where its type is *Histology*

    - The microscopic study of the patient s cells and tissues.

# Cancer History

This class contains information that Identifies whether the patient has a prior history of any reportable malignancy.

1.  Contains exactly one [1..1] **previousHistoryOfCancer** with data type *Code*

    - Identifies whether the patient has a prior history of any reportable malignancy. Possible values are No; Yes; Unknown; etc.

2.  Contains zero or more [0..*] **reportableMalignancyListEntry**, where its type is *Reportable Malignancy List Entry*

    - An order, arrangement, or significance in which the reportable Malignancy takes place.

# Cancer Patient Summary

Epsiode of Cancer in this patient.

1.  Contains exactly one [1..1] **id** with data type *Id*

    - A unique identifier for the Act. (HL7 3.0)

2.  Contains exactly one [1..1] **alcoholHistory** with data type *Code*

    - Code the patient's past or current consumption of alcoholic beverages including wine or beer. Possible values are Yes; No; Unknown; No history of alcohol use; Current use of alcohol; Past history of alcohol use; Alcohol usage unknown; etc.

3.  Contains exactly one [1..1] **asbestosExposure** with data type *Code*

    - Identifies if the patient was exposed to asbestos. Possible values are Yes; No; Unknown; etc.

4. Contains exactly one [1..1] **comments** with data type *String*
   - This is a comment on the follow-up.
5. Contains exactly one [1..1] **dateFollowupDue** with data type *Point In Time*
   - The date of next scheduled follow-up.
6. Contains exactly one [1..1] **entryStatus** with data type *Code*
   - Indicates whether entry is complete. Possible values are complete; etc.
7. Contains exactly one [1..1] **familyHistoryOfCancer** with data type *Code*
   - Identifies whether the patient has a family history of any reportable malignancy. 'Possible values are No; Yes; Unknown; etc.
8. Contains exactly one [1..1] **isDeceased** with data type *Boolean*
   - "An indication that the subject is dead."" HL7 V3 RIM Ballot 8
9. Contains exactly one [1..1] **qualityOfSurvival** with data type *Code*
   - Identifies the code describing the patient's quality of survival. Possible values are Normal; Symptomatic & Ambulatory; More than 50% Ambulatory; Less than 50% Ambulatory; Bedridden; Not applicable, dead; Unknown or unspecified; etc.
10. Contains exactly one [1..1] **tobaccoHistory** with data type *Code*
    - Code the patient's past or current use of tobacco. Possible values are Yes; No; Unknown; Never used; Cigarette smoker, current; Cigar/Pipe smoker, current; Snuff/Chew/Smokeless, current; Combination use, current; Previous use; Unknown; etc.
11. Contains exactly one [1..1] **usualOccupation** with data type *Code*
    - Indicates the patient's usual occupation (that is, the kind of work performed during most of the patient's working life before diagnosis of this tumor). "retired" is not recorder patient's current or most recent occupation or any known occupation is used If usual occupation is not available or is unknown. This is the OCCUPATION field of SNOMED. Possible values are ABLE SEAMAN; ABRASIVE WHEEL MOULDER ; ADMINISTRATION MANAGER; ADVERTISING COPYWRITER; etc.
12. Contains zero or one [0..1] **cancerDeath**, where its type is *Cancer Death Event*
    - Cancer related Death
13. Contains exactly one [1..1] **cancerPatient**, where its type is *Patient*
    - The patient who is the subject of the cancer patient episode of Care.
14. Contains zero or more [0..*] **familyHistory**, where its type is *Family History*
    - Cancer Family History
15. Contains at least one [1..*] **followup**, where its type is *Patient Followup History*
    - Followup History
16. Contains zero or one [0..1] **modality**, where its type is *Modality*
    - A method of treatment.

# Cancer Protocol

This class contains attributes pertinent to a systemic plan of the cancer treatment.
1. Contains exactly one [1..1] **yearPutOnProtocol** with data type *Integer*
   - Indicates the year in which the patient was entered into a protocol.

# Cancer Staging

This class contains information related to cancer staging that describes the extent or severity of an individual s cancer.

1. Contains exactly one [1..1] **clinicalStagedBy** with data type *Code*

   - Identifies the person who recorded the AJCC staging elements and the stage group in the patient's medical record. Possible values are Not staged; Managing MD; Pathologist; Pathologist & managing MD; Committee chair, liaison MD, registry advisor; Registrar; Registrar & MD; Another facility; NA; Unknown; etc.

2. Contains exactly one [1..1] **clinicalStageGroup** with data type *Code*

   - Identifies the anatomic extent of disease based on the T , N, and M elements as recorded by the physician. Possible values are Stage 0; Stage 0A; Stage 0is; Stage I,Stage IA; Stage IA1;Stage IA2; Stage IIB; Stage IVC; Not applicable; Unknown; etc.

3. Contains exactly one [1..1] **lymphaticVesselInvasion** with data type *Code*

   - Identifies whether lymphatic vessel invasion was involved. Possible values are Lymphatic vessel invasion cannot be assessed; No lymphatic vessel invasion; Lymphatic vessel invasion; etc.

4. Contains exactly one [1..1] **pathologicStagedBy** with data type *Code*

   - Identifies the person who recorded the pathologic AJCC staging elements and the stage group in the patient's medical record. Possible values are Not staged; Managing MD; Pathologist; Pathologist & managing MD; Committee chair, liaison MD, registry advisor; Registrar; Registrar & MD; Another facility; NA; Unknown; etc.

5. Contains exactly one [1..1] **pathologicStageGroup** with data type *Code*

   - Identifies the anatomic extent of disease based on the T, N, and M elements as recorded by the physician. Possible values are Stage 0; Stage 0a; Stage 0s; Stage Ois; Stage II; Stage IIA; Stage IVB; Stage IVC; Not Applicable; unknown; etc.

6. Contains exactly one [1..1] **physiciansStage** with data type *String*

   - Indicates information regarding the physician's stage

7. Contains exactly one [1..1] **stageGroupingAjcc** with data type *Code*

   - This field is set by either the CLINCICAL STAGE GROUP (38) or PATHOLOGIC STAGE GROUP (88) field depending on which takes precedence. It consists of the more general stage group values of 0, I, II, III, IV, Unk/Uns or NA. G302

8. Contains exactly one [1..1] **venousInvasion** with data type *Code*

   - Indicates whether venous invasion was involved. Possible values are Venous invasion cannot be assessed; No venous invasion; Microscopic venous invasion; Macroscopic venous invasion; etc.

9. Contains exactly one [1..1] **stagingPhysician**, where its type is *Author*

# Cancer Surgery

Surgical operation or procedure, especially one involving the removal or replacement of a diseased organ or tissue related to cancer

1. Extends *Cancer Treatment*
2. Contains exactly one [1..1] **numberOfNodesRemoved** with data type *Code*

   - Indicates the number of regional lymph nodes removed. Possible values are 00-99; 00 for No nodes removed 01 for 1 node removed 02 for 2 nodes removed ...90 for 90 or more nodes removed 95 for No nodes removed, aspiration performed 96 for Node removal as a sampling, number unknown 97 for Node removal as dissection, number unknown 98 for Nodes surgically removed, number unknown 99 for Unknown; not stated; death certificate only.

3. Contains exactly one [1..1] **scopeOfLymphNodeSurgery** with data type *Code*

   - Indentifies the removal, biopsy, or aspiration of regional lymph node(s) at the time of surgery of the primary site or during a separate surgical event. Possible values are None; Bx/aspiration, NOS; Sentinel Bx; Nodes removed, number unk; 1-3 nodes removed; 4 or more nodes removed; sentinel + 3, 4 or 5, timing not stated; Sentinel + 3, 4, or 5, diff times; Unknown/NA; etc.

4. Contains exactly one [1..1] **surgeryOfPrimary** with data type *Code*

- Indicates the surgical procedure(s) performed to the primary site. Possible values are None; no surgery of primary site; autopsy ONLY; Local tumor destruction, NOS; Local tumor excision, NOS; etc.

5. Contains exactly one [1..1] **surgicalMargins** with data type *Code*

- Records the final status of the surgical margins after resection of the primary tumor. Possible values are No residual tumor; Residual tumor, NOS; Microscopic residual tumor; Macroscopic residual tumor; Margins not evaluable; No primary site surgery; Unknown or NA; etc.

6. Contains exactly one [1..1] **surgicalProcedureOtherSite** with data type *Code*

- Identifies the code for surgery of other regional site(s), distant site(s) or distant lymph node(s). Possible values are None; Nonprimary surg proc performed; Nonprimary surg proc/other regional sites; Nonprimary surg proc/distant lymph node(s); Nonprimary surg proc/distant site; Combination of codes; Unknown; etc.

# Cancer Treatment

This class contains the information for the patient s administration or application of remedies to a patient or for a disease or injury; medicinal or surgical management; therapy 1st occurence of each treatment type is the 1st course of treatment. following occurences are subsequent treatments for that treatment type.

1. Contains exactly one [1..1] **treatmentDate** with data type *Point In Time*

- Indicates the date on which this treatment was initiated.

2. Contains zero or one [0..1] **treatmentHospital**, where its type is *Service Delivery Location*

- Indicates the name of the institution providing treatment.

# Cancer Treatment Evaluation

Contains information pertinent to the followup of the all the treatments other than Radiation Treatment.

1. Contains zero or one [0..1] **crohnsDisease** with data type *Code*

- Indicates the appropriate code for whether Crohn's disease/ulcerative colitis was a pre-existing condition. Possible Values are No; Yes; Unknown; etc.

2. Contains zero or one [0..1] **familialAdenomatousPolyposis** with data type *Code*

- Idetifies whether the patient was affected by FAP (Familial adenomatous polyposis). Possible values are No; Yes; Unknown/not documented; etc.

3. Contains zero or one [0..1] **gleasonsScore** with data type *String*

- Indicates the Gleason's score. Possible values are unknown, not reported or not applicable, 99; etc.

4. Contains zero or one [0..1] **hnpcc** with data type *Code*

- Indicates whether the patient is affected by hereditary nonpolyposis colon cancer (HNPCC) syndrome. Possible values are No; Yes; Unknown/not documented; etc.

5. Contains zero or one [0..1] **inflammatoryBowelDisease** with data type *Code*

- Record whether the patient was affected by inflammatory bowel disease (IBD). Possible values are No; Yes; Unknown/not documented; etc.

6. Contains zero or one [0..1] **division**, where its type is *Service Delivery Location*

- The division to which this primary belongs.

# Cancer Treatment List Entry

The act or process of identifying a single course of treatment regimen, for the patient's cancer.

1. Contains exactly one [1..1] **precedence** with data type *Integer*

   • Provides an indication of whether the cancer treatment is primary, secondary, tertiary, etc.
2. Contains exactly one [1..1] **cancerTreatment**, where its type is *Cancer Treatment*

# Cand P Exam Event

1. Contains exactly one [1..1] **dateCompleted** with data type *Point In Time*
2. Contains exactly one [1..1] **examDate** with data type *Point In Time*

   • The date and time of the examination for the patient.
3. Contains exactly one [1..1] **examType** with data type *Code*

   • Contains the code that identifies the type of examination performed for the patient.
4. Contains exactly one [1..1] **id** with data type *Code*

   • Unique identifier for the is Examination occrurence.
5. Contains exactly one [1..1] **results** with data type *String*

   • The consequence of a particular action, operation, or course; an outcome.
6. Contains exactly one [1..1] **status** with data type *Code*

   • The status of the examination for the patient.
7. Contains zero or one [0..1] **clinicalDocument**, where its type is *Clinical Document Event*
8. Contains exactly one [1..1] **examiningPhysician**, where its type is *Individual Provider*
9. Contains zero or one [0..1] **insufficientReason**, where its type is *Insufficient Reason*
10. Contains zero or one [0..1] **examLocation**, where its type is *Institution*

# Cand P Exam Request

This class includes information related to the 2507 request for Compensation & Pension Program.

1. Contains exactly one [1..1] **dateApproved** with data type *Point In Time*

   • The date/time exam results were approved.
2. Contains exactly one [1..1] **dateCompleted** with data type *Point In Time*

   • The date the entire 2507 request was completed.
3. Contains exactly one [1..1] **examType** with data type *Code*

   • Contains the name of the exam for the 2507 request.
4. Contains exactly one [1..1] **id** with data type *Code*

   • "A unique identifier for the Act." (HL7 3.0)
5. Contains exactly one [1..1] **priority** with data type *Code*

   • The request reason for the 2507 exam to be conducted. Possible values are TERMINAL; POW; ORIGINAL SC; ORIGINAL NSC; INCREASE; REVIEW; OTHER; INSUFFICIENT EXAM etc.
6. Contains exactly one [1..1] **remarks** with data type *String*
7. Contains exactly one [1..1] **requestDate** with data type *Point In Time*

   • The date the 2507 request was entered.
8. Contains exactly one [1..1] **status** with data type *Code*

   • The status of the 2507 exam request. Possible values are NEW; PENDING, REPORTED; PENDING, SCHEDULED; RELEASED TO RO, NOT PRINTED; FOR COMPLETED, PRINTED BY RO; CANCELLED BY MAS; CANCELLED BY RO; TRANSCRIBED; FOR NEW, TRANSFERRED IN; COMPLETED, TRANSFERRED OUT etc.

9. Contains exactly one [1..1] **requestingLocation**, where its type is *Institution*

   • The name of the regional office that entered the request.

10. Contains zero or more [0..*] **knownDisability**, where its type is *Disability Observation*

   • Other known disabilities or those stated by the veteran.

11. Contains zero or more [0..*] **exam**, where its type is *Cand P Exam Event*

   • The 2507 exam event.

12. Contains exactly one [1..1] **subject**, where its type is *Patient*

   • The veteran for whom the 2507 exam has been requested

13. Contains zero or one [0..1] **routingLocation**, where its type is *Division*

14. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

## Capitation Arrangement

'A method of paying for medical services on a per-person rather than a per-procedure basis. Under capitation, an HMO pays a doctor a fixed amount each month to take care of HMO members, regardless of how much or how little care each member needs. ' -eHealthInsurance.org

1. Extends *Financial Arrangement*

## Cardiac Surgery Evaluation

Evaluation of the cardiac surgery for the patient.

1. Contains exactly one [1..1] **arteryBypassGraftNumber** with data type *Physical Quantity*

   • This is the number of coronary artery bypass graft (CABG) anastomoses to native coronary arteries with radial artery(ies) regardless of whether other procedures were performed. Do not leave blank, enter "zero" in the appropriate place if no coronary artery bypass grafts were performed with radial artery. Note that any CABG distal anastomoses performed without placing the patient on cardiopulmonary bypass are to be recorded.

2. Contains exactly one [1..1] **totalCpbTime** with data type *Time Interval*

   • Record in minutes the total cardiopulmonary bypass time. This includes the total duration of full and partial cardiopulmonary bypass from all episodes of cardiopulmonary bypass. This information can generally be found on the perfusionist record and/or the anesthesia record.

## Cardiac Surgery Event

Surgery for treating a patient with a heart disorder.

1. Extends *Surgical Event*

2. Contains exactly one [1..1] **collectionDate** with data type *Time Interval*

   • Contains the date and time that the cardiac surgical priority information was collected.

3. Contains exactly one [1..1] **cardiacSurgeryId** with data type *Id*

   • Unique identifier that is assigned to this surgery event.

4. Contains exactly one [1..1] **status**

   • Contains a code that identifies the status of the surgery event.

5. Contains exactly one [1..1] **surgicalPriority** with data type *Code*

   • Contains the surgical priority that most accurately reflects the acuity of patient's cardiovascular condition at the time of transport to the operating room. Suggested like values: 1:ELECTIVE, 2:URGENT, 3:EMERGENT

(ONGOING ISCHEMIA), 4:EMERGENT (HEMODYNAMIC COMPROMISE), 5:EMERGENT (ARREST WITH CPR).

6. Contains exactly one [1..1] **totaISchemicTime** with data type *Point In Time*

   • Record in minutes the duration of time the ascending aorta is totally cross-clamped. Do not include the duration of partial aorta cross-clamp used for sewing the proximal anastomoses.

7. Contains exactly one [1..1] **estimateOfMortalityDate** with data type *Point In Time*

   • Contains the date and time that the estimate of mortality information was collected.

8. Contains at least one [1..*] **evaluation**, where its type is *Cardiac Surgery Evaluation*

   • Examine and appraise the cardiac surgery.

9. Contains zero or more [0..*] **cardiacProsthesis**, where its type is *Surgery Device*

   • An artificial device used to replace a missing body part, such as a limb, tooth, eye, or heart valve.

10. Contains exactly one [1..1] **perfusionDevice**, where its type is *Surgery Device*

    • The piece of equipment or a mechanism designed to support perfusion for the surgical function

# Care Agency

This class includes information related to the type of agency providing last care to patient or type of patient destination agency for HPBC program.

1. Contains exactly one [1..1] **agencyCategory** with data type *Code*

   • Categorizes the agency providing care to the patient. Possible values include VA Provided Care, Non-VA Care, and VA Fee Basis/Contract.

2. Contains exactly one [1..1] **careCategory** with data type *Code*

   • Type of care provided to the patient Possible values are General Hospital; Specialty Hospital; Nursing Home; Residential Care Facility; Hospice; Community-Based Service; Self/Family, No Regular Source; Not Determined etc.

# Care Plan

1. Contains zero or one [0..1] **carePlanGuideline**, where its type is *Care Plan Guideline*
2. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
3. Contains exactly one [1..1] **carePlanType** with data type *Code*
4. Contains exactly one [1..1] **dateCreated** with data type *Point In Time*
5. Contains exactly one [1..1] **patientInstructions** with data type *String*
6. Contains zero or more [0..*] **carePlanTeamMember**, where its type is *Care Plan Team Member*
7. Contains exactly one [1..1] **id** with data type *Id*
8. Contains exactly one [1..1] **version** with data type *String*
9. Contains exactly one [1..1] **author**, where its type is *Author*
10. Contains zero or more [0..*] **relatedCarePlan**, where its type is *Related Care Plan*
11. Contains zero or more [0..*] **healthConcern**, where its type is *Health Concern*
12. Contains zero or more [0..*] **intervention**, where its type is *Intervention*
13. Contains exactly one [1..1] **patient**, where its type is *Patient*
14. Contains exactly one [1..1] **goal**, where its type is *Goal*

# Care Plan Guideline

1. Contains exactly one [1..1] **id** with data type *Id*

2. Contains exactly one [1..1] **text** with data type *String*

## Care Plan Team Member

1. Contains exactly one [1..1] **individualProvider**, where its type is *Individual Provider*

## Care Protocol

A proposed or tentative course of action for the maintenance and restoration of health by the treatment and prevention of disease by trained and licensed professionals.

1. Contains exactly one [1..1] **description** with data type *String*
2. Contains exactly one [1..1] **id** with data type *Id*
3. Contains exactly one [1..1] **title** with data type *String*

## Cause Of Death

Identifies the condition that caused or contributed to the death of the organism. For Humans: The U.S. Standard Certificate of Death (Rev 11/2003) requires the entry of "the chain of events-diseases, injuries, or complications-that directly caused the death", beginning with the "immediate cause (final disease or condition resulting in death)" and ending with the "underlying cause (disease or injury that initiated the events resulting in death)." Note the CDC Center for Vital Statistics is required to report this information to the World Health Organization (WHO). The WHO requires that this data be reported using ICD-10 codes. For Non-humans: The coding system to be used for non-humans has not been determined at this time. Added 11/23/2010 for Problem List.

1. Contains exactly one [1..1] **causeOfDeath** with data type *Code*

   • Identifies the condition that caused or contributed to the death of the organism. For Humans: The U.S. Standard Certificate of Death (Rev 11/2003) requires the entry of "the chain of events-diseases, injuries, or complications-that directly caused the death", beginning with the "immediate cause (final disease or condition resulting in death)" and ending with the "underlying cause (disease or injury that initiated the events resulting in death)." Note the CDC Center for Vital Statistics is required to report this information to the World Health Organization (WHO). The WHO requires that this data be reported using ICD-10 codes. For Non-humans: The coding system to be used for non-humans has not been determined at this time. Added 11/23/2010 for Problem List.

2. Contains exactly one [1..1] **timeInterval** with data type *Time Quantity*

   • The approximate interval between onset and death.

## Cause Of Death List Entry

An ordered list of the condition(s) that caused or contributed to the death of the organism. When more than one value exists, the ordered list shall begin with the Immediate Cause of death followed by the Cause Leading to the Immediate cause, followed by the Next Antecedent cause of death, ending with the Underlying cause of death. For Humans: The U.S. Standard Certificate of Death (Rev 11/2003) requires the entry of "the chain of events-diseases, injuries, or complications-that directly caused the death", beginning with the "immediate cause (final disease or condition resulting in death)" and ending with the "underlying cause (disease or injury that initiated the events resulting in death)." Note the CDC Center for Vital Statistics is required to report this information to the World Health Organization (WHO). The WHO requires that this data be reported using ICD-10 codes. For Non-humans: The coding system to be used for non-humans has not been determined at this time. Added 11/23/2010 for Problem List.

1. Contains exactly one [1..1] **causeOfDeath**, where its type is *Cause Of Death*

- Identifies the condition that caused or contributed to the death of the organism. For Humans: The U.S. Standard Certificate of Death (Rev 11/2003) requires the entry of "the chain of events-diseases, injuries, or complications-that directly caused the death", beginning with the "immediate cause (final disease or condition resulting in death)" and ending with the "underlying cause (disease or injury that initiated the events resulting in death)." Note the CDC Center for Vital Statistics is required to report this information to the World Health Organization (WHO). The WHO requires that this data be reported using ICD-10 codes. For Non-humans: The coding system to be used for non-humans has not been determined at this time. Added 11/23/2010 for Problem List.

2. Contains exactly one [1..1] **precedence** with data type *Integer*

- Provides a mechanism to order the cause of death entries, i.e., primary, secondary, etc.

# Cell Reinfusion

Determines the amount of fluid in milliliters reinfused during the procedure.

1. Contains exactly one [1..1] **amount** with data type *Physical Quantity*

- This is the amount of fluid in milliliters that was reinfused into the patient during this procedure.

# Cell Salvage

Determines the amount of fluid in milliliters collected during the procedure.

1. Contains exactly one [1..1] **amount** with data type *Physical Quantity*

- This is the amount of fluid in milliliters collected during the procedure.

# Cell Saver Event

Cell Saver for the surgical event.

1. Contains exactly one [1..1] **cellSaverId** with data type *Id*

- This field identifies the cell saver that was used during this procedure.

2. Contains zero or more [0..*] **cellSaver**, where its type is *Surgery Device*

- The amount of fluid collected during the procedure.

3. Contains zero or one [0..1] **cellSalvage**, where its type is *Cell Salvage*

- Determines the amount of fluid in milliliters collected during the procedure.

4. Contains zero or one [0..1] **cellReinfusion**, where its type is *Cell Reinfusion*

- The amount of fluid reinfused during the procedure.

5. Contains at least one [1..*] **disposableUsed**, where its type is *Surgery Device*

- Identifies the disposable products used during the surgical process.

# Census Event

Date that an Inpatient or ShortStay Encounter was included in the Census. Census is taken 3 or 4 times a year at 11:59 pm. Only those Encounters that are active (admitted), at the time the Census Event triggers receive a date timestamps.

1. Contains exactly one [1..1] **censusDate** with data type *Point In Time*

- This field contains the date the census was taken for this Encounter

2. Contains zero or more [0..*] **shortstayCensus**, where its type is *Short Stay*

- ShortStay Encounter was included in the Census. Census is taken 3 or 4 times a year at 11:59 pm. Only those Encounters that are active (admitted), at the time the Census Event triggers receive a date timestamps.

3. Contains zero or more [0..*] **inpatientCensus**, where its type is *Inpatient Encounter Event*

- Inpatient Encounter was included in the Census. Census is taken 3 or 4 times a year at 11:59 pm. Only those Encounters that are active (admitted), at the time the Census Event triggers receive a date timestamps.

## Certificate Of Medical Necessity

1. Contains exactly one [1..1] **dateBegin** with data type *Point In Time*
2. Contains exactly one [1..1] **dateRevisedOrRecertified** with data type *Point In Time*
3. Contains exactly one [1..1] **dateSigned** with data type *Point In Time*
4. Contains exactly one [1..1] **category** with data type *Code*
5. Contains exactly one [1..1] **lengthOfNeed** with data type *Time Quantity*
6. Contains exactly one [1..1] **narrative** with data type *String*
7. Contains exactly one [1..1] **requestStatus** with data type *Code*
8. Contains zero or more [0..*] **assessmentInstrumentResponse**, where its type is *Assessment Instrument Response*

## Chart Review

A chart review is the examination of a representative sample of medical charts and ledgers to identify patterns of errors or areas where quality may be improved. This class identifies who reviewed the medical record and when.

1. Contains exactly one [1..1] **author**, where its type is *Author*

- Identifies the practitioner who performed the chart review.

## Chemotherapy

The treatment of cancer using specific chemical agents or drugs that are selectively destructive to malignant cells and tissues. [Source <http://dictionary.reference.com/search?q=00-database-info&db=ahsmd>: The American Heritage Stedman's Medical Dictionary]

1. Extends *Cancer Treatment*
2. Contains exactly one [1..1] **chemotherapy** with data type *Code*

- Indicates the type of chemotherapy administered as first course of treatment or subsequent treatment at this and at all other facilities. If chemotherapy was not administered, then this item records the reason it was not administered to the patient. Chemotherapy consists of a group of anticancer drugs that inhibit the reproduction of cancer cells by interfering with DNA synthesis and mitosis. Possible values are None; Chemotherapy, NOS; Single agent; Multiagent; Not admin/contraindicated; Pt died prior to tx; Not admin, no reason given; Refused by pt; Unknown if admin; Unknown, death cert; etc.

## Chest X Ray

A Phtograph of chest taken by X-Ray.

1. Contains exactly one [1..1] **chestXRay** with data type *Code*

- Indicates the results of the diagnostic test CHEST X-RAY. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.

2. Contains exactly one [1..1] **dateOfChestXRay** with data type *Point In Time*

• The date of the diagnostic test CHEST X-RAY.

## Cigarette Smoking

US Standard Certificate Of Birth Field 37 Describes whether and how much the infant's mother smoked before and/or during pregnancy. The US Standard Certificate Of Birth Field 37 lists four time periods: Three months before pregnancy; first three months of pregnancy; second three months of pregnancy; and third trimester of pregnancy. It then asks for the average number of cigarettes OR packs of cigarettes smoked per day for each of these time periods. This class is modeled such that there is one instance per time period, and therefore will have up to (exactly?) four instances.

1. Contains exactly one [1..1] **timePeriodCategory** with data type *Code*
   • US Standard Certificate Of Birth Field 37 Describes whether and how much the infant's mother smoked before and/or during pregnancy. The US Standard Certificate Of Birth Field 37 lists four time periods: Three months before pregnancy; first three months of pregnancy; second three months of pregnancy; and third trimester of pregnancy. It then asks for the average number of cigarettes OR packs of cigarettes smoked per day for each of these time periods. This class is modeled such that there is one instance per time period, and therefore will have up to (exactly?) four instances. This property indicates which of the four time periods is being documented by the number of cigarettes or number of packs of cigarettes properties.
2. Contains zero or one [0..1] **numberOfCigarettes** with data type *Integer*
   • US Standard Certificate Of Birth Field 37 Describes the average number of cigarettes smoked per day for the time period identified by the timePeriodCategory property.
3. Contains zero or one [0..1] **numberOfPacks** with data type *Integer*
   • US Standard Certificate Of Birth Field 37 Describes the average number of packs of cigarettes smoked per day for the time period identified by the timePeriodCategory property.

## Citizen

'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com

1. Contains exactly one [1..1] **nation**, where its type is *Nation*
   • 'A relatively large group of people organized under a single, usually independent government; a country.' - American Heritage Dictionary. An organization created to govern a country, which has the power to grant citizenship to its people.
2. Contains zero or one [0..1] **effectiveDateRange** with data type *Time Interval*
   • The time period during which the person is/was a citizen of the associated Nation.

## Clearing House

An organization that consolidates medical claims from various providers for electronic submission to and payment from various payers.

1. Contains exactly one [1..1] **category** with data type *Code*
   • Identifies the type of clearinghouse

## Clincal Assessment Ratio Observation

Contains the response to clinical observation that can be expressed as a ratio.

1. Extends *Clinical Observation*
2. Contains exactly one [1..1] **value** with data type *Physical Quantity Ratio*

## Clincial Assessment Panel

This class captures information about the type of assessment

1. Contains exactly one [1..1] **assessmentDate** with data type *Point In Time*
2. Contains exactly one [1..1] **assessmentTitle** with data type *String*
3. Contains exactly one [1..1] **assessmentType** with data type *Code*
4. Contains zero or more [0..*] **clinicalObservation**, where its type is *Clinical Observation*

   • A clinical observation being done by a practioner for a patient
5. Contains exactly one [1..1] **patient**, where its type is *Patient*

   • The patient whose problems are being observed and documented.
6. Contains zero or more [0..*] **vitalsignObservation**, where its type is *Vital Sign Observation Event*

   • An event in which an objective measurement is taken of an aspect of a patient.
7. Contains exactly one [1..1] **practitioner**, where its type is *Individual Provider*

   • The practioner who is observing the care for the patient .

## Clinic Stop

Identifies various nodes within a workflow process that is typically performed by a Medical Service. Used to facilitate collection of workload and financial information. This is equivalent to File 40.7 in Vista.

1. Extends *Service Delivery Location*
2. Contains exactly one [1..1] **stopCode** with data type *Code*

   • Identifies various nodes within a workflow process that is typically performed by the Service. Used to facilitate collection of workload and financial information.

## Clinical Assessment Boolean Value

Contains the value for a clinical observation that can be expressed as a boolean.

1. Extends *Clinical Observation*
2. Contains exactly one [1..1] **value** with data type *Boolean*

## Clinical Assessment Coded Value Set

Contains the value for a clinical observation that can be expressed as a code.

1. Extends *Clinical Observation*
2. Contains exactly one [1..1] **value** with data type *Code*

## Clinical Assessment Num Units Value

Contains the value for a clinical observation that can be expressed as a numeric response with units.

1. Extends *Clinical Observation*
2. Contains exactly one [1..1] **value** with data type *Physical Quantity*

# Clinical Assessment Numeric Value

Contains the value for clinical observation that can be expressed as a numeric response.

1. Extends *Clinical Observation*
2. Contains exactly one [1..1] **value** with data type *Real*

# Clinical Assessment String Value

Contains the value for a clinical observation that can be expressed as a textual response.

1. Extends *Clinical Observation*
2. Contains exactly one [1..1] **value** with data type *String*

# Clinical Condition

The health condition(s) associated with the policy. Conditions when specified, are coded concepts expressed in a standard vocabulary (e.g., LOINC, SNOMED CT, etc.). These may include indications of 'substance abuse' or 'HIV-related' illnesses, etc. An obligationCode may be implemented as a 'condition'.

1. Contains exactly one [1..1] **condition** with data type *Code*

   - Categorizes the health condition associated with the policy. Conditions when specified, are coded concepts expressed in a standard vocabulary (e.g., LOINC, SNOMED CT, etc.). These may include indications of 'substance abuse' or 'HIV-related' illnesses, etc.

# Clinical Document Event

"Document: "Specialization of Act to add the characteristics unique to document management services." (HL7 3.0) "ClinicalDocument: "A clinical document is a documentation of clinical observations and services, as defined in." (HL7 3.0 CDA 2.0) "An actual occurrence of an event (i.e., the documentation act already happened and is not just a request, intent, plan or promise to document)." (HL7 3.0) This class servers the purpose of the Header. "The header identifies and classifies the document; provides information on authentication, the encounter, the patient, and the provider; and sets the context for the document as a whole." (HL7 3.0)

1. Contains exactly one [1..1] **archiveDate** with data type *Point In Time*

   - <p> This contains the date this document was archived. </p>
2. Contains exactly one [1..1] **confidentiality** with data type *Code*

   - "Confidentiality is a required contextual component of CDA, where the value expressed in the header holds true for the entire document, unless overridden by a nested value (as further described in CDA Context ( 4.4 ))." (HL7 V3)
3. Contains exactly one [1..1] **dispensation** with data type *Code*

   - A code depicting the storage status of a Clinical Document. Possible Values Include: Active, Archived, Purged etc.
4. Contains exactly one [1..1] **documentTitle** with data type *String*

   - "Represents the title of the document. It's commonly the case that clinical documents do not have a title, and are collectively referred to by the display name of ClinicalDocument.code (e.g. a "consultation" or "progress note"). Where these display names are rendered to the clinician, or where the document has a unique title, the ClinicalDocument.title component should be used." (HL7 3.0)
5. Contains exactly one [1..1] **documentType** with data type *Code*

- Classifies the document. In VistA this is a pointer to file 8925.1. In HL7 CDA, this is: "The code specifying the particular kind of document (e.g. History and Physical, Discharge Summary, Progress Note). The value set is drawn from LOINC, and has a CWE coding strength." (HL7 3.0)

6. Contains exactly one [1..1] **id** with data type *Id*

   - "Represents the unique instance identifier of a clinical document" (HL7 3.0)

7. Contains exactly one [1..1] **isCosignatureNeeded** with data type *Boolean*

   - Indicates whether or not a cosignature is needed.

8. Contains exactly one [1..1] **language** with data type *Code*

   - "Specifies the human language of character data (whether they be in contents or attribute values). The values of the attribute are language identifiers as defined by the IETF (Internet Engineering Task Force) RFC 3066 for the Identification of Languages, ed. H. Alvestrand. 1995, which obsoletes RFC 1766. Language is a contextual component of CDA., where the value expressed in the header holds true for the entire document, unless overridden by a nested value (as further described in CDA Context ( 4.4 ))." (HL7 3.0 CDA 2.0)

9. Contains exactly one [1..1] **referenceDate** with data type *Point In Time*

   - In VistA, "this is the Date (and time) by which the clinician will reference the document. For Progress Notes, this will likely be the date of the provider's encounter with the patient. For documents which have been dictated, and transcribed (e.g., discharge summaries), it will correspond to the dictation date of the record. In all cases, this is the date by which the document will be referenced and sorted." In CDA, this is the creation date: "Signifies the document creation time, when the document first came into being. " (HL7 3.0, CDA 2.0)

10. Contains exactly one [1..1] **status** with data type *Code*

    - The current status of a given clinical document. Possible values include: undictated, untranscribed, unreleased, unverified, unsigned, uncosigned, completed, etc. Displayed in CPRS. And is an automatic system change when updated (never through a prompt to the user).

11. Contains exactly one [1..1] **treatmentBeginDate** with data type *Point In Time*

    - The date/time at which the treatment episode associated with this document was initiated (e.g., Admission date/time for a discharge summary, Visit date/time for a clinic note, Transfer date/time for an interim summary)

12. Contains exactly one [1..1] **treatmentEndDate** with data type *Point In Time*

    - The ending date/time for the treatment episode associated with this document (e.g.Time is optional)

13. Contains exactly one [1..1] **updateDate** with data type *Point In Time*

    - <HTML><HEAD> <META content="MSHTML 6.00.2900.3492" name=GENERATOR></HEAD> <BODY>This contains the date and time this document was updated.</BODY></HTML>

14. Contains exactly one [1..1] **version** with data type *Integer*

    - "An integer value used to version successive replacement documents." (HL7 V3)

15. Contains zero or one [0..1] **administrativeClosure**, where its type is *Administrative Closure Act*

    - This document was closed by Administrative Action.

16. Contains zero or one [0..1] **amendment**, where its type is *Amendment Act*

    - Records the amendment of a clinical document.

17. Contains zero or one [0..1] **divsion**, where its type is *Institution*

    - This is the institution associated with the document. It is extracted from the document's hospital location if known; otherwise it is extracted from the user's log-on division. Equivalent to a pointer to File #4.

18. Contains zero or more [0..*] **documentGroup**, where its type is *Document Group*

    - Documents can be aggregated into clinically meaningfully groups; each document in the group will usually reference the same patient. A clinical document will typically belong to at most one Document Group.

19. Contains exactly one [1..1] **hospitalCreditStop**, where its type is *Clinic Stop*

    - Identifies a node within a workflow process that is typically performed by the Service to facilitate collection of workload and financial information.

20. Contains exactly one [1..1] **hospitalLocation**, where its type is *Hospital Location*
    - Hospital Location assiciated with this document.
21. Contains zero or one [0..1] **image**, where its type is *Image*
    - The pointer to the Image File.
22. Contains zero or one [0..1] **linkedDataObject**, where its type is *Linked Data Object*
    - The document for which the linkage is beding made.
23. Contains zero or one [0..1] **patientTransfer**, where its type is *Patient Transfer*
    - The inpatient movement with which the document is associated.
24. Contains zero or more [0..*] **procedureSummary**, where its type is *Procedure Summary*
    - The summary for the clinical procedure performed.
25. Contains exactly one [1..1] **recordTarget**, where its type is *Patient*
    - A Role of a Person as a recipient of health care services from a healthcare provider.
26. Contains zero or more [0..*] **relatedDocument**, where its type is *Related Document*
27. Contains zero or one [0..1] **retraction**, where its type is *Nullify Act*
    - Records the retraction, or "nullification" of a clinical document.
28. Contains at least one [1..*] **section**, where its type is *Clinical Document Section*
    - A clinical document body is comprised of one or more document sections.
29. Contains zero or one [0..1] **service**, where its type is *Service Department*
    - The treating speciality associated with this document.
30. Contains zero or one [0..1] **treatingSpecialty**, where its type is *Facility Treating Specialty*
    - The treating speciality associated with this document.
31. Contains zero or one [0..1] **visit**, where its type is *Outpatient Visit*
    - Indicates the visit to which the clinical document is related.
32. Contains zero or one [0..1] **visitLocation**, where its type is *Hospital Location*
    - This is the Admitting/Screening Clinic associated with this document
33. Contains zero or one [0..1] **attender**, where its type is *Attender*
34. Contains exactly one [1..1] **author**, where its type is *Author*

# Clinical Document Section

This class serves the purpose of a context that distinguishes the body of a document from the document header. "The body contains the clinical report, and can be either an unstructured blob, or can be comprised of structured markup. " (HL7 3.0 CDA 2.0) "Document sections can nest, can override context propagated from the header (see CDA Context ( 4.4 ), and can contain CDA entries." (HL7 3.0)

1. Contains exactly one [1..1] **confidentiality** with data type *Code*
   - "A value for Section.confidentialityCode overrides the value propagated from StructuredBody. See CDA Context ( 4.4 ) for more details.confidentialityCode is of type CE, and therefore must carry both a code and a codeSystem." (HL7 3.0 CDA 2.0)
2. Contains exactly one [1..1] **language** with data type *Code*
   - "Specifies the human language of character data (whether they be in contents or attribute values). The values of the attribute are language identifiers as defined by the IETF (Internet Engineering Task Force) RFC 3066: Tags for the Identification of Languages, ed. H. Alvestrand. 1995 , which obsoletes RFC 1766. " (HL7 3.0, CDA 2.0)
3. Contains exactly one [1..1] **sectionTitle** with data type *String*
   - "Represents the label of a section. If valued, it is to be rendered as part of the narrative content of the clinical document body." (Hl7 3.0 CDA 2.0)

4. Contains exactly one [1..1] **sectionType** with data type *Code*
   - Corresponding to Section.Code: "The code specifying the particular kind of section (e.g. Chief Complaint, Review of Systems, Assessment). The value set is drawn from LOINC, and has a CWE coding strength."Represents the label of a section. If valued, it is to be rendered as part of the narrative content of the clinical document body. " (Hl7 3.0, CDA 2.0)
5. Contains exactly one [1..1] **text** with data type *String*
   - "A textual or multimedia description (or reference to a description) of the Act. (e.g. For act definitions, the Act.text can contain textbook-like information about that act. For act orders, the description will contain particular instructions pertaining only to that order.) Free text descriptions are used to help an individual interpret the content and context of the act, but all information relevant for automated functions must be communicated using the proper attributes and associated objects." (HL7 3.0 CDA 2.0)

## Clinical Information

1. Contains exactly one [1..1] **measurementDimension** with data type *Code*
2. Contains exactly one [1..1] **measurementValue** with data type *Physical Quantity*
3. Contains exactly one [1..1] **observationDateTime** with data type *Point In Time*

## Clinical Observation

An event in which a Clinical Observation is recorded.
1. Contains zero or one [0..1] **bodySite** with data type *Code*
2. Contains exactly one [1..1] **clinicalObservationDate** with data type *Point In Time*
3. Contains zero or one [0..1] **clinicalObservationType** with data type *Code*
4. Contains exactly one [1..1] **id** with data type *Id*
5. Contains exactly one [1..1] **isPresent** with data type *Boolean*
6. Contains zero or one [0..1] **observationMethod** with data type *Code*
7. Contains exactly one [1..1] **severity** with data type *Code*
8. Contains exactly one [1..1] **status** with data type *Code*
9. Contains zero or one [0..1] **device**, where its type is *Device*
   - A contrivance or an invention serving a particular purpose, especially a machine used to perform one or more relatively simple tasks." (The American Heritage Stedman's Medical Dictionary)
10. Contains zero or one [0..1] **patientState**, where its type is *Patient State Observation*
    - The state of the patient being observed.
11. Contains exactly one [1..1] **practitioner**, where its type is *Individual Provider*
    - The practioner who is observing the care for the patient .

## Clinical Procedure Record

Clinical Procedures provided and or performed for the patient during the Encounter.
1. Contains exactly one [1..1] **comments** with data type *String*
   - Textual Description of the procedure.
2. Contains exactly one [1..1] **date** with data type *Point In Time*
   - The date and time the professional service was performed
3. Contains exactly one [1..1] **status** with data type *Code*
   - A value specifying the state of this patient encounter (based on the RIM Act class state machine), for example, active, aborted, completed

4. Contains zero or more [0..*] **complication**, where its type is *Complication Event*
   - An undesirable event experienced by a patient whilst undergoing a clinical procedure, especially if the event was caused by the procedure itself.
5. Contains at least one [1..*] **clinicalPractitionerPerformer**, where its type is *Practitioner Lite*
6. Contains exactly one [1..1] **performer**, where its type is *Individual Provider*
7. Contains zero or more [0..*] **relatedProcedure**, where its type is *Related Procedure*
8. Contains zero or more [0..*] **procedureList**, where its type is *Procedure List Entry*

## Clinical Service

The provision of healthcare-related service(s) within the context of an encounter.
1. Contains exactly one [1..1] **clinicalServceId** with data type *Id*
   - Unique Identifier for this Clinical service .
2. Contains exactly one [1..1] **typeOfService** with data type *Code*
   - Clinical Speciality ID
3. Contains zero or one [0..1] **clinicalProcedureRecord**, where its type is *Clinical Procedure Record*

## Co Agent

<p>"Identifies the co-existing agent contributing to the DUR event (drug or disease) conflicting with the prescribed drug." - NCPDP Script (Field 7883, Data Dictionary 201009)</p>
1. Contains exactly one [1..1] **code** with data type *Code*
   - <p>"Identifies the co-existing agent contributing to the DUR event (drug or disease) conflicting with the prescribed drug." - NCPDP Script (Field 7883, Data Dictionary 201009)</p>

## Co Insurance

The co-insurance percentage is typically found in a fee for service environment and is based on a percentage of the total amount the provider would be paid for the service(s). This amount is the patient's responsibility. - derived from X12 270/271 IG
1. Contains exactly one [1..1] **amount** with data type *Monetary Amount*

## Co Payment

Co-Payment represents the patient's portion of responsibility for a benefit. The co-payment amount is typically a fixed amount and is customarily collected upon receipt of service (however the requirements may vary from plan to plan). - derived from X12 270/271 IG
1. Contains exactly one [1..1] **amount** with data type *Monetary Amount*

## Code

"A word, letter, number, or other symbol used in a code system to mark, represent, or identify something: The code on the label shows the date of manufacture." - Dictionary.com This *abstract* datatype represents a "coded element" - some series of letters or numbers which can be "looked up" in a code system or value set. In practice, this datatype will be substituted with specific "flavors" of the code datatype for use in particular standards-based payloads.
1. Contains zero or one [0..1] **code** with data type *String*

- This is a placeholder for the "code", which is a unique identifier of an entry in a coding system. Note that this property will be replaced by some other concept or group of concepts when this abstract class is replaced by a specific class for a given target platform.

2. Contains zero or one [0..1] **text** with data type *String*

- This is a placeholder for the "display text" or "designation", which is the human-readable string representing the concept. Note that this property will be replaced by some other concept or group of concepts when this abstract class is replaced by a specific class for a given target platform.

3. Contains zero or one [0..1] **codeSystem** with data type *String*

- This is a placeholder for the "coding system", which is a identifies the coding scheme or coding system of which the code is a member. Note that this property will be replaced by some other concept or group of concepts when this abstract class is replaced by a specific class for a given target platform.

4. Contains zero or one [0..1] **codeSystemVersion** with data type *String*

- This is a placeholder for the "coding system version", which is identifies the version coding scheme or coding system of which the code is a member. Note that this property will be replaced by some other concept or group of concepts when this abstract class is replaced by a specific class for a given target platform. This version number identifies the possible members of a coding system as of a particular time. If a coding system isn't formally versioned, such as NDC, the date on which the coding system was published could be used here.

## Coded Ordinal

1. Contains exactly one [1..1] **value** with data type *Real*

## Coded Question

This class represents a question that requires an answer based on a predefined terminology/value set.

1. Extends *Question*
2. Contains exactly one [1..1] **question**

- This attribute is used to define the code associated with the Behavioral Health assessment question that requires a coded response.

3. Contains zero or more [0..*] **answer** with data type *Code*

- This attribute represents response as a coded value to a specific assessment question. If a response is not provided, then the null value may be qualified by a ASKU (asked but unknown) null flavor.

## Collected Specimen

1. Extends *Specimen*
2. Contains exactly one [1..1] **specimenCollectionEvent**, where its type is *Specimen Collection Event*

- Association from Specimen to SpecimenCollectionEvent procedure to get collection date.

3. Contains zero or one [0..1] **definedPatientEvent**, where its type is *Defined Patient Event*

- The specific patient-related event to which a specimen collection or collections (and subsequently, any tests performed on that specimen) are related or affected by time, sequence, directive, intent, etc. Examples might include drug administration (peak and trough), beginning of fasting (lipids, FBS), glucose challenge (tolerances) or meal (postprandial), admission (pre- or post-admission studies), scheduled surgery/transfusion (compatibility testing), onset of symptoms (acute and convalescent), LMP (pregnancy test, Pap smear), lumbar puncture (CSF tubes 1, 2, and 3), treatment completion (test of cure, post-transfusion H&H), use/ingestion (BAT, toxicology), start of 24-hour urine pooling (creatinine clearance), etc.

## Colonoscopy

Visual examination of the colon (with a colonoscope) from the cecum to the rectum; requires sedation [Source: WordNet 2.0, 2003 Princeton University ]

1. Contains exactly one [1..1] **colonoscopy** with data type *Code*
   - Indicates the results of the diagnostic test COLONOSCOPY. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.
2. Contains exactly one [1..1] **dateOfColonoscopy** with data type *Time Interval*
   - The date of the diagnostic test COLONOSCOPY. If this test was not done, record a '0'.

## Comment Event

This class is used to capture comments about an Activity which might be made by various practitioners during the course of that Activity.

1. Contains exactly one [1..1] **id** with data type *Id*
   - Uniquely identifies the comment.
2. Contains exactly one [1..1] **comment** with data type *String*
   - This property contains the comment text.
3. Contains exactly one [1..1] **commentCategory** with data type *Code*
   - A categorization of the comment, which might be used to locate specific comments or for display purposes.
4. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
   - The date and time the comment was entered.
5. Contains exactly one [1..1] **author**, where its type is *Individual Provider*
   - Indicates the practitioner who created the comment.

## Complication Event

An undesirable event experienced by a patient whilst undergoing a clinical procedure, especially if the event was caused by the procedure itself.

1. Contains exactly one [1..1] **description** with data type *String*
   - Describes the complication that may have occurred during the exam procedure.

## Composite Policy

This class is the main/focal class for electronic privacy policies. It contains a set of basic policies that work together to enforce a privacy policy, organizational standard operating procedure, or a consent directive. Its basic characteristic is that it contains other policies. An instance of a CompositePolicy may include several Authorization, Delegation, Refrain, or Obligation policies. A CompositePolicy is specialization of Policy and inherits all its attributes and associations. In addition to the attributes it inherits from its base class ('Policy') this type of class contains the following association and attribute:

1. Extends *Policy*
2. Contains exactly one [1..1] **combiningAlgorythm** with data type *String*
   - This attribute is used to specify the policy combining algorithm that is used to process the contained policies.
3. Contains at least one [1..*] **containedPolicy**, where its type is *Basic Policy*

- This association specifies the policies contained in a CompositionPolicy.

## Computer User

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Concommittant Drugs

1. Contains exactly one [1..1] **adminStartDate** with data type *Point In Time*
2. Contains exactly one [1..1] **adminStopDate** with data type *Point In Time*
3. Contains exactly one [1..1] **lastFillDate** with data type *Point In Time*
4. Contains exactly one [1..1] **sig** with data type *String*
5. Contains exactly one [1..1] **medicinalProduct**, where its type is *Medicinal Product*

## Consent Author

A participation by which a person in the role of 'Consenter' creates or 'authors' a Consent Directive.
1. Contains exactly one [1..1] **consenter**, where its type is *Consenter*
   - Identifies the person who created or 'authored' the consent directive
2. Contains exactly one [1..1] **functionCode** with data type *Code*
   - Further defines the kind of participation by which a person in the role of 'Consenter' creates or 'authors' a Consent Directive.

## Consent Directive

This class is the focal class representing a set of consent directives issued by a consenter on behalf of self or someone else. This class is the root class or the entry class into the Consent Directive structure.
1. Contains zero or one [0..1] **documentImage** with data type *base64 Binary*
   - This optional attribute references a signed paper document containing the client's consent directive.
2. Contains exactly one [1..1] **effectiveTime** with data type *Point In Time*
   - This attribute specifies the date when the policy/consent is in effect.
3. Contains zero or one [0..1] **expirationTime** with data type *Point In Time*
   - This attribute specifies when the consent directive automatically expires. A consent directive may be revoked prior to its expiration date.
4. Contains exactly one [1..1] **id** with data type *Id*
   - Unique identifier that refers to a specific Consent Directive instance. This id or the published URI may be used to lookup the client's consent directives in order to apply them to the collection, access, use, or disclosure of health records.
5. Contains exactly one [1..1] **reason** with data type *Code*
   - This attribute is used to specify the reason for revoking a Consent Directive, e.g., requested vs. correction/ error. An error would be a discrepancy between the intent of Consent Directive (as communicated by the Consenter) and that which was entered into the Consent Directive Management System (CDMS).
6. Contains exactly one [1..1] **status** with data type *Code*
   - This attribute indicates whether the consent directive is active or not.

7. Contains zero or one [0..1] **replacesDirective**, where its type is *Consent Directive*
   - Points to a previous Consent Directive superseded by the current instance.
8. Contains exactly one [1..1] **consentAuthor**, where its type is *Consent Author*
   - Identifies the person who created or 'authored' the consent directive
9. Contains zero or more [0..*] **publishedPolicy**, where its type is *Privacy Policy*
   - A set of rules that are intended to be enforced by security systems and are used as the basis for client consent directives.
10. Contains zero or more [0..*] **privacyRuleList**, where its type is *Privacy Rule List*
    - A list of zero or more consent rules applicable to this consent directive. A consent rule specifies the permission allowed to a user type by the consenter for a specific type of information. The person consenting may be either the subject of the record or a designated Substitute Decision Maker. One or more consent rules comprise a consent directive or privacy policy.
11. Contains exactly one [1..1] **subjectOfConsent**, where its type is *Patient*
    - Identifies the person to whom the consent directive applies. This person may or may not be the same person as the consent author, as in the case where the patient is a minor child or an incapacitated person.

## Consenter

This class is intended to capture the properties of a Consenter/Substitute Decision Maker - see 'Actors'.

1. Contains exactly one [1..1] **relationship** with data type *Code*
   - This coded attribute is intended to specify the relationship between the consenter and the client. This may be a Substitute Decisions Maker, a legal guardian, etc.
2. Contains zero or one [0..1] **digitalSignature** with data type *base64 Binary*
   - This attribute is used to store the consenter's signature.
3. Contains zero or one [0..1] **signatureRecorded** with data type *Boolean*
   - If a digital signature is not allowed by policy, this attribute indicates whether a signature was captured.
4. Contains zero or one [0..1] **name** with data type *Person Name*
   - Contains the name of the person who granted consent.
5. Contains zero or one [0..1] **client**, where its type is *Patient*
   - Identifies the person to whom the consent directive applies. This person may or may not be the same person as the consent author, as in the case where the patient is a minor child or an incapacitated person.
6. Contains zero or one [0..1] **grantee**, where its type is *Grantee*
   - Designates who/what has been delegated a specific right.

## Constraint Policy

A constraint policy is intended to constrain an existing policy. For example a ConstraintPolicy instance may be used to represent a consent directive that sets specific 'constraints' on a default organizational policy regarding substance abuse data (e.g., 42CFR Part2). A policy (BasicPolicy or CompositePolicy) can be constrained in the sense of profiles for tailoring a policy instance. Complex constraints (e.g., an OCL expression) may be applied and managed separately. For this definition and management purpose it is possible to separate externally-defined constraints and specify a 'ConstraintPolicy' with clearly defined associations to the constrained policy according to component model principles. Effectively, the result of applying constraints is just another CompositePolicy.

1. Extends *Basic Policy*
2. Contains zero or more [0..*] **constraint** with data type *String*
   - Constraint expression.

## Consult Promise

The act of accepting the role of fulfiller. It is the act of accepting a consult or procedure request. The receiving service will perform update tracking activities.

1. Contains exactly one [1..1] **category** with data type *Code*
   • value which indicates whether the request is a consult or procedure request.(C:Consult P:Procedure) (VISTA)
2. Contains exactly one [1..1] **date** with data type *Point In Time*
   • Date/time of actual entry of consultation or procedure request into data repository
3. Contains exactly one [1..1] **fillerId** with data type *Id*
   • A unique identifier for the Act.
4. Contains exactly one [1..1] **serviceSetting** with data type *Code*
   • value which allows the ordering person to indicate if the service is to be rendered on an outpatient or inpatient basis. This is to alleviate the confusion if patient is currently an inpatient/outpatient but is just about to be discharged/admitted and become a outpatient/inpatient. (Data Type = Set of Codes I:inpatient,O:outpatient)
5. Contains exactly one [1..1] **status** with data type *Code*
   • the current status of ConsultProcedureRequest in placer system (CPRS)
6. Contains zero or more [0..*] **activity**, where its type is *Process Activities*
   • action activities for consultProcedurePromise, it is used for tracking/auditing
7. Contains zero or more [0..*] **associatedResult**, where its type is *Consult Result*
   • One or more results (from Medicine package) to be associated with a instance of ConsultProcedurePromise.
8. Contains exactly one [1..1] **responsibleService**, where its type is *Service Department*
   • An organizational unit defined by the type of service that it provides to patients. Examples include Surgery, Dentistry, Mental Health.
9. Contains exactly one [1..1] **consultRequest**, where its type is *Consult Request*
   • The original consultation request (i.e., order) that initiated the consultation fulfillment.
10. Contains exactly one [1..1] **performingLocation**, where its type is *Service Delivery Location*

## Consult Request

A record of a consultation or procedure request. A ConsultRequest is a type of Act. The definition of Act is: "A record of something that is being done, has been done, can be done, or is intended or requested to be done." (HL7 3.0)

1. Extends *Healthcare Order*
2. Contains exactly one [1..1] **requestReason** with data type *String*
   • reasons for consultprocedure request
3. Contains exactly one [1..1] **serviceRenderedSetting** with data type *Code*
   • value to indicate if the service is to be rendered on an outpatient or inpatient basis. This is to alleviate the confusion if patient is currently an inpatient/outpatient but is just about to be discharged/admitted and become a outpatient/inpatient. (Data Type = Set of Codes I:inpatient,O:outpatient)
4. Contains zero or one [0..1] **provisionalDiagnosis**, where its type is *Diagnosis*
5. Contains exactly one [1..1] **orderedProcedure** with data type *Code*
   • Identifies a kind of procedure that can be, is, or has been requested as part of an order.

## Consult Result

1. Contains exactly one [1..1] **date** with data type *Point In Time*
2. Contains exactly one [1..1] **resultCode** with data type *Code*
3. Contains exactly one [1..1] **resultText** with data type *String*

# Contact Log Entry

1. Extends *Patient Journal Entry*
2. Contains exactly one [1..1] **journalEntryType**
3. Contains exactly one [1..1] **contactMethod** with data type *Code*
4. Contains exactly one [1..1] **relatedTaskOrItem** with data type *String*
5. Contains exactly one [1..1] **personContacted** with data type *String*
6. Contains exactly one [1..1] **contactDateTime** with data type *Point In Time*

# Contact Party

The person who should be contacted on the patients behalf under specified situations. Note that because all we need is the person's name and contact information (address, phone numbers), this class does not have an association to the Person class (although logically it should). This is because the other properties of Person, such as sex and date of birth, are irrelevant to the usage. The HL7 Role class allows for names and addresses on the Role, which technically should be only those names or addresses as the relate to the role (i.e., as they differ from those in Person class), but since these are available for use, we are utilizing them in this manner, even though it is somewhat irregular.

1. Contains zero or one [0..1] **ageAtDeath** with data type *Physical Quantity*
   • If the person related to the patient is deceased, this property contains that person's age upon their death. This is used in conjunction with other properties to determine any familial propensities for fatal conditions.
2. Contains zero or one [0..1] **contactCategory** with data type *Code*
   • Indicates the circumstances under which this person is the contact party for the person identified in the owning Person class.
3. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
   • The date range during which this person is a contact party for the patient.
4. Contains exactly one [1..1] **isPrimaryContact** with data type *Boolean*
   • Indicates whether this person is the primary one to contact. Added for MyHealtheVet.
5. Contains exactly one [1..1] **legalName** with data type *Person Name*
   • The name by which a person is known or legally identified such as the name on a driver's license or passport. Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc.
6. Contains exactly one [1..1] **preferredContactMethod** with data type *Code*
   • Identifies the preffered method by which this person should be contacted. Possible values include: primaryHomePhone, temporaryEmail, etc. Added for MyHealtheVet.
7. Contains zero or one [0..1] **relationshipCategory** with data type *Code*
   • Indicates how the person is related to the person identified in the owning Person class. Examples include Spouse, Child, Parent, Legal Guardian, etc.
8. Contains exactly one [1..1] **status** with data type *Code*
   • The status of the record of the relationship with the person identified in the Person class. Example values include Active, Deprecated, etc. Paired with the effectiveDateRange which indicates the valid range of dates for which this person is a relation.
9. Contains exactly one [1..1] **mobilePhone** with data type *Telecommunications*
   • A telecommunication device that moves and stays with its owner. Suitable for urgent matters, the mobile phone is not the first choice for routine business.

10. Contains exactly one [1..1] **primaryHomeAddress** with data type *Address*

- A communications address for the person's primary place of residence.

11. Contains exactly one [1..1] **primaryHomePhone** with data type *Telecommunications*

- The phone number of a person at their primary home, to reach a person after business hours.

12. Contains zero or one [0..1] **workAddress** with data type *Address*

- The contact party's office address. First choice for business related contacts during business hours.

13. Contains exactly one [1..1] **workPhone** with data type *Telecommunications*

- The phone number for a person at their office location. First choice for business related contacts during business hours.

14. Contains zero or more [0..*] **asEmployee**, where its type is *Employee*

- Represents information about a person while in the role of an employee of some organization.

## Contrast Media Administration

This class contains attributes related to contrast media administation associated with this Rad/Nuc Med exam.

1. Contains zero or more [0..*] **contrastMedia**, where its type is *Orderable Pharmacy Item*

- Identifies the contrast agent(s) associated with this Rad/Nuc Med exam. Possible values are Ionic Iodinated; Non-ionic Iodinated; Gadolinium; Cholecystographic; Gastrografin; Barium; unspecified contrast media; etc.

2. Contains exactly one [1..1] **performer**, where its type is *Primary Performer*

## Co-pilot

This class illustrates how a role (specified by the Role stereotype and color coded according to the HL7 RIM convention) is specified in an information model. A role is specified in the HL7 Version 3 RIM as 'a competency of the Entity that plays the Role as identified, defined, guaranteed, or acknowledged by the Entity that scopes the Role'.

1. Contains zero or one [0..1] **person**, where its type is *Person*

- This directed association describes that the entity Person is in the role Pilot.

2. Contains zero or one [0..1] **airline**, where its type is *Airline*

## Coupon Redemption

1. Contains exactly one [1..1] **code** with data type *Code*
2. Contains exactly one [1..1] **id** with data type *Code*
3. Contains exactly one [1..1] **value** with data type *Monetary Amount*

## Coverage

A synonym for insurance indicating how much protection the insurance provides. This may mean either the dollar amount purchased or the type of loss covered.

1. Contains zero or more [0..*] **qualifyingReason**, where its type is *Qualifying Reason*

- qualifyingReason.

2. Contains zero or one [0..1] **meansTest**, where its type is *Means Test*

- meansTest.

3. Contains exactly one [1..1] **employee**, where its type is *Employee*

- employee.
4. Contains zero or more [0..*] **humanitarianCase**, where its type is *Humanitarian Case*
   - humanitarianCase.

## Covered Benefit

1. Contains exactly one [1..1] **code** with data type *Code*

## Covered Patient

1. Contains exactly one [1..1] **coverageTerm** with data type *Time Interval*
2. Contains exactly one [1..1] **coverageType** with data type *Code*
3. Contains exactly one [1..1] **id** with data type *Id*
   - Payer-assigned identifier for the Patient.
4. Contains exactly one [1..1] **patientRelationshipCode** with data type *Code*
   - NCPDP Telcom: Code assigned to a specific person within a family. Examples: 1=Cardholder 2=Spouse 3-999=Dependents and Others (including second spouses, etc.)
5. Contains exactly one [1..1] **patientResidenceType** with data type *Code*
6. Contains exactly one [1..1] **personCode** with data type *Code*
   - NCPDP Telcom: Code assigned to a specific person within a family. Examples: 1=Cardholder 2=Spouse 3-999=Dependents and Others (including second spouses, etc.)
7. Contains zero or one [0..1] **dependent**, where its type is *Dependent*
8. Contains exactly one [1..1] **patient**, where its type is *Patient*
9. Contains zero or one [0..1] **patientSubscriber**, where its type is *Patient Subscriber*
10. Contains zero or one [0..1] **responsibleParty**, where its type is *Responsible Party*

## Cs Extension Evaluation

Identifies contiguous growth (extension) of the primary tumor within the organ of origin or its direct extension into neighboring organs. Possible values are Not applicable; Further contiguous extension; No evidence of primary tumor; Unknown extension; primary tumor cannot be assessed; not stated in patient record; etc.

1. Contains exactly one [1..1] **csExtension** with data type *Code*
   - Identifies contiguous growth (extension) of the primary tumor within the organ of origin or its direct extension into neighboring organs. Possible values are Not applicable; Further contiguous extension; No evidence of primary tumor; Unknown extension; primary tumor cannot be assessed; not stated in patient record; etc.

## Ct Of Abdomen Pelvis

Cat scan of abdoment Pelvis. An image produced by a CAT scanner. Also called CT scan. [Source: The American Heritage Dictionary of the English Language, Fourth Edition]

1. Contains exactly one [1..1] **ctOfAbdomenPelvis** with data type *Code*
   - Indicates the results of the diagnostic test CT OF ABDOMEN/PELVIS. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.
2. Contains exactly one [1..1] **dateOfCtOfAbdomenPelvis** with data type *Point In Time*
   - The date of the diagnostic test CT OF ABDOMEN/PELVIS.

## Ct Scan Of Thorax

Cat scan of thorax. An image produced by a CAT scanner. Also called CT scan. [Source: The American Heritage Dictionary of the English Language, Fourth Edition]

1. Contains exactly one [1..1] **ctScanOfThorax** with data type *Code*
   - Indicates the results of the diagnostic test CT SCAN. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.
2. Contains exactly one [1..1] **dateOfCtScanOfThorax** with data type *Point In Time*
   - The date of the diagnostic test CT SCAN.

## Currency

1.

## Daily Event Journal Entry

1. Extends *Patient Journal Entry*
2. Contains exactly one [1..1] **journalEntryType**
3. Contains exactly one [1..1] **eventTitle** with data type *String*

## Data Enterer

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

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1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Date

1.

## Death Certificate

A document issued by a medical practitioner certifying the deceased state of a person. In the United States, this is typically the U.S. Standard Certificate of Death (Rev. 11/2003).

1. Contains exactly one [1..1] **dateFiled** with data type *Point In Time*

   - The date the Certificate of Death was filed with the Registrar.

2. Contains exactly one [1..1] **didTobaccoUseContribute** with data type *Code*

   - Indicates whether it is the opinion of the Medical Certifier that the use of tobacco contributed to he person's death. Possible values include: Yes, No, Probably, Unknown.

3. Contains zero or one [0..1] **dispositionCategory** with data type *Code*

   - Categories the method of the disposition of the body. Possible values include: Burial, Cremation, Donation, Entombment, Removal from State.

4. Contains zero or one [0..1] **dispositionOther** with data type *String*

   - A textual description of the method of the disposition of the body, when none of possible values of dispositionCategory applies (in other words, a description for "Other").

5. Contains exactly one [1..1] **mannerOfDeath** with data type *Code*

   - Categorizes the underlying cause of death. Possible values (from the US Standard Death Certificate, version 2003) include: Natural, Homicide, Accident, Suicide, Pending Investigation, Could not be Determined. For more details, see http://www.cdc.gov/nchs/data/misc/hb_cod.pdf

6. Contains exactly one [1..1] **placeOfDeathCategory** with data type *Code*

   - Categories the location of the person's death. Possible values include:</p><p>If death occured in a Hospital: Inpatient, Emergency Room/Outpatient, Dead on Arrival</p><p>If death occured somewhere other than in a Hospital: Hospice facility, Nursing home/Long term care facility, Decedent s home.

7. Contains exactly one [1..1] **placeOfDeathOther** with data type *String*

   - <p>A textual description of the place of death, when none of possible values of placeOfDeath applies (in other words, a description for "Other").</p>

8. Contains zero or one [0..1] **pregnancyStatusCategory** with data type *Code*

   - If the person is female, this property provides an indication of whether she was pregnant at or near the time of death. This information is important in determining pregnancy-related mortality. Possible values include: Not pregnant within past year, Pregnant at time of death, Not pregnant, but pregnant within 42 days of death, Not pregnant, but pregnant 43 days to 1 year before death, Unknown if pregnant within the past year.

9. Contains exactly one [1..1] **survivingSpousesName** with data type *String*

   - If the decedent was married at the time of death, this property contains the full name of the surviving spouse. If the surviving spouse is the wife, her name prior to first marriage should be entered. This item is used in establishing proper insurance settlements and other survivor benefits.

10. Contains exactly one [1..1] **wasAutopsyFindingsAvailable** with data type *Boolean*

    - If an autopsy was performed, this property indicates whether the autopsy findings were available to complete the cause of death. This property should be null (i.e., "blank") if no autopsy was performed.

11. Contains exactly one [1..1] **wasAutopsyPerformed** with data type *Boolean*

    - Indicates whether either a partial or full autopsy was performed.

12. Contains exactly one [1..1] **wasEverInArmedForces** with data type *Boolean*

    - Indicates whether the decedent was ever in the U.S. Armed Forces.

13. Contains exactly one [1..1] **wasResidenceInsideCityLimits** with data type *Boolean*

    - Indicates whether the decedent's residence is inside city limits.

14. Contains zero or one [0..1] **informant**, where its type is *Informant*

    - Identifies the person who informed the authorites of the decedent's death.

15. Contains zero or one [0..1] **facilityAtDeath**, where its type is *Service Delivery Location*

    - Place at which death occurred. If death did not occur at an institution, only the address is used. Note that the address includes County.

16. Contains zero or one [0..1] **funeralFacility**, where its type is *Organizational Provider*

- Identifies the funeral facility, including license information.

17. Contains exactly one [1..1] **pronouncementOfDeath**, where its type is *Pronouncement Of Death*

- The opinion or determination, based on a physical assessment, that life has ceased. A series of steps that need to occur to determine that a death has occurred. Involves examining patients to determine death, notifying families and in recording proper documentation of a death. Death pronouncements are generally conducted by a physician.

18. Contains zero or one [0..1] **injury**, where its type is *Injury*

- Information related to cases where the decedents death was due to injury or poisoning.

19. Contains exactly one [1..1] **certifier**, where its type is *Legal Authenticator*

- The practitioner who certified the information contained in the Certificate of Death

## Deductible

'The amount of money you must pay each year to cover your medical care expenses before your insurance policy starts paying.' -eHealthInsurance.org

1. Contains exactly one [1..1] **amount** with data type *Monetary Amount*

## Defined Patient Event

The specific patient-related event to which a specimen collection or collections (and subsequently, any tests performed on that specimen) are related or affected by time, sequence, directive, intent, etc. Examples might include drug administration (peak and trough), beginning of fasting (lipids, FBS), glucose challenge (tolerances) or meal (postprandial), admission (pre- or post-admission studies), scheduled surgery/transfusion (compatibility testing), onset of symptoms (acute and convalescent), LMP (pregnancy test, Pap smear), lumbar puncture (CSF tubes 1, 2, and 3), treatment completion (test of cure, post-transfusion H&H), use/ingestion (BAT, toxicology), start of 24-hour urine pooling (creatinine clearance), etc.

1. Contains exactly one [1..1] **eventType** with data type *Code*

- Categorizes the patient event that triggered the speciment collection, or the patient state at the time of the specimen collection. Examples might include drug administration (peak and trough), beginning of fasting (lipids, FBS), glucose challenge (tolerances) or meal (postprandial), admission (pre- or post-admission studies), scheduled surgery/transfusion (compatibility testing), onset of symptoms (acute and convalescent), LMP (pregnancy test, Pap smear), lumbar puncture (CSF tubes 1, 2, and 3), treatment completion (test of cure, post-transfusion H&H), use/ingestion (BAT, toxicology), start of 24-hour urine pooling (creatinine clearance), etc.

2. Contains exactly one [1..1] **timeBeforeOrSinceEvent** with data type *Time Quantity*

- Specifies the amount of time that had elapsed between the event and the collection of the specimen. Note that the event usually occurs before the specimen collection (e.g., in a glucose tolerance test, the amount of time after the glucose load had been administered), but sometimes the event in question occurs after the specimen collection (e.g., pre-admission).

## Delegation Policy

A delegation policy is intended to delegate access rights to a specific individual or organization (a grantee). ISO 22600-2 defines delegation as 'conveyance of privilege from one entity that holds such privilege, to another entity' and a DelegationPolicy as 'defines what authorizations can be delegated to whom'.

1. Extends *Basic Policy*
2. Contains at least one [1..*] **accessRight** with data type *Code*

3. Contains zero or more [0..*] **grantee**, where its type is *Grantee*

   • Designates who/what has been delegated a specific right.

## Dental Activity System Reporting

This class includes the data elements that are related to Dental Activity System.

1. Contains exactly one [1..1] **dasId** with data type *Id*

   • This is the unique identifier of the dental encounter record.
2. Contains exactly one [1..1] **dasCategory** with data type *String*

   • This is a pointer to DAS file.
3. Contains exactly one [1..1] **treatmentDisposition** with data type *Code*

   • This is the treatment disposition as filed to DAS. Possible values are In progress; Completed; Terminated etc.

## Dental Classification

Last the dental patient.

1. Contains exactly one [1..1] **classification** with data type *Code*

   • The last classification for this patient.
2. Contains exactly one [1..1] **classificationDate** with data type *Point In Time*

   • Last classification Date

## Dental Material

The type of material used in this treatment.

1. Contains exactly one [1..1] **materialType** with data type *Code*

   • Identifies the type of material used in this treatment. Possible values are matUnknown; matAmalgam; matGold; matMetallic; matPorcelain; matResin; matSedative; matPFM; matGuttaPercha; matPaste; matSilverPoint; matNone etc. DRM Plus Program Specific.

## Dental Procedure

Dental Procedures provided and or performed for the patient during the Encounter.

1. Contains exactly one [1..1] **dentalProcedureCode** with data type *Code*

   • ADA/CPT Code associated with this exam.

## Dental Treatment Plan

Includes information related to the dental plan or chart for the patient.

1. Contains exactly one [1..1] **treatmentPlanId** with data type *Id*

   • This is the unique identifier of the dental encounter record.
2. Contains exactly one [1..1] **dentalAlert** with data type *String*

- Lists the dental alerts for the patient - e.g. Antibiotic Premed, Sedation Premed, etc.

3.  Contains exactly one [1..1] **treatmentFlag** with data type *String*

    - Flags for treatment plan

4.  Contains exactly one [1..1] **treatmentPlanType** with data type *Code*

    - Whether the treatment is planned or completed. Possible values are Planned, Completed etc. DRM Plus Program Specific.

5.  Contains exactly one [1..1] **treatmentsInGroup** with data type *Integer*

    - Number of treatments included in this group.

6.  Contains exactly one [1..1] **treatingSpecialty**, where its type is *Facility Treating Specialty*

    - Provides an indication of the medical specialty of the organization-location. Examples include Medicine, Surgery, Psychiatry, etc. Related to the "CDR #" in VHA. (TreatingSpeciality is a role):

7.  Contains exactly one [1..1] **dentalPatientEncounter**, where its type is *Encounter Event*

    - Dental Patient Encounter - The patient who is the subject of this dental treatment.

8.  Contains zero or one [0..1] **lastClassification**, where its type is *Dental Classification*

    - Last dental classification of the patient.

9.  Contains at least one [1..*] **diagnosis**, where its type is *Diagnosis*

    - Diagnosis of of a disease or injury.

10. Contains zero or one [0..1] **bedSection**, where its type is *Ward*

    - "A division in a hospital for the care of a particular group of patients" The American Heritage Stedman's Medical Dictionary.

11. Contains zero or one [0..1] **division**, where its type is *Institution*

    - An identification of an organization at a location.

12. Contains zero or more [0..*] **dataEnterer**, where its type is *Data Enterer*
13. Contains zero or more [0..*] **practitioner**, where its type is *Individual Provider*
14. Contains zero or more [0..*] **primaryProvider**, where its type is *Individual Provider*
15. Contains zero or more [0..*] **treatmentPlanService**, where its type is *Treatment Plan Service*

## Dependent

1.  Contains exactly one [1..1] **subscriber**, where its type is *Subscriber*

## Detected Issue Event

"An observation identifying a potential adverse outcome as a result of an Act or combination of Acts. Examples: Detection of a drug-drug interaction; Identification of a late-submission for an invoice; Requesting discharge for a patient who does not meet hospital-defined discharge criteria. Discussion: This class is commonly used for identifying 'business rule' or 'process' problems that may result in a refusal to carry out a particular request. In some circumstances it may be possible to 'bypass' a problem by modifying the request to acknowledge the issue and/or by providing some form of mitigation. Constraints: the Act or Acts that may cause the the adverse outcome are the target of a subject ActRelationship. The subtypes of this concept indicate the type of problem being detected (e.g. drug-drug interaction) while the Observation.value is used to repesent a specific problem code (e.g. specific drug-drug interaction id)." - HL7 Version 3

1.  Contains exactly one [1..1] **dangerLevel** with data type *Code*

    - This is the clinical danger level associated with this detected issue. Those having a High danger level will require a justification for override and release. Valid values are High, Moderate, or Low.

2. Contains exactly one [1..1] **detectedIssue** with data type *Code*

   - Indicates the issue that was detected (also called an "order check").

3. Contains exactly one [1..1] **text** with data type *String*

   - Contains the actual text of the detected issue.

4. Contains zero or one [0..1] **detectedIssueOverride**, where its type is *Detected Issue Override*

   - Provides a record that the Detected Issue (or "Order Check") was acknowledged and was disregarded. For example, perhaps a warning was displayed indicating that the patient has a mild allergy to an antibiotic that the clinician wishes to order. If the antibiotic is the only one that could possibly save the patient's life, the clinician would likely choose to order the antibiotic anyway.

5. Contains zero or one [0..1] **detectedIssueOrderRevision**, where its type is *Detected Issue Order Revision*

   - Provides a record of a revision to the originally proposed Order Action - the resulting revision reflecting a decision to change the Order Action based on information presented by the Detected Issue (aka Order Check).

## Detected Issue Order Revision

Provides a record of a revision to the originally proposed Order Action - the resulting revision reflecting a decision to change the Order Action based on information presented by the Detected Issue (aka Order Check).

1. Contains zero or more [0..*] **orderAction**, where its type is *Order Action*

   - Identifies a new Order Action record that was created as a revision to a previously proposed Order Action due to information presented by a Detected Issue (aka Order Check).

## Detected Issue Override

Provides a record that the Detected Issue (or "Order Check") was acknowledged and was disregarded. For example, perhaps a warning was displayed indicating that the patient has a mild allergy to an antibiotic that the clinician wishes to order. If the antibiotic is the only one that could possibly save the patient's life, the clinician would likely choose to order the antibiotic anyway.

1. Contains exactly one [1..1] **overrideReason** with data type *Code*

   - Contains a justification for overriding the Detected Issue and releasing the Order Action.

2. Contains exactly one [1..1] **overrideAuthor**, where its type is *Author*

   - The person who overrode the Detected Issue (aka Order Check).

## Device

"A contrivance or an invention serving a particular purpose, especially a machine used to perform one or more relatively simple tasks." (The American Heritage Stedman's Medical Dictionary). "A ManufacturedMaterial used in an activity without being substantially changed through that activity." - HL7 V3

1. Extends *Product*
2. Contains zero or one [0..1] **alertLevel** with data type *Code*

   - "The current functional status of an automated device." - HL7 V3. Possible values include: Normal, Warning, Critical, etc.

3. Contains zero or one [0..1] **dateLastCalibrated** with data type *Point In Time*

   - "The date and time the device was last calibrated." - HL7 V3

4. Contains zero or one [0..1] **identifier** with data type *Id*

- Uniquely identifies the device. Typically the serial number assigned by the manufacturer, but other asset control identifiers may be used as well.

5. Contains zero or one [0..1] **localRemoteControlState** with data type *Code*

- "The state of control of the device. A device can either work autonomously or it can be controlled by another system. The control status of a device must be communicated between devices prior to remote commands being transmitted. If the device is not in "Remote" status, external commands will be ignored." - HL7 V3

6. Contains zero or one [0..1] **modelName** with data type *Code*

- "The human designated moniker for a device, assigned by the manufacturer" - HL7 V3

7. Contains zero or one [0..1] **softwareName** with data type *Code*

- "The moniker, version and release of the software that operates the device as assigned by the software manufacturer or developer." - HL7 V3

8. Contains exactly one [1..1] **deviceInstance**, where its type is *Device Instance*

9. Contains exactly one [1..1] **manufacturer**, where its type is *Manufacturer*

## Device Instance

1. Contains exactly one [1..1] **durableMedicalEquipment**, where its type is *Device*

2. Contains zero or one [0..1] **manufacturingLot**, where its type is *Manufacturing Lot*

3. Contains zero or one [0..1] **id** with data type *Id*

- "A unique identifier for this instance. If the product instance represents a single individual product (quantity = 1) then this id is also called the "serial number". If the product instance represents a product lot, the id is also called the "lot number"." - HL7 V3

## Diagnosis

"a.The act or process of identifying or determining the nature and cause of a disease or injury through evaluation of patient history, examination, and/or review of laboratory data. b.The opinion derived from such an evaluation" American Heritage Dictionary

1. Contains exactly one [1..1] **diagnosisCode** with data type *Code*

- Contains a code that most closely identifies the condition or the diagnosis. This code will come from one of several commonly used coding systems, depending on the branch of medicine involved (e.g., clinical medicine, dentistry, mental health), and on the purpose (e.g., clinical, billing). The code will likely come from one of the following: Structured Nomenclature for Medicine (SNOMED), International Classifications of Diseases (ICD), Diagnostic and Statistical Manual of Mental Disorders (DSM).

2. Contains zero or one [0..1] **diagnosisModifier** with data type *Code*

- Contains a "modifier" that more precisely identifies the condition or the diagnosis. Some coding schemes, such as the International Classifications of Diseases version 9, support the notion of a "modifier", while others do not. This property is only to be used when the code property is using a coding scheme that supports a modifier.

## Diagnosis Grouping Event

The act or process of grouping diagnosis that determined the nature and cause of a disease or injury through evaluation of patient history, examination, and review of laboratory data.

1. Contains exactly one [1..1] **diagnosisRelatedGroup** with data type *Code*

- Contains the diagnosis grouping code.

2. Contains exactly one [1..1] **id** with data type *Id*

- Unique Identifier for the Grouping type

## Diagnosis List Entry

This class provides a mechanism to associate a record with multiple diagnoses. Rather than have the traditional "primary diagnosis", "secondary diagnosis", etc. in a record, the record will contain a zero-to-many pointer to this class, which then has a one-to-one pointer to a diagnosis, with a precedence property to indicate primary, secondary, tertiary, etc.

1. Contains exactly one [1..1] **precedence** with data type *Integer*

   - Provides an indication of whether the diagnosis is primary, secondary, tertiary, etc.
2. Contains exactly one [1..1] **diagnosis**, where its type is *Diagnosis*

   - Indicates the diagnosis associated with this entry in the list.

## Diagnosis Related Group

1. Extends *Diagnosis Weighted Payment*

## Diagnosis Weighted Payment

'A method of classifying inpatient hospital services. It is used as a method of determining financing to reimburse various providers for services performed.' -eHealthInsurance.org

1. Contains exactly one [1..1] **code** with data type *Code*

## Diagnostic Imaging Event

This class contains attributes associated with Diagnostic Imaging.

1. Extends *Imaging Event*

## Diagnostic Summary

This area of the assessment is used to record answers related to the client/patient's diagnoses that may be pertinent to their behavioral health problems.

1. Extends *Behavioral Health Assessment Domain*
2. Contains zero or one [0..1] **diagnosis**, where its type is *Diagnosis*

## Diagnostic Workup

This class contains information pertinent to the diagnostic followup of a cancer patient.

1. Contains zero or one [0..1] **dateOfBloodInSptumPerPT** with data type *Point In Time*

   - The date of the presence of blood in the patient's sputum (as reported by the patient).
2. Contains zero or one [0..1] **dateOfChangeInBowelHabits** with data type *Point In Time*

   - The date of a change in bowel habits (as reported by the patient).
3. Contains zero or one [0..1] **dateOfFirstSymptoms** with data type *Point In Time*

- The date on which the patient was first seen with symptoms or had abnormal test results which began the workup which led to the diagnosis of cancer. This date would be before or equal to the DATE DX.

4. Contains zero or one [0..1] **dateOfIncreasedCough** with data type *Point In Time*

- The date on which the patient experienced increased coughing.

5. Contains zero or one [0..1] **dateOfFever** with data type *Point In Time*

- The date on which the patient experienced a fever.

6. Contains zero or one [0..1] **dateOfNightSweats** with data type *Point In Time*

- The date on which the patient experienced night sweats.

7. Contains zero or one [0..1] **dateStartOfWorkupOrdered** with data type *Point In Time*

- The date the physician placed consult to specialty clinic OR ordered diagnostic procedures or tests.

8. Contains zero or one [0..1] **dateWorkupStarted** with data type *Point In Time*

- The date when the patient was seen in the specialty clinic OR had diagnostic procedures or tests performed.

9. Contains zero or one [0..1] **bloodInSputumPerPt** with data type *Code*

- Indicates the presence of blood in the patient's sputum as reported by the patient. Possible values are No; Yes; unknown/Not documented; etc.

10. Contains zero or one [0..1] **changeInBowelHabitsPerPt** with data type *Code*

- Indicates all changes in bowel habits as reported by the patient. Possible values are No; 'Yes; Unknown/not documented; etc.

11. Contains zero or one [0..1] **increasedCough** with data type *Code*

- Indicates whether the patient experienced increased coughing. Possible values are No; Yes; Unknown/not documented; etc.

12. Contains zero or one [0..1] **fever** with data type *Code*

- Indicates whether the patient experienced a fever. Possible values are No; Yes; Unknown/not documented; etc.

13. Contains zero or one [0..1] **nightSweats** with data type *Code*

- Indicates whether the patient experienced night sweats. Possible values are No; Yes; Unknown/not documented; etc.

14. Contains zero or one [0..1] **sporadicPolyps** with data type *Code*

- Indicates the existence of sporadic polyps. Possible values are No; Yes; Unknown/not documented; etc.

15. Contains zero or one [0..1] **ulcerativeColitis** with data type *Code*

- Indicates whether the patient was affected by ulcerative colitis (UC). Possible values are No; Yes; Unknown/not documented; etc.

16. Contains zero or one [0..1] **weightLossPerPt** with data type *Code*

- Indicates the weight loss as reported by the patient. Possible values are No; Yes; Unknown/not documented; etc.

17. Contains zero or one [0..1] **resultBariumEnema**, where its type is *Barium Enema*

- Result of Barium Enema

18. Contains zero or one [0..1] **resultBronchoscopy**, where its type is *Bronchoscopy*

- Result of Bronchoscopy

19. Contains zero or one [0..1] **resultColonoscopy**, where its type is *Colonoscopy*

- result of Colonoscopy

20. Contains zero or one [0..1] **resultDyspnea**, where its type is *Dyspnea*

- Result of Dyspnea

21. Contains zero or one [0..1] **resultChestXRay**, where its type is *Chest X Ray*

- Result of Chest C-Ray

22. Contains zero or one [0..1] **resultCtOfAbdomenPelvis**, where its type is *Ct Of Abdomen Pelvis*

   • Result of Ct Of Abdomen Pelvis

23. Contains zero or one [0..1] **resultCtScanOfThorax**, where its type is *Ct Scan Of Thorax*

   • Result of Ct Scan Of Thorax

24. Contains zero or one [0..1] **resultFobt**, where its type is *Fecal Occult Blood Test*

   • Result of Fecal Occult Blood Test

25. Contains zero or one [0..1] **resultMediastinoscopy**, where its type is *Mediastinoscopy*

   • Result of Mediastinoscopy

26. Contains zero or one [0..1] **resultPetScan**, where its type is *Pet Scan*

   • Result of Pet Scan.

27. Contains zero or one [0..1] **resultSigmoidoscopy**, where its type is *Sigmoidoscopy*

   • Result of Sigmoidoscopy

# Dialysis Event

dialysis type

1. Extends *Clinical Service*
2. Contains exactly one [1..1] **dialysisType** with data type *Code*

   • Identifies the type of dialysis for this Encounter.

# Diet Journal Entry

1. Extends *Patient Journal Entry*
2. Contains exactly one [1..1] **journalEntryType**
3. Contains exactly one [1..1] **mealType** with data type *Code*
4. Contains exactly one [1..1] **timeOfMeal** with data type *Point In Time*
5. Contains exactly one [1..1] **mealDescription** with data type *String*
6. Contains exactly one [1..1] **calories** with data type *Physical Quantity*
7. Contains exactly one [1..1] **fat** with data type *Physical Quantity*
8. Contains exactly one [1..1] **carbohydrates** with data type *Physical Quantity*
9. Contains exactly one [1..1] **protein** with data type *Physical Quantity*

# Diet List

1. Contains exactly one [1..1] **precedence** with data type *Integer*

   • Identifies the arrangement or order of succession in a set of diets.

# Diet Modification

A diet requested for a patient. A diet modification is a variation from a regular diet.

1. Contains exactly one [1..1] **diet** with data type *Code*

   • A diet requested for a patient. A diet modification is a variation from a regular diet.

## Diet Request

A record of a regular diet order that is requested for a patient.

1. Extends *Dietetics Request*
2. Contains [0..5] **dietPrecedence**, where its type is *Diet Modification*
   • Identifies the arrangement or order of succession in a set of diets requested for this patient.

## Dietetics Consult Request

A record of a request for a dietetics consult for this patient.

1. Contains exactly one [1..1] **dieteticsConsult** with data type *Code*
   • A code representing the type of dietetics consult requested for this patient.
2. Contains exactly one [1..1] **initialFollowUp** with data type *Code*
   • A code indicating whether the consult is an initial or a follow up.
3. Contains exactly one [1..1] **consultPatient**, where its type is *Patient*
   • The subject of a dietetics consult. This type of request is separate from but may be linked to a dietetics request.

## Dietetics Order Action

A record of an action that has been taken on an order, including the signature and verification required to release the order.

1. Contains exactly one [1..1] **actionType** with data type *Code*
   • The action ordered (e.g., New, Hold, Discontinue, etc). VHIM will use HL7 3.0 vocabulary domain: ActCode (for ActOrderCode - not yet defined).
2. Contains exactly one [1..1] **date** with data type *Point In Time*
   • This is the date/time this action was taken on the dietetics request.
3. Contains exactly one [1..1] **startDate** with data type *Point In Time*
   • This is the start date/time when the order action begins to be valid.
4. Contains exactly one [1..1] **stopDate** with data type *Point In Time*
   • This is the stop date/time when the order action ceases to be valid.
5. Contains exactly one [1..1] **natureOfOrder** with data type *Code*
   • "This specifies the nature of the order or how it originated." (VistA)
6. Contains exactly one [1..1] **reason** with data type *Code*
   • A code specifying why this action has occurred.
7. Contains exactly one [1..1] **releaseStatus** with data type *Code*
   • This field tracks the status of the order action. This is different from the order status. Valid values are Unreleased, Pre-release, Rejected, or Discontinued due to Edit.
8. Contains exactly one [1..1] **text** with data type *String*
   • Contains particular instructions pertaining to the order action.
9. Contains zero or more [0..*] **reviewer**, where its type is *Individual Provider*
10. Contains zero or more [0..*] **clerk**, where its type is *Individual Provider*
11. Contains zero or more [0..*] **clinician**, where its type is *Individual Provider*
12. Contains zero or more [0..*] **authorizer**, where its type is *Individual Provider*

## Dietetics Request

A record of a dietetics request for a patient.

1. Extends *Healthcare Order*
2. Contains exactly one [1..1] **foodServiceType** with data type *Code*
   - The type of service requested for this diet order: tray, cafeteria, or dining room. It does not apply to NPO (nothing by mouth) orders.
3. Contains exactly one [1..1] **isNPO** with data type *Boolean*
   - A flag indicating whether or not an order was given for the patient to receive nothing by mouth. NPO: nil per os (Latin, meaning nothing by mouth).
4. Contains exactly one [1..1] **startDate** with data type *Point In Time*
   - The start date/time for this request.
5. Contains exactly one [1..1] **stopDate** with data type *Point In Time*
   - The date/time this request is considered complete.
6. Contains at least one [1..*] **orderAction**, where its type is *Dietetics Order Action*
   - Contains a record of a particular action taken on the dietetics order. The value of the actionType attribute will determine what action is being recorded (e.g., New, Hold, Discontinue, etc).
7. Contains zero or one [0..1] **isolationPrecaution**, where its type is *Isolation Precautions*
   - Indicates the type of isolation or special precautions the patient is under.
8. Contains zero or more [0..*] **additionalOrders**, where its type is *Additional Orders List*
   - Maintains the sequence or precedence of additional dietary orders.
9. Contains zero or more [0..*] **performanceMonitors**, where its type is *Performance Monitors*
   - Maintains performance measure items to be monitored during the patient's care.

## Disability Observation

This class includes disability related information of a Veteran for whom the 2507 exam is requested.

1. Contains exactly one [1..1] **disability** with data type *String*
   - A medically diagnosed condition that makes it difficult to engage in some or all of the activities of daily life

## Discharge Event

The release of a patient from a course of care.

1. Contains zero or one [0..1] **date** with data type *Point In Time*
   - "This field contains the discharge date/time. It is to be used if the event date/time is different than the discharge date and time, that is, a retroactive update. This field is also used to reflect the date/time of an outpatient/emergency patient discharge." - HL7 Version 2.8, PV1-45
2. Contains exactly one [1..1] **disposition** with data type *Code*
   - "Contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.). ...use the Official Uniform Billing (UB) 04 2008 numeric codes found on form locator 17." - HL7 Version 2.8, PV1-36 Note that while the encounter is still "active" (i.e., the encounter does not have an end date yet) this attribute should be interpreted as the expected discharge disposition. When the encounter is "completed" this attribute contains the actual discharge disposition.
3. Contains exactly one [1..1] **needOutpatientFollowup** with data type *Boolean*

4. Contains exactly one [1..1] **dischargeFromLocation**, where its type is *Service Delivery Location*
   - "The location to which the patient is assigned. It is a role played by a place at which services may be provided. Note that a single physical place can play multiple service delivery location roles each with its own attributes. For example, a Podiatry clinic and Research clinic may meet on alternate days in the same physical location; each clinic uses its own mailing address and telephone number." (HL7)
5. Contains exactly one [1..1] **dischargeToLocation**, where its type is *Service Delivery Location*
   - "Indicates the healthcare facility to which the patient was discharged and the date." - HL7 Version 2.8, PV1-37

## Disease Risk

1. Extends *Patient Risk*
2. Contains exactly one [1..1] **disease** with data type *Code*
3. Contains exactly one [1..1] **vaccineGroup**, where its type is *Vaccine Group*

## Dispense Recipient

1. Contains exactly one [1..1] **id** with data type *Id*
2. Contains exactly one [1..1] **relationshipToPatient** with data type *Code*
3. Contains exactly one [1..1] **asPerson**, where its type is *Person*

## Dispensed Drug

1. Contains exactly one [1..1] **isCompounded** with data type *Boolean*
2. Contains zero or one [0..1] **pharmacyManufacturedProduct**, where its type is *Pharmacy Manufactured Product*
3. Contains zero or one [0..1] **productInstance**, where its type is *Medicinal Product Instance*

## Division

Division: "A part of a government, business, country, etc, that has been made into a unit for administrative, political, or other reasons." - Collins English Dictionary. The part of the organization responsible for the actions taken in the provision of healthcare services to the patient. This class is primarily used for the tracking of financial and workload information. This class is equivalent to File 40.8 in Vista.

1. Extends *Organization*

## Dme Provision

1. Extends *Billable Service*

## Document Group

This is a flat level document. The purpose of DocumentGroup class is to link a set of documents about a patient in clinically meaningful ways at the point-of-use. "Specialization of Act to add the characteristics unique to document management services." (HL7 3.0)

1. Contains exactly one [1..1] **dateRange** with data type *Time Interval*

- This is a date range of the date and time for which the 1st document in the group is created and the date and time for which the recent document in the group is created.
2. Contains exactly one [1..1] **groupId** with data type *Id*
   - A unique identifier for the Act.
3. Contains exactly one [1..1] **groupName** with data type *String*
   - A textual description of a collection of documents in clinically meaningful ways.
4. Contains zero or more [0..*] **document**, where its type is *Clinical Document Event*
   - Documents can be aggregated into clinically meaningfully groups; each document in the group will usually reference the same patient. A clinical document will typically belong to at most one Document Group.

## Document Imaging Event

This class contains attributes associated with Document (Medical Document) Imaging.
1. Extends *Imaging Event*
2. Contains exactly one [1..1] **documentDate** with data type *Point In Time*
   - The date of the document when image is a document.
3. Contains exactly one [1..1] **remarks** with data type *String*
   - It further describes the type of document image. [This is mainly for Document Imaging.]
4. Contains exactly one [1..1] **documentCategory** with data type *Code*
   - Categorizes the type of imaged medical document. Used for indexing and searching of documents, which allow clinicians to apply sort filters when viewing or researching images. Possible values include (from the VA): Insurance form, Eligibility form, Patient Rights and Responsibilities form, Means Test form, Allied Veteran form, Appointment of a VSO as claimant's representative, DD214 enlisted record and report of separation, Death certificate, Miscellaneous document, etc.

## Dose Administrator

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Dose Measurer

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Double

1.

## Drug Class

This class identifies the drug class that is associated with this allergy event.
1. Contains exactly one [1..1] **code** with data type *Code*
   - This contains the code set that identifies the type of drug class for this patient for this Allergy.

## Drug Coverage Status

1. Contains exactly one [1..1] **drugCoverageCode** with data type *Code*

## Drug Formulary

'List of preferred pharmaceutical products to be used by a managed care plan's network physicians. Formularies are based on evaluations of the efficacy, safety, and cost-effectiveness of drugs.' -eHealthInsurance.org

1. Extends *Financial Arrangement*

## Drug Ingredient

"Relates a product (typically medicine) to a substance which it contains as an ingredient. Ingredients can be specified for medicines or other products, including devices, but they always mean the same thing: a material (here: chemical substance) in the make-up of the main product, not a structural part or content of a container, and not a material added later into a device for operation. For medicines and food this is obvious. For devices, an example for ingredient would be latex in a chest tube (but not an inhalant in a nebulizer device)." - HL7 V3

1. Contains zero or one [0..1] **effectiveTime** with data type *Time Interval*
2. Contains exactly one [1..1] **isActiveMoiety** with data type *Boolean*
3. Contains exactly one [1..1] **isDiluent** with data type *Boolean*
4. Contains exactly one [1..1] **isPreservative** with data type *Boolean*
5. Contains exactly one [1..1] **isAdjuvant** with data type *Boolean*
6. Contains exactly one [1..1] **isAntigen** with data type *Boolean*
7. Contains exactly one [1..1] **isConfidential** with data type *Boolean*
   - Used to indicate that the manufacturer considers the presence of the ingredient a trade secret. This could be the case for inactive ingredients.
8. Contains exactly one [1..1] **quantity** with data type *Physical Quantity Ratio*
   - "A ratio specifying the strength of the ingredient as amount of ingredient substance (numerator) in amount of medicine (denominator). For example, a 50 mg tablet contains 50 mg in 1 tablet; a 50 mg per 5 mL syrup contains 50 mg in 5 mL. Note that for countable dose forms ("eaches") no unit is required in the denominator, i.e., the denominator is a dimensionless number with unit 1 (one, the unity). The fact that the dose is per tablet, capsule, or whatever the dose form may be is recorded in the formCode of the scoping product, not in a unit of measure ." - HL7 V3
9. Contains zero or more [0..*] **medicinalProduct**, where its type is *Medicinal Product*
10. Contains exactly one [1..1] **ingredient**, where its type is *Ingredient*

## Drug Pricing

1. Contains exactly one [1..1] **basisOfCostDetermination** with data type *Integer*

## Drug Provision

1. Extends *Billable Service*
2. Contains exactly one [1..1] **benefitLimitationOverrideCategory** with data type *Code*
3. Contains exactly one [1..1] **benefitLimitationOverrideId** with data type *String*
4. Contains exactly one [1..1] **billingUnitOfMeasure** with data type *Code*

5. Contains exactly one [1..1] **claimDelayReason** with data type *Code*
6. Contains exactly one [1..1] **intermediaryAuthorizationCategory** with data type *Code*
   - overriding an edit that is performed by an intermediary (switch).
7. Contains exactly one [1..1] **intermediaryAuthorizationId** with data type *String*
8. Contains exactly one [1..1] **levelOfService** with data type *Code*
9. Contains exactly one [1..1] **pharmacyType** with data type *Code*
10. Contains zero or one [0..1] **medicationDispense**, where its type is *Medication Dispense*
11. Contains zero or more [0..*] **priorAuthorization**, where its type is *Prior Authorization*
12. Contains zero or more [0..*] **serviceProvision**, where its type is *Professional Service Provision*

## Drug Substitution

1. Contains exactly one [1..1] **reason** with data type *Code*

## Drug Use Evaluation

DUE: If a prescriber or pharmacy has determined that the patient is on another medication that can interact, the DUE can communicate what the problem is, what the co-agent(s) are, DUR tends to be after the fact, while DUE tends to be before the fact, but basically they are similar.

1. Contains exactly one [1..1] **adverseEffectMitigation** with data type *Code*
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
3. Contains exactly one [1..1] **professionalServiceCode** with data type *Code*
   - <p>"Action taken in response to a conflict." - NCPDP Script (Field 7882, Data Dictionary 201009)</p><p>"Action taken by a pharmacist or prescriber in response to a conflict or the result of a pharmacist s professional service." - NCPDP Telecommunication (Field 441-E6, Data Dictionary 201009)</p><p>Categorizes the action taken by a pharmacist or prescriber in response to a conflict or the result of a pharmacist s professional service.</p>
4. Contains exactly one [1..1] **reasonForService** with data type *Code*
   - <p>"For further explanation, conflict, or clarification of services related to drug use evaluation.... Code identifying the type of conflict detected. When this composite is used, DUE Reason For Service Code is mandatory." - NCPDP Script (Field 7880, Data Dictionary 201009)</p><p>"Code identifying the type of utilization conflict detected by the prescriber or the pharmacist or the reason for the pharmacist s professional service." - NCPDP Telecommunication (Field 439-E4, Data Dictionary 201009)</p><p>Categorizes the type of drug utilization conflict detected by the prescriber or the pharmacist or the reason for the pharmacist s professional service. Examples include: Drug-Drug Interaction, Dose Range Conflict, Ingredient Duplication, etc.</p>
5. Contains exactly one [1..1] **serviceResultCode** with data type *Code*
   - <p></p>
6. Contains zero or one [0..1] **author**, where its type is *Author*
7. Contains zero or one [0..1] **coAgent**, where its type is *Co Agent*
   - <p>"Identifies the co-existing agent contributing to the DUR event (drug or disease) conflicting with the prescribed drug." - NCPDP Script (Field 7883, Data Dictionary 201009)</p>
8. Contains zero or one [0..1] **primaryPerformer**, where its type is *Primary Performer*

## Drug Use History

This class is intended to specify the information exchanged to describe drug use history.

1. Extends *Behavioral Health Assessment Domain*

## Dss Unit

Establishes the Account code information for the Faciility at which the Event occurred. This is equivalent to File 724 in Vista.

1. Contains exactly one [1..1] **code** with data type *Code*

## Dyspnea

Difficulty in breathing, often associated with lung or heart disease and resulting in shortness of breath. Also called air hunger. [Source: The American Heritage Dictionary of the English Language, Fourth Edition]

1. Contains exactly one [1..1] **dyspnea** with data type *Code*
   - Indicates whether the patient experienced dyspnea. Possible values are No; Yes; Unknown/not documented; etc.
2. Contains exactly one [1..1] **dateOfDyspnea** with data type *Point In Time*
   - Record the date on which the patient was affected by dyspnea.

## Early Late Tray Request

A record of an early/late dietary tray request for a patient.

1. Extends *Dietetics Request*
2. Contains exactly one [1..1] **meals** with data type *Code*
   - A code indicating the meals to which this order applies.
3. Contains exactly one [1..1] **isBaggedMeal** with data type *Boolean*
   - Indicates whether the meal should be bagged or not.

## Education

This class is used to record the answers related to the education situation of the patient (e.g. education level as well as enrollment status for those who should be enrolled in school).

1. Extends *Behavioral Health Assessment Domain*
2. Contains exactly one [1..1] **statusCode** with data type *Code*
   - This coded attribute is used to specify whether patients are enrolled, not enrolled, or has completed their education.
3. Contains exactly one [1..1] **level** with data type *Code*
   - This attribute is used to specify the highest education level achieved by the patient.

## Educational Institution

An organization created to provide educational instruction. Specifically, a school or institution of higher learning.

1. Contains exactly one [1..1] **institutionCode** with data type *Code*
   - Identifies the educational institution. This would ordinarily be an string or an Id, but because there are a finite number of medical schools, they are normally represented as codes.
2. Contains exactly one [1..1] **address** with data type *Address*

- The person's office address. First choice for business related contacts during business hours.
3. Contains exactly one [1..1] **workEmail** with data type *Telecommunications*
   - The email address that a person uses while at their place of business. First choice for business related contacts during business hours.
4. Contains exactly one [1..1] **workPhone** with data type *Telecommunications*
   - The phone number for a person at their office location. First choice for business related contacts during business hours.

# Electrode Position Event

A collector or emitter of electric charge or of electric-charge carriers, as in a semiconducting device. Source: The American Heritage Stedman's Medical Dicti

1. Contains exactly one [1..1] **electrodePosition** with data type *Code*
   - Contains a code corresponding to the area of placement of the dispersive electrode pad.
2. Contains exactly one [1..1] **positionId** with data type *Id*
   - Unique identifier for the elctrode position
3. Contains at least one [1..*] **electroSurgicalUnit**, where its type is *Surgery Device*
   - A piece of electro surgical equipment perfoming a special surgical function

# Eligbility Response

1.

# Eligibiity Inquiry

1.

# Eligibility Override

"Code indicating that the pharmacy is clarifying eligibility for a patient." - NCPDP (Field 309-C9)

1. Contains exactly one [1..1] **eligibilityClarificationCode** with data type *Code*

# Emergency Encounter

Emergency is an encounter without a scheduled appointment and urgent clinical services are required.

1. Extends *Encounter Event*
2. Contains exactly one [1..1] **activityTime** with data type *Point In Time*
   - "The time interval starting with the administrative onset of the encounter (e.g. admission, registration, patient arrival) and ending with the patient's departure (e.g. discharge). (HL7).
3. Contains exactly one [1..1] **arrivedBy** with data type *Code*
   - Identifies the mode of transportation. ie. ambulance, car, walking etc.
4. Contains zero or one [0..1] **discharge**, where its type is *Discharge Event*
   - The release of a patient from a course of care.

## Employee

A role subclassing the Veteran.
1.

## Employee

A role subclassing the Veteran.
1.

## Employment Status

1.  Extends *Behavioral Health Assessment Domain*
2.  Contains exactly one [1..1] **income** with data type *Monetary Amount*
3.  Contains exactly one [1..1] **statusCode** with data type *Code*

## Encounter Event

An interaction between a patient and a practitioner under the auspices of a given organization for the purpose of providing healthcare-related service(s). It is important to understand that if the there is a change in provider or organization, by definition a new encounter will be generated. For example, if a patient is moved from Surgery to Post-Op, a new encounter is generated. Similarly, if a patient receives care from 2 nurses while in Post-Op, there will be 2 encounters.

1.  Extends *Abstract Encounter*
2.  Contains exactly one [1..1] **accountId** with data type *Id*
    *   "Contains the identifier of a Service Episode in or for which the visit occurs." - HL7 Version 2.8, PV1-54 This field contains the unique identification number for this episode of care. This field associates the current encounter with a parent encounter.
3.  Contains zero or one [0..1] **accountStatus** with data type *Code*
    *   "Contains the account status." - HL7 Version 2.8, PV1-41 Note that HL7 does not suggest any values for this code (in User-defined Table 117).
4.  Contains zero or more [0..*] **alternateVisitId** with data type *Id*
    *   "Contains the alternative, temporary, or pending optional visit ID number to be used if needed. Multiple alternate identifiers may be sent." - HL7 Version 2.8, PV1-50 Uniquely identifies this patient visit using an identification scheme other than the one used for the "id" property. This allows for different systems or organizations to assign different identifiers to the same visit.
5.  Contains zero or one [0..1] **ambulatoryStatus** with data type *String*
    *   "Indicates any permanent or transient handicapped conditions." - HL7 Version 2.8, PV1-15 Possible values include (from HL7 Table 9): No functional limitations; Ambulates with assistive device; Wheelchair/stretcher bound; Comatose; non-responsive; Disoriented; Vision impaired; Hearing impaired; Speech impaired; Non-English speaking; Functional level unknown; Oxygen therapy; Special equipment (tubes, IVs, catheters); Amputee; Mastectomy; Paraplegic; Pregnant.
6.  Contains zero or one [0..1] **chargePriceIndicator** with data type *String*
    *   "Contains the code used to determine which price schedule is to be used for room and bed charges." - HL7 Version 2.8, PV1-21 Note that HL7 does not suggest any values for this code (in User-defined Table 32).
7.  Contains exactly one [1..1] **chiefComplaint** with data type *String*

8. Contains exactly one [1..1] **dateCreated** with data type *Point In Time*

   • Date the visit was entered / modified.

9. Contains exactly one [1..1] **dietType** with data type *Code*

   • "Indicates a special diet type for a patient." - HL7 Version 2.8, PV1-38 Note that HL7 does not suggest any values for this code (in User-defined Table 114).

10. Contains zero or one [0..1] **financialClass** with data type *Code*

    • "Contains the financial class(es) assigned to the patient for the purpose of identifying sources of reimbursement." - HL7 Version 2.8, PV1-20 Note that HL7 does not suggest any values for this code (in User-defined Table 64).

11. Contains zero or one [0..1] **hospitalService** with data type *Code*

    • "Contains the treatment or type of surgery that the patient is scheduled to receive." - HL7 Version 2.8, PV1-10 Possible Values (from HL7 Table 69) include: Cardiac Service, Medical Service, Pulmonary Service, Surgical Service, Urology Service.

12. Contains zero or one [0..1] **isEmploymentRelated** with data type *Boolean*

    • "Specifies whether a patient's illness was job-related." - HL7 Version 2.8, PV2-15

13. Contains zero or one [0..1] **patientClass** with data type *String*

    • "This field is used by systems to categorize patients by site. It does not have a consistent industry-wide definition. It is subject to site specific variations." - HL7 Version 2.8, PV1-2 Possible values include (from HL7 Table 4): Emergency; Inpatient; Outpatient; Preadmit; Recurring patient; Obstetrics; Commercial Account; Not Applicable; Unknown

14. Contains zero or one [0..1] **patientType** with data type *Code*

    • "Contains site-specific values that identify the patient type." - HL7 Version 2.8, PV1-18 Note that HL7 does not suggest any values for this code (in User-defined Table 18).

15. Contains exactly one [1..1] **reason** with data type *Code*

    • "A set of values specifying the non-medical reasons for this encounter. Examples are "Medical Necessity", "Patient's Request" and "Dependency". Note: medical reason(s) for the encounter are specified as associated diagnoses." (HL7)

16. Contains exactly one [1..1] **referralSource** with data type *Code*

    • Identifies the source of the admission or encounter. In other words, identified where the patient was before being sent for this encounter. Possible values include: Community, Other facility, etc.

17. Contains zero or one [0..1] **servicingFacility** with data type *String*

    • "This field is used in a multiple facility environment, e.g., multiple campuses or buildings, to indicate the healthcare facility with which this visit is associated." - HL7 Version 2.8, PV1-39 Note that HL7 does not suggest any values for this code (in User-defined Table 115).

18. Contains exactly one [1..1] **specialArrangement** with data type *Code*

    • A set of values representing the types of special arrangements provided or to be provided for this patient encounter (e.g., wheelchair, stretcher, interpreter, attendant, seeing eye dog)

19. Contains exactly one [1..1] **specialCourtesy** with data type *Code*

    • "Indicates whether the patient will be extended certain special courtesies." - HL7 Version 2.8, PV1-22 Note that HL7 does not suggest any values for this code (in User-defined Table 45).

20. Contains exactly one [1..1] **specialReason** with data type *Code*

    • "A set of values specifying the non-medical reasons for this encounter. Examples are "Medical Necessity", "Patient's Request" and "Dependency". Note: medical reason(s) for the encounter are specified as associated diagnoses." (HL7)

21. Contains zero or one [0..1] **visitId** with data type *Id*

    • "Contains the unique number assigned to each patient visit." - HL7 Version 2.8, PV1-19

22. Contains zero or one [0..1] **admitter**, where its type is *Individual Provider*

- "Contains the admitting physician information" - HL7 Version 2.8, PV1-17

23. Contains zero or one [0..1] **appointment**, where its type is *Appointment*

- "An arrangement to meet a person or be at a place at a certain time" - Dictionary.com The scheduled time of the Encounter.

24. Contains zero or one [0..1] **assignedPatientLocation**, where its type is *Service Delivery Location*

- "This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient. For canceling a transaction or discharging a patient, the current location (after the cancellation event or before the discharge event) should be in this field." - HL7 Version 2.8, PV1-3

25. Contains zero or one [0..1] **attender**, where its type is *Individual Provider*

- "Contains the attending physician information." - HL7 Version 2.8, PV1-7

26. Contains zero or more [0..*] **clinicalService**, where its type is *Clinical Service*

27. Contains zero or more [0..*] **patientTransfer**, where its type is *Patient Transfer*

- The act of transferring a patient from one location or responsible organization to another. Note that a transfer from organization to another will, by definition, trigger a new encounter. Note that a transfer from one location to another may trigger a new encounter depending on whether the responsible organization has changed. A movement from one bed within the same ward to another probably will not, but a movement from one ward to another probably would.

28. Contains zero or one [0..1] **pendingLocation**, where its type is *Service Delivery Location*

- "Indicates the point of care, room, bed, healthcare facility ID, and bed status to which the patient may be moved. The first component may be the nursing station for inpatient locations, or the clinic, department, or home for locations other than inpatient." - HL7 Version 2.8, PV1-42

29. Contains exactly one [1..1] **primaryCarePhysician**, where its type is *Individual Provider*

30. Contains zero or one [0..1] **priorTemporaryLocation**, where its type is *Service Delivery Location*

- "This field is used to reflect the patient's temporary location (such as the operating room/theatre or x-ray) prior to a transfer from a temporary location to an actual location, or from a temporary location to another temporary location. The first component may be the nursing station for inpatient locations, or the clinic, department, or home for locations other than inpatient." - HL7 Version 2.8, PV1-43

31. Contains zero or one [0..1] **referer**, where its type is *Individual Provider*

- "Contains the referring physician information." - HL7 Version 2.8, PV1-8

32. Contains exactly one [1..1] **serviceLocation**, where its type is *Service Delivery Location*

- "The location to which the patient is assigned. It is a role played by a place at which services may be provided. Note that a single physical place can play multiple service delivery location roles each with its own attributes. For example, a Podiatry clinic and Research clinic may meet on alternate days in the same physical location; each clinic uses its own mailing address and telephone number." (HL7)

33. Contains zero or one [0..1] **temporaryLocation**, where its type is *Service Delivery Location*

- "Contains a location other than the assigned location required for a temporary period of time (e.g., OR, operating theatre, etc.)." - HL7 Version 2.8, PV1-11

34. Contains exactly one [1..1] **reportableCondition**, where its type is *Reportable Condition*

## Enrollment Inquiry

1.

## Enrollment Response

1.

## Entered By

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Entitlement Program Administrator

1. Extends *Plan Sponsor*

## Entity

'A physical thing, group of physical things or an organization capable of participating in Acts while in a role. An entity is a physical object that has, had or will have existence. The only exception to this is Organization, which while not having a physical presence, fulfills the other characteristics of an Entity. Entity stipulates the thing itself, not the Roles it may play: the Role of Patient, e.g., is played by the Person Entity.' HL7 RIM.

1. Contains zero or more [0..*] **experimentalUnit**, where its type is *Experimental Unit*
   - A role played by a physical entity in which it is acting as the primary unit of interest in a specific research objective.

## Epidural

An injection into the epidural space of the spine. Source: The American Heritage Stedman's Medical Dictionary

1. Contains exactly one [1..1] **method** with data type *Code*
   - Contains a code corresponding to the method of administration of the anesthetic agent.Suggested like values: B:BOLUS, I:INTERMITTENT, D:DRIP INFUSION, etc.
2. Contains zero or one [0..1] **puncture**, where its type is *Epidural Administration Event*
   - To pierce with a pointed object, as with a needle.

## Epidural Administration Event

Management of an injection into the epidural space of the spine. Source: The American Heritage Stedman's Medical Dictionary

1. Contains exactly one [1..1] **route** with data type *Code*
   - Contains a code identifying the route of the endotracheal tube to the trachea. Lieke values: O:ORAL, N:NASAL, T:TRACHEOSTOMY., etc.
2. Contains exactly one [1..1] **testDose** with data type *Physical Quantity Interval*
   - Contains the volume (mls.) of the test dose fluid vehicle.
3. Contains exactly one [1..1] **testDoseID** with data type *Id*
   - Contains the identifier for the drug used for the epidural test dose.

## Equipment Measurement Event

The dimension, quantity, or capacity determined by measuring a peice of equipment.

1. Contains exactly one [1..1] **dimensionCode** with data type *Code*

    • Contains the code set that identifies the dimensions of measuremnt for the equipment being used.
2. Contains exactly one [1..1] **id** with data type *Id*

    • Unique identifier for each type measurement of the equipment
3. Contains zero or more [0..*] **measurement**, where its type is *Surgery Device*

    • The dimension, quantity, or capacity determined by measuring:

## Equipment Measurement Result

The dimension, quantity, or capacity determined by measuring:

1. Contains exactly one [1..1] **measurementResult** with data type *Physical Quantity*

    • Contains the result of the dimension, quantity, or capacity determined being measured.
2. Contains exactly one [1..1] **id** with data type *Id*

    • Contains the unique Identifier for each measurement being captured,
3. Contains at least one [1..*] **resultOfMeasurement**, where its type is *Equipment Measurement Event*

    • The dimension, quantity, or capacity determined by measuring:

## Equipment Sterilization Event

Sterliizes the equipment and provides the sterilization number of the implanted device

1. Contains exactly one [1..1] **sterilizationNumber** with data type *Integer*

    • Contains the sterilization number of the implanted device
2. Contains zero or one [0..1] **sterilizeEquipment**, where its type is *Surgery Device*

    • Contains the sterilization number of the implanted device

## Equipment Timing Event

Contains the Date and time and durationthe piece of Equipment was in use.

1. Contains exactly one [1..1] **effectiveTime** with data type *Point In Time*

    • The date and time the surgical device was in use.
2. Contains zero or more [0..*] **duration** with data type *Time Interval*

    • The length of time the device was used in the Surgical event.
3. Contains at least one [1..*] **timeDuration**, where its type is *Surgery Device*

    • Contains the Date and time and urationthe piece of Equipment was in use.

## Etiology Observation

This class contains information that identifies theThe cause or origin of a spinal cord injury as determined by medical diagnosis.

This class contains information that identifies theThe cause or origin of a spinal cord injury as determined by medical diagnosis.

1. Contains exactly one [1..1] **etiologyNonTrauma** with data type *Code*

- • Contains code set indicating the nature of non-traumatic injury suffered by veteran
- • Contains code set indicating the nature of non-traumatic injury suffered by veteran

2. Contains exactly one [1..1] **EtiologyOther** with data type *String*

- • Contains information in textual format identifying other complicating health issues for the veteran.
- • Contains information in textual format identifying other complicating health issues for the veteran.

3. Contains exactly one [1..1] **etiologyTrauma** with data type *Code*

- • Contains code set indicating the nature of traumic injury suffered by veteran
- • Contains code set indicating the nature of traumic injury suffered by veteran

4. Contains exactly one [1..1] **msSubType** with data type *Code*

- • Contains the code set that identifies the Multiple Sclerosis subtype for the veteran
- • Contains the code set that identifies the Multiple Sclerosis subtype for the veteran

5. Contains exactly one [1..1] **onsetDate** with data type *Point In Time*

- • Contains the date of the etiology injury for the veteran.
- • Contains the date of the etiology injury for the veteran.

# Evaluation Event

This class that contains the information for the spinal cord injury patients evaluation session.

This class that contains the information for the spinal cord injury patients evaluation session.

1. Contains exactly one [1..1] **declinedAnnualEval** with data type *Boolean*

- • Indicates if the veteran refuses further Aes
- • Indicates if the veteran refuses further Aes

2. Contains exactly one [1..1] **nextDueDate** with data type *Point In Time*

- • Contains date for next scheduled AE for the veteran
- • Contains date for next scheduled AE for the veteran

3. Contains exactly one [1..1] **offeredDate** with data type *Point In Time*

- • Contains the last AE date offered to the veteran
- • Contains the last AE date offered to the veteran

4. Contains exactly one [1..1] **receivedDate** with data type *Point In Time*

- • Contains the last AE date received by the veteran
- • Contains the last AE date received by the veteran

# Event Capture

Captures Procedures performed for the patient. Could be an encounter or actual service not clinically related i.e. CWT, compensatory thearapy work that the patient was being paid for.

1. Contains exactly one [1..1] **id** with data type *Id*

- • Unique Identifier for the EventCapture for the Patient

2. Contains exactly one [1..1] **checkoutTime** with data type *Point In Time*

3. Contains exactly one [1..1] **eventCaptureCategory** with data type *Code*

- • Identfies the procedure code type that determines whether this is a uses the CPT or the NAtional Procedure codeSet

4. Contains exactly one [1..1] **isInpatient** with data type *Boolean*

5. Contains exactly one [1..1] **nbrOfProcedures** with data type *Integer Interval*

- Contains the number of times the designated procedure was performed on the patient.
6. Contains exactly one [1..1] **procedureDate** with data type *Point In Time*

    - Date/Time of procedure/service performed.
7. Contains exactly one [1..1] **procedureModifierText** with data type *String*

    - Captures Procedures performed for the patient. Could be an encounter or actual service not clinically related i.e. CWT, compensatory thearapy work that the patient was being paid for.
8. Contains exactly one [1..1] **procedureReason** with data type *Code*

    - Contains the codeset for the Reason for the procedure.
9. Contains exactly one [1..1] **clinic**, where its type is *Hospital Location*

    - "A facility, often associated with a hospital or medical school, that is devoted to the diagnosis and care of outpatients." The American Heritage Stedman's Medical Dictionary
10. Contains zero or one [0..1] **dssId**, where its type is *Clinic Stop*
11. Contains exactly one [1..1] **dssUnit**, where its type is *Dss Unit*

    - Establishes the Unit id information for the Faciility entering information into the Event Capture
12. Contains exactly one [1..1] **location**, where its type is *Institution*
13. Contains exactly one [1..1] **orderingSection**, where its type is *Medical Specialty*
14. Contains exactly one [1..1] **primaryDiagnosis**, where its type is *Diagnosis*

    - The act or process of identifying or determining the nature and cause of a disease or injury through evaluation of patient history, examination, and review of laboratory data.

    - The act or process of identifying or determining the nature and cause of a disease or injury through evaluation of patient history, examination, and review of laboratory data.
15. Contains zero or one [0..1] **procedure1**, where its type is *Procedure*
16. Contains zero or one [0..1] **procedure2**, where its type is *National Procedure*
17. Contains zero or one [0..1] **secondaryDiagnosis**, where its type is *Diagnosis*
18. Contains exactly one [1..1] **section**, where its type is *Medical Specialty*
19. Contains exactly one [1..1] **service**, where its type is *Service Department*
20. Contains exactly one [1..1] **visit**, where its type is *Outpatient Visit*
21. Contains exactly one [1..1] **patient**, where its type is *Patient*

# Examination Event

"An investigation or inspection for the purpose of diagnosis" (The American Heritage Stedman's Medical Dictionary)

1. Extends *Clinical Service*
2. Contains exactly one [1..1] **date** with data type *Point In Time*

    - The date and time of the examination for the patient.
3. Contains exactly one [1..1] **examType** with data type *Code*

    - Contains the code that identifies the type of examination performed for the patient.
4. Contains exactly one [1..1] **id** with data type *Id*

    - Unique identifier for the is Examination occurrence.
5. Contains exactly one [1..1] **isNormal** with data type *Boolean*

    - Identifies the results of the exam suggested values: A=Abnormal, N=Normal, etc
6. Contains exactly one [1..1] **results** with data type *String*

    - The consequence of a particular action, operation, or course; an outcome.
7. Contains exactly one [1..1] **status** with data type *Code*

    - The status of the examination for the patient.

8.  Contains zero or more [0..*] **relatedExamination**, where its type is *Related Examination*

# Exercise Journal Entry

1.  Extends *Patient Journal Entry*
2.  Contains exactly one [1..1] **journalEntryType**
3.  Contains exactly one [1..1] **activityType** with data type *Code*
4.  Contains exactly one [1..1] **exerciseIntensity** with data type *Code*
5.  Contains exactly one [1..1] **activityDuration** with data type *Time Quantity*
6.  Contains exactly one [1..1] **activityDistance** with data type *Physical Quantity*

# Experimental Unit

A physical entity which is the primary unit of interest in a specific research objective. In an interventional study, the experimental unit is assigned to an intervention. The experimental unit is also the unit of primary statistical analysis. Commonly the individual StudySubject (animal, person or product) is the experimental unit. Different experimental units must be capable of receiving different experimental interventions. For example, if all pigs in a pen receive the same intervention in their feed, and the primary observations and analyses of interest are associated with the entire pen (e.g. total feed consumed, total weight of all pigs combined), then the pen of pigs rather than the individual animal is the experimental unit. [CDISC/HL7 Study Participation RMIM, PORT_RM100001UV] For example, a human StudySubject may have 10 patches of skin each considered an ExperimentalUnit, or a Product StudySubject may have 10 bearings in it, each considered an ExperimentalUnit. Alternatively, each StudySubject may be an ExperimentalUnit. NOTE: Depending on the research objectives, a single study may have multiple levels of experimental units, such as whole people and patches of skin.

1.  Contains exactly one [1..1] **id** with data type *Id*

    • A unique symbol that establishes identity of the experimental unit. For example, patient number 7 on a study.

2.  Contains exactly one [1..1] **statusCode** with data type *Code*

    • A coded value specifying the state of the experimental unit. For example, active, cancelled, pending, suspended, terminated, nullified.

3.  Contains exactly one [1..1] **statusDate** with data type *Point In Time*

    • The date (and time) on which the status is assigned to the experimental unit.

4.  Contains exactly one [1..1] **subgroupCode** with data type *Code*

    • A coded value specifying the identification of uniform groups of subjects for separate analysis or treatment. For example, in National Cancer Institute (NCI) this is the Clinical Data Update System (CDUS) Reporting.

# Extension Evaluation

Evaluates the method used in determining the size and dimensions of the tumor

1.  Contains exactly one [1..1] **extension** with data type *Code*

    • Indicates the Seer Extent of Disease coding schema. Possible values are IN SITU;Tumor confined to lacrimal gland/duct; Invading periosteum of ; fossa of lacrimal gland/duct; Extension to any of the following without bone invasion:Orbital soft tissues, Optic nerve, Globe (eyeball); Adjacent bone; FURTHER contiguous extension; Metastasis; UNKNOWN if extension or metastasis; etc.

# FDA Person

A specialization of Person that adds properties specifically needed by FDA

1. Extends *Person*
2. Contains zero or one [0..1] **subjectId** with data type *Id*
   - A local identifier for a person. The stereotype set indicates there may be more than one distinct local ID for a given person, identified in no particular order. There is only one distinct local ID for each facility issuing the ID and local IDs are only assigned to a person where there was some reason for the person to be assigned a distinct ID specific to a facility.

## Facility Treating Specialty

Provides an indication of the medical specialty of the organization-location. Examples include Medicine, Surgery, Psychiatry, etc. This class is equivalent to File 45.7 in Vista.

1. Extends *Service Delivery Location*
2. Contains exactly one [1..1] **specialtyCode** with data type *Code*
   - Identifies the specialty.

## Family History

Contains information Identifying the patient's family member with cancer.

1. Contains exactly one [1..1] **familyMemberCancerAnatomicLocation** with data type *Code*
   - The location of the family member's cancer, from the COMMON CANCERS File. Possible values are Brain; Gallbladder; Breast; COLON & RECTUM; ESOPHAGUS; etc.
2. Contains exactly one [1..1] **familyMemberWithCancer** with data type *Code*
   - Identifies the family member with cancer. Possible value FATHER; MOTHER; BROTHER; SISTER; UNCLE; AUNT; NIECE; NEPHEW; DISTANT RELATION; IN-LAWS; HUSBAND; WIFE; CHILD; NOT KNOWN; GRANDMOTHER; GRANDFATHER; etc.

## Family Social History

This area of the assessment is used to record answers related to family and social history that may predispose the patient to a specific type of problem. This includes living arrangement.

1. Extends *Behavioral Health Assessment Domain*
2. Contains exactly one [1..1] **traumaHistory** with data type *Integer*
   - This coded attribute specifies whether the patient may have a history of physical or mental trauma even though it has not yet manifested as a diagnosis.
3. Contains zero or one [0..1] **householdComposition**, where its type is *Household Composition*
4. Contains exactly one [1..1] **livingArrangement**, where its type is *Living Arrangement*
5. Contains exactly one [1..1] **socialNetwork**, where its type is *Social Network*

## Fecal Occult Blood Test

Fecal Occult Blood Testing

1. Contains exactly one [1..1] **fecalOccultBloodTest** with data type *Code*
   - Indicates thee results of the diagnostic test FECAL OCCULT BLOOD TEST (FOBT). Possbile values are Not done; Positive (3-card sample); Negative (3-card sample); Positive (6-card sample); Negative (6-card sample); Unknown/not documented; etc.
2. Contains exactly one [1..1] **dateOfFobt** with data type *Point In Time*

- The date of the diagnostic test FECAL OCCULT BLOOD TEST (FOBT).

# Fee For Service Arrangement

Fee Schedule: 'A list of maximum fees for providers who are on a fee-for-service basis.' -eHealthInsurance.org Fee-for-Service: 'A payment system for health care where the provider is paid for each service rendered rather than a pre-negotiated amount for each patient.' -eHealthInsurance.org

1. Extends *Financial Arrangement*
2. Contains exactly one [1..1] **feeSchedule**, where its type is *Fee Schedule*
3. Contains zero or more [0..*] **diagnosisRelatedGroup**, where its type is *Diagnosis Weighted Payment*

# Fee Schedule

'A list of maximum fees for providers who are on a fee-for-service basis.' -eHealthInsurance.org

1. Contains exactly one [1..1] **billableAct** with data type *Billable Service*

# Financial Arrangement

Describes the nature of the financial arrangement or contract between a healthcare provider and a health plan. Financial Arrangements are commonly based on Fee Schedules, Capitation arrangements, or some kind of combination of the two.

1. Contains exactly one [1..1] **contractId** with data type *Id*
2. Contains exactly one [1..1] **healthPlan**, where its type is *Health Plan*
3. Contains exactly one [1..1] **billableAct**, where its type is *Billable Service*

# Flight Schedule

This is an example act class that is used to specify the properties of a flight schedule.

1. Contains exactly one [1..1] **airFlight**, where its type is *Air Flight*

   - This ActRelationship describes the relationship between FlightSchedule and AirFlight. ActRelationship is a directed association between a source Act and a target Act (in this case it is a bi-directional association) as specified by the HL7 V3 RIM. The relationships associated with an Act are considered properties of the source act object. This means that the author of an Act-instance is also considered the author of all of the act relationships that have this Act as their source, (though not necessarily of the target Acts of those relationships). There are no exceptions to this rule. The meaning and purpose of an ActRelationship is specified in the ActRelationship.typeCode attribute. Every ActRelationship instance is like an arrow with a point (headed to the target) and a butt (coming from the source). The functions that source and target Acts play in that association are defined for each ActRelationship type differently. For instance, in a composition relationship, the source is the composite and the targets are the components. In a reason-relationship the source is any Act and the target is the reason or indication for the source-Act.

   - This represents an association of a FlightSchedule to an AirFlight. The association will appear as a property of a class (FlightSchedule) and named for the far end of the association.

2. Contains exactly one [1..1] **airlineCode** with data type *Code*

   - This is an example coded attribute with an identified binding to a coding system. In this case, it represents the codes assigned to various airlines which can then be associated to a particular flight schedule. If the coding system is not specified here it may be specified runtime. This example shows how a coding system, coded concept, and value set may be assigned to a coded attribute. Note that if only a coding system is specified, then

the graphical representation for the vocabulary binding will identify the coding system (preceded by the prefix 'C:' on the diagram). If however, a specific value set is assigned, then the value set will be identified on the class diagram (preceded by the prefix 'V:').

## Fluid Audit

A methodical examination or review of the fluid utilized in the surgical event.

1. Contains exactly one [1..1] **bloodLoss** with data type *Physical Quantity*

   • Contains the volume of blood loss during the surgical event.
2. Contains exactly one [1..1] **totalUrineOutput** with data type *Physical Quantity*

   • Contains the total urine output post surgery.

## Food Preference

A record of the food preference for this patient.

1. Extends *Dietetics Request*
2. Contains exactly one [1..1] **meals** with data type *Code*

   • A code indicating the meals to which this food preference request applies.
3. Contains at least one [1..*] **foodPreferenceItem**, where its type is *Food Preference Food Item*

   • A food item that is part of the requested food preference.

## Food Preference Food Item

A record of a food preference item and the quantity in which it is ordered.

1. Contains exactly one [1..1] **foodPreferenceItem** with data type *Code*

   • An item that is requested as part of a Food Preference order.
2. Contains exactly one [1..1] **quanity** with data type *Integer Ratio*

   • The ordered quantity of the requested food item.

## Formal Education

Represents information about the formal educational experience of an Individual Healthcare Provider.

1. Extends *Provider Education*
2. Contains exactly one [1..1] **degree** with data type *Code*

   • Indicates the degree or certificate earned by the provider. Examples include Bachelor of Science, Doctorate in Medicine.

## Frequency Question

This class represents a question that requires an answer specifying the number a times (repetitions) an event occurred during a unit of time (e.g. number of drinks per week).

1. Extends *Question*
2. Contains exactly one [1..1] **question**

- This attribute is used to define the code associated with the Behavioral Health assessment question that requires a frequency response.
3. Contains exactly one [1..1] **answer** with data type *Time Quantity*

- This coded attribute is used to specify the number of occurrences within a given period of time. If a response is not provided, the null value may be qualified by an ASKU (asked but unknown) null flavor.

## Functional Role

Functional Roles can be grouped according to their authorization to access IIHI and perform various operations on health care information. E.g., A health care provider in Organization A is authorized to access protected information (including IIHI) from Organization B (when Organization A &amp; B have entered into a trusted relationship) if that provider is associated with the Functional Group whose permissions grant access per that FunctionalRole. In summary, the functional role defines the access control decision. A functional role is bound to a policy.

1. Contains zero or one [0..1] **name** with data type *String*

- This attribute is used to represent the user role name, if specified.
2. Contains zero or one [0..1] **roleCode** with data type *Code*

- The functional role may specify that the user is part of the healthcare team that is directly involved in the client s care. This attribute refers to a functional role assigned by an organization to computer users.
3. Contains zero or more [0..*] **rolePermission**, where its type is *Permission*

- This association identifies the permissions that are associated with a functional role.

## Functional Status

1.

## Functional Status Section

1. Contains zero or one [0..1] **functionalStatus**, where its type is *Functional Status*

## Generated By

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Generic Medicine

"The non-proprietary, generic substance as which the same medicines is known in the literature independent of a specific manufacturer." - HL7 V3

1. Contains zero or one [0..1] **code** with data type *Code*

- Identifies the generic medicine using some coding system such as RxNorm or NDF-RT.
2. Contains exactly one [1..1] **name** with data type *String*

- "The non-proprietary, generic, or "established" name." - HL7 V3
3. Contains zero or more [0..*] **product**, where its type is *Medicinal Product*

# Global Assessment Of Functioning

Axis 5 permits the clinician to indicate his/her overall judgment of a person's psychological, social and occupation functioning on a scale, the Global Assessment of Functioning (GAF Scale).

1. Contains exactly one [1..1] **value** with data type *Code*
   - The code indicating the clinician's overall judgment of a person's psychological, social and occupation functioning on the Global Assessment of Functioning (GAF Scale).

# Goal

Note that a goal might be constructed of sub-goals, which might each be associated with a single outcome. For example, a goal to loose 5 pounds per week over 6 weeks might spawn 6 child goals to loose 5 pounds in week 1, week 2, etc. Each child goal would be associated with one actual outcome (i.e., lost 4 pounds in week 1; lost 6 pounds in week 2, etc). Then the "parent" goal outcome could be the total (e.g., lost 28 pounds in 6 weeks).

1. Contains exactly one [1..1] **category** with data type *Code*
2. Contains exactly one [1..1] **dateEstablished** with data type *Point In Time*
3. Contains exactly one [1..1] **description** with data type *String*
4. Contains exactly one [1..1] **desiredOutcome** with data type *String*
5. Contains exactly one [1..1] **goalIntent** with data type *String*
6. Contains exactly one [1..1] **goalType** with data type *Code*
7. Contains exactly one [1..1] **id** with data type *Id*
8. Contains exactly one [1..1] **patientApprovalLevel** with data type *String*
   - Provides an indication of the extent to which the patient is in agreement with the goal. Note that this is a prospective measurement.
9. Contains exactly one [1..1] **patientAdherenceLevel** with data type *String*
   - Provides an indication of the extent to which the patient adhered to the goal Note that this is a retrospective measurement.
10. Contains exactly one [1..1] **priority** with data type *String*
11. Contains exactly one [1..1] **shortOrLongTerm** with data type *Code*
12. Contains exactly one [1..1] **status** with data type *Code*
13. Contains exactly one [1..1] **targetDate** with data type *Point In Time*
14. Contains zero or more [0..*] **reviewedBy**, where its type is *Reviewer*
15. Contains zero or more [0..*] **relatedGoal**, where its type is *Related Goal*
16. Contains zero or more [0..*] **actualOutcome**, where its type is *Actual Outcome*
17. Contains zero or more [0..*] **goalEvaluation**, where its type is *Goal Evaluation*
18. Contains exactly one [1..1] **author**, where its type is *Author*
19. Contains exactly one [1..1] **supporter**, where its type is *Supporter*

# Goal Evaluation

1. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
2. Contains exactly one [1..1] **author**, where its type is *Author*

# Grantee

This class is used to designate who/what has been delegated a specific right. For example, in the case of substance abuse related information, under certain conditions the authority to grant, withhold, or withdraw consent to the

disclosure of the information, is granted to the client. In another example, a Clearinghouse may act an agent/proxy for a provider organization as an intermediary and therefore can be a grantee as well.

1. Contains exactly one [1..1] **organizationalProvider**, where its type is *Organizational Provider*

   • Additional information about the grantee when the grantee is an organizational provider.

2. Contains zero or one [0..1] **clearingHouse**, where its type is *Clearing House*

   • Additional information about the grantee when the grantee is a clearinghouse.

## Group Coverage

'Coverage of a number of individuals under one contract. The most common 'group' is employees of the same employer.' eHealthInsurance.org

1. Contains exactly one [1..1] **address** with data type *Us Mailing Address*
2. Contains exactly one [1..1] **groupId** with data type *Id*

   • A unique identifier that the payer or information source uses to identify a specific Group OR an Identifier assigned by the health plan to be used as a key to the group's contractual benefits.

3. Contains exactly one [1..1] **groupName** with data type *String*
4. Contains exactly one [1..1] **healthPlan**, where its type is *Health Plan*
5. Contains exactly one [1..1] **planSponsor**, where its type is *Plan Sponsor*
6. Contains exactly one [1..1] **policy**, where its type is *Healthcare Policy*
7. Contains exactly one [1..1] **subscriber**, where its type is *Subscriber*

## Group Encounter Event

A collection of like Encounters for multiple patients i.e. Group Therapy sessions. Note that each patient has its own Episode of Care.

1. Contains exactly one [1..1] **id** with data type *Id*

   • Uniquely identifies the group encounter.

2. Contains at least one [1..*] **encounter**, where its type is *Encounter Event*

   • An interaction between a patient and a practitioner at a given location under the auspices of a given organization for the purpose of providing healthcare-related service(s).

## Group Practice

1. Extends *Organization*

## HL72 Coded Element

Represents the HL7 V2 Coded Element (CE) datatype. The CE datatype is made up of 6 pieces: Identifier, Text, Name of Coding System, Alternate Identifier, Alternate Text, and Alternate Name of Coding System.

1. Extends *Code*
2. Contains zero or one [0..1] **identifier** with data type *String*

   • "Sequence of characters (the code) that uniquely identifies the item being referenced. Different coding schemes will have different elements here." - HL7 V2

3. Contains zero or one [0..1] **text**

- "The descriptive or textual name of the identifier, e.g., myocardial infarction or X-ray impression." - HL7 V2

4. Contains zero or one [0..1] **codingSystem** with data type *String*

   - "Identifies the coding scheme being used in the identifier component. The combination of the identifier and name of coding system components will be a unique code for a data item. Each system has a unique identifier." - HL7 V2

5. Contains zero or one [0..1] **alternateIdentifier** with data type *String*

   - "An alternate sequence of characters (the code) that uniquely identifies the item being referenced. See usage note in section introduction." - HL7 V2

6. Contains zero or one [0..1] **alternateText** with data type *String*

   - "The descriptive or textual name of the alternate identifier. See usage note in section introduction" - HL7 V2

7. Contains zero or one [0..1] **alternateCodingSystem** with data type *String*

   - "Identifies the coding scheme being used in the alternate identifier component." - HL7 V2

## HL72 Entity Identifier

This class corresponds to the HL7 V2 Entity Identifier (EI) data type. "The entity identifier defines a given entity within a specified series of identifiers. The EI is appropriate for, but not limited to, machine or software generated identifiers. The generated identifier goes in the first component. The remaining components, 2 through 4, are known as the assigning authority; they identify the machine/system responsible for generating the identifier in component 1." - HL7 V2

1. Extends *Id*
2. Contains zero or one [0..1] **identifier**

   - "The first component, <entity identifier>, is usually defined to be unique within the series of identifiers created by the <assigning authority>, defined by a hierarchic designator, represented by components 2 through 4." - HL7 V2

3. Contains zero or one [0..1] **namespaceId** with data type *String*

   - "The assigning authority is a unique identifier of the system (or organization or agency or department) that creates the data." - HL7 V2

4. Contains zero or one [0..1] **universalId** with data type *String*

   - "The <universal ID> (UID), is a string formatted according to the scheme defined by the <universal ID type> (UID type) component. The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme." - HL7 V2

5. Contains zero or one [0..1] **universalIdType** with data type *String*

   - "The <universal ID type> (UID type) component governs the interpretation of the <universal ID> (UID) component. If the UID type is a known UID refer to HL7 Table 0301 - Universal ID type for valid values, then the UID is a universal ID of that type." - HL7 v2

## HL72 Extended Composite Id

This class corresponds to the HL7 V2 Extended Composite ID With Check Digit (CX) data type, which is "used for specifying an identifier with its associated administrative detail". This datatype has been simplified in that some optional components, such as the check digits, which are not used in current HL7 v2 messaging within VA, have been omitted. In addition, the subcomponents which are themselves complex types have been exploded in order to have all subcomponents in the type. For example, the Assigning Authority component in the HL7 v2

datatype is an HD datatype, which has three components. This has been replaced by three properties in this class: AssigningAuthNamespaceId, AssigningAuthUniveralId, and AssigningAuthUniveralIdType.

1. Extends *Id*
2. Contains exactly one [1..1] **entityIdentifier** with data type *String*

   - "The value of the identifier itself" - HL7 v2
3. Contains exactly one [1..1] **assigningAuthNamespaceId** with data type *String*

   - The Assigning Authority is "a unique name of the system (or organization or agency or department) that creates the data" - HL7 v2. Note that Assigning Authority in HL7 v2 is a complex type (an HD datatype). This property contains the Namespace Id sub-component, which is "used as the HL7 identifier for the user-defined table of values for this component."
4. Contains zero or one [0..1] **assigningAuthNameUniversalId** with data type *String*

   - The Assigning Authority is "a unique name of the system (or organization or agency or department) that creates the data" - HL7 v2. Note that Assigning Authority in HL7 v2 is a complex type (an HD datatype). This property contains the Universal Id sub-component, which is defined thusly: "The <universal ID> (UID), is a string formatted according to the scheme defined by the <universal ID type> (UID type) component. The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme." - HL7 v2
5. Contains exactly one [1..1] **assigningAuthNameUniversalIdType** with data type *String*

   - The Assigning Authority is "a unique name of the system (or organization or agency or department) that creates the data" - HL7 v2. Note that Assigning Authority in HL7 v2 is a complex type (an HD datatype). This property contains the Universal Id Type sub-component, which is defined thusly: "The <universal ID type> (UID type) component governs the interpretation of the <universal ID> (UID) component. If the UID type is a known UID refer to HL7 Table 0301 - Universal ID type for valid values, then the UID is a universal ID of that type." - HL7 v2
6. Contains exactly one [1..1] **identifierTypeCode** with data type *String*

   - "A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the Assigning authority component. Refer to HL7 Table 0203 - Identifier type for suggested values" - HL7 v2
7. Contains exactly one [1..1] **assigningFacNamespaceId** with data type *String*

   - The Assigning Facility is "the place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems." - HL7 v2. Note that the Assigning Facility in HL7 v2 is a complex type (an HD datatype). This property contains the Namespace Id sub-component, which is "used as the HL7 identifier for the user-defined table of values for this component."
8. Contains zero or one [0..1] **assigningFacUniversalId** with data type *String*

   - The Assigning Facility is "the place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems." - HL7 v2. Note that Assigning Authority in HL7 v2 is a complex type (an HD datatype). This property contains the Universal Id sub-component, which is defined thusly: "The <universal ID> (UID), is a string formatted according to the scheme defined by the <universal ID type> (UID type) component. The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme." - HL7 v2
9. Contains zero or one [0..1] **assigningFacUniversalIdType** with data type *String*

   - The Assigning Facility is "the place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems." - HL7 v2. Note that

Assigning Authority in HL7 v2 is a complex type (an HD datatype). This property contains the Universal Id Type sub-component, which is defined thusly: "The <universal ID type> (UID type) component governs the interpretation of the <universal ID> (UID) component. If the UID type is a known UID refer to HL7 Table 0301 - Universal ID type for valid values, then the UID is a universal ID of that type." - HL7 v2

10. Contains zero or one [0..1] **expirationDate** with data type *Point In Time*

   • "The last date, if known, on which the identifier is valid and active" - HL7 v2

## HL72 Hierarchic Designator

This class corresponds to the HL7 V2 Hierarchic Designator (HD) data type. An HD "identifies an (administrative or system or application or other) entity that has responsibility for managing or assigning a defined set of instance identifiers (such as placer or filler number, patient identifiers, provider identifiers, etc.). This entity could be a particular health care application such as a registration system that assigns patient identifiers, a governmental entity such as a licensing authority that assigns professional identifiers or drivers license numbers, or a facility where such identifiers are assigned." - HL7 v2

1. Extends *Id*
2. Contains zero or one [0..1] **namespaceId** with data type *String*

   • This property is "used as the HL7 identifier for the user-defined table of values for this component." - HL7 v2.
3. Contains zero or one [0..1] **universalId** with data type *String*

   • "The <universal ID> (UID), is a string formatted according to the scheme defined by the <universal ID type> (UID type) component. The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme." - HL7 v2
4. Contains zero or one [0..1] **universalIdType** with data type *String*

   • "The <universal ID type> (UID type) component governs the interpretation of the <universal ID> (UID) component. If the UID type is a known UID refer to HL7 Table 0301 - Universal ID type for valid values, then the UID is a universal ID of that type." - HL7 v2

## HL72 Organization Identifier Extended

This class corresponds to the HL7 V2 Extended Composite Name and Identification Number for Organizations (XON) data type. An XON is used "to specify the name and ID number of an organization." - HL7 v2

1. Extends *Id*
2. Contains zero or one [0..1] **identifier**

   • "Contains the sequence of characters (the code) that uniquely identifies the item being referenced by XON.1 Organization Name." - HL7 v2
3. Contains zero or one [0..1] **name** with data type *String*

   • "The name of the specified organization" - HL7 v2
4. Contains zero or one [0..1] **nameTypeCode** with data type *String*

   • "A code that represents the type of name i.e., legal name, display name. Refer to User-defined Table 0204 - Organizational Name Type for suggested values." - HL7 v2
5. Contains zero or one [0..1] **assigningAuthority**

   • "The assigning authority is a unique identifier of the system (or organization or agency or department) that creates the data" - HL7 v2
6. Contains zero or one [0..1] **identityTypeCode** with data type *String*

- "A code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the "Assigning authority" component." - HL7 v2
7. Contains zero or one [0..1] **assigningFacility** with data type *String*

- "The place or location identifier where the identifier was first assigned to the person. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems." - HL7 v2
8. Contains zero or one [0..1] **nameRepresentation** with data type *String*

- "Different <name/address types> and representations of the same <name/address> should be described by repeating of this field" - HL7 v2

# HL72 Person Location

This class corresponds to the HL7 V2 Person Location (PL) data type. A PL "is used to specify a patient location within a healthcare institution. Which components are valued depends on the needs of the site. For example for a patient treated at home, only the person location type is valued. It is most commonly used for specifying patient locations, but may refer to other types of persons within a healthcare setting." - HL7 v2

1. Extends *Id*
2. Contains zero or one [0..1] **pointOfCare** with data type *String*

- "Specifies the code for the point where patient care is administered. It is conditional on Person Location Type (e.g., nursing unit or department or clinic). After floor, it is the most general patient location designation." - HL7 v2
3. Contains zero or one [0..1] **room** with data type *String*

- "Specifies the code for the patient's room. After point of care, it is the most general person location designation." - HL7 v2
4. Contains zero or one [0..1] **bed** with data type *String*

- "Specifies the code for the patient's bed. After room, it is the most general person location designation." - HL7 v2
5. Contains zero or one [0..1] **facilityNamespaceId** with data type *String*

- The Facility is "is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation." - HL7 v2. Note that the Facility in HL7 v2 is a complex type (an HD datatype). This property contains the Namespace Id sub-component, which is "used as the HL7 identifier for the user-defined table of values for this component."
6. Contains zero or one [0..1] **facilityUniversalId** with data type *String*

- The Facility is "is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation." - HL7 v2. Note that the Facility in HL7 v2 is a complex type (an HD datatype). This property contains the Universal Id sub-component, which is defined thusly: "The <universal ID> (UID), is a string formatted according to the scheme defined by the <universal ID type> (UID type) component. The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme." - HL7 v2
7. Contains zero or one [0..1] **facilityUniversalIdType** with data type *String*

- The Facility is "is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation." - HL7 v2. Note that the Facility in HL7 v2 is a complex type (an HD datatype). This property contains the Universal Id Type sub-component, which is defined thusly: "The <universal ID type> (UID type) component governs the interpretation of the <universal ID> (UID) component. If the UID type is a known UID refer to HL7 Table 0301 - Universal ID type for valid values, then the UID is a universal ID of that type." - HL7 v2

8. Contains zero or one [0..1] **personLocationType** with data type *String*

   • "Person location type is the categorization of the person s location defined by facility, building, floor, point of care, room or bed. Although not a required field, when used, it may be the only populated field. It usually includes values such as nursing unit, department, clinic, SNF, physician s office." - HL7 v2

9. Contains zero or one [0..1] **locationDescription** with data type *String*

   • "Describes the location in free text" - HL7 v2

## HL73 Coded Simple Value

"Coded data in its simplest form, where only the code is not predetermined. The code system and code system version are fixed by the context in which CS value occurs. CS is used for coded attributes that have a single HL7-defined value set." - HL7 V3

1. Extends *Code*
2. Contains exactly one [1..1] **code**

   • "The plain code symbol defined by the code system, or an expression in a syntax defined by the code system which describes the concept." - HL7 V3

3. Contains exactly one [1..1] **codeSystem**

   • "The code system that defines the code." - HL7 V3

4. Contains exactly one [1..1] **codeSystemName** with data type *String*

   • "The common name of the coding system." - HL7 V3

5. Contains zero or one [0..1] **codeSystemVersion**

   • "If applicable, a version descriptor defined specifically for the given code system." - HL7 V3

## HL73 Concept Descriptor

"A reference to a concept defined in a code system" - HL7 V3

1. Extends *Code*
2. Contains exactly one [1..1] **code**

   • "The plain code symbol defined by the code system, or an expression in a syntax defined by the code system which describes the concept." - HL7 V3

3. Contains exactly one [1..1] **codeSystem**

   • "The code system that defines the code." - HL7 V3

4. Contains exactly one [1..1] **codeSystemName** with data type *String*

   • "The common name of the coding system." - HL7 V3

5. Contains zero or one [0..1] **codeSystemVersion**

   • "If applicable, a version descriptor defined specifically for the given code system." - HL7 V3

6. Contains exactly one [1..1] **valueSet** with data type *String*

   • "The value set that applied when this CD was created." - HL7 V3

7. Contains zero or one [0..1] **valueSetVersion** with data type *String*

   • "The version of the value set that applied when this CD was created" - HL7 V3

8. Contains exactly one [1..1] **displayName** with data type *String*

   • "A name, title, or representation for the code or expression as it exists in the code system identified by the value of codeSystem." - HL7 V3

9. Contains exactly one [1..1] **originalText** with data type *String*

- "The text as seen and/or selected by the user who entered the data which represents the intended meaning of the user." - HL7 V3
10. Contains zero or more [0..*] **codingRationale** with data type *String*
    - "The reason a particular CD has been provided. " - HL7 V3
11. Contains zero or more [0..*] **translation** with data type *HL73 Concept Descriptor*
    - "A set of other CDs that each represent a translation of this CD into equivalent codes within the same code system or into corresponding concepts from other code systems." - HL7 V3
12. Contains zero or one [0..1] **source** with data type *HL73 Concept Descriptor*
    - "The CD from which this CD was translated, if it was translated from another CD." - HL7 V3

## HL73 Id

This class corresponds to the HL7 V3 II datatype, which is defined as: "An identifier that uniquely identifies a thing or object. Examples are object identifier for HL7 RIM objects, medical record number, order id, service catalog item id, Vehicle Identification Number (VIN), etc. Note that a II does not identify the type of the object being identified, or the type of the association between the object and the identifier - it is only the identifier itself."

1. Extends *Id*
2. Contains exactly one [1..1] **root** with data type *String*
    - A unique identifier that guarantees the global uniqueness of the instance identifier. The root alone may be the entire instance identifier. This string should be one of the following RUID, OID or UUID
    - "A unique identifier that guarantees the global uniqueness of the instance identifier. The root alone may be the entire instance identifier" - HL7 V3
3. Contains zero or one [0..1] **extension** with data type *String*
    - A character string as a unique identifier within the scope of the identifier root.
    - "A character string as a unique identifier within the scope of the identifier root." - HL7 V3
4. Contains zero or one [0..1] **identifierName** with data type *String*
    - A human readable name or mnemonic for the assigning authority. The Assigning Authority Name has no computational value. The purpose of a Assigning Authority Name is to assist an unaided human interpreter of an II value to interpret the authority. Note: no automated processing must depend on the assigning authority name to be present in any form.
    - "This is a human-readable name for the namespace represented in the root. It is a descriptive name for the actual namespace. e.g. "California, U.S. Driver's License Number, 1970-"." - HL7 V3

## Hbpc Admission

This class includes data elements related to patient's eligibility and other administrative information that is evaluated at the time of admission to the Home Based Primary Care (HBPC) Program.

1. Contains exactly one [1..1] **admissionDate** with data type *Point In Time*
2. Contains exactly one [1..1] **eligibilityCategory** with data type *Code*
    - The patient's eligibility at time of evaluation for HBPC program. Possible Values Include: Service Connected 50% or More; Aid & Attendance or Housebound; Service Connected Less Than 50%; Non-Service Connected, Receiving VA Pension; Other Non-Service Connected etc..
3. Contains exactly one [1..1] **livingArrangement** with data type *Code*
    - Living arrangement of a patient for HBPC Program. Possible Values Include: Alone; With Spouse; With Relatives; With Non-Relatives; Group Quarters, Not Health Related; Not Determined etc.
4. Contains exactly one [1..1] **maritalStatus** with data type *Code*
    - Marital Status of the patient at time of admission to the HBPC Program.

5. Contains zero or one [0..1] **admissionAssessment**, where its type is *Hbpc Assessment*
   - Patient's Health Assessment at time of admission to HBPC Program.
6. Contains zero or one [0..1] **previousAgencyType**, where its type is *Care Agency*
   - Type of agency providing last care to patient

## Hbpc Assessment

1. Contains exactly one [1..1] **hearingAbility** with data type *Code*
   - Describes patient's hearing ability at time of Admission/Discharge. Possible values are Normal or Minimal Loss, Moderate Loss, Severe Loss, Total Loss, Not Determined etc
2. Contains exactly one [1..1] **visionAbility** with data type *Code*
   - Describes patient's Vision ability at time of Admission/Discharge. Possible values are Normal or Minimal Loss, Moderate Loss, Severe Loss, Total Loss, Not Determined etc
3. Contains exactly one [1..1] **expressiveCommunicationAbility** with data type *Code*
   - Describes patient's ability to communicate with others at time of Admission/Discharge. Possible values are Speaks and is Usually Understood; Speaks But is Understood Only with Difficulty; Uses Only Sign Language, Symbol Board or Writing; Uses Only Gestures, Grunts, or Primitive Symbols; Does Not Convey Needs; Not Determined etc.
4. Contains exactly one [1..1] **receptiveCommunicationAbility** with data type *Code*
   - Describes patient's ability to understand others at time of Admission/Discharge. Possible values are Usually Understands Oral Communication; Has Limited Comprehension of Oral Communication; Understands by Depending on Lip Reading, Written Material, or Sign Language; Understands Primitive Gestures, Facial Expres., Pictograms, and/or Env. Cues; Does Not Understand; Not Determined etc.
5. Contains exactly one [1..1] **primaryDiagnosis**, where its type is *Diagnosis*
   - The primary diagnosis of the patient at admission or discharge
6. Contains exactly one [1..1] **bathingAbility** with data type *Code*
   - How much help patient requires bathing at time of Admission/Discharge.
7. Contains exactly one [1..1] **dressingAbility** with data type *Code*
   - How much help patient requires dressing at time of Admission/Discharge.
8. Contains exactly one [1..1] **toiletUsageAbility** with data type *Code*
   - How much help patient requires using toilet at time of Admission/Discharge.
9. Contains exactly one [1..1] **transferringAbility** with data type *Code*
   - How much help patient requires transferring at time of Admission.Discharge
10. Contains exactly one [1..1] **eatingAbility** with data type *Code*
    - How much help patient requires eating at time of Admission/Discharge.
11. Contains exactly one [1..1] **walkingAbility** with data type *Code*
    - How much help patient requires walking at time of Admission/Discharge.
12. Contains exactly one [1..1] **bowelContinence** with data type *Code*
    - Describes patient's bowel continence at time of Admission/Discharge. Possible Values are Continent or Ostomy/Catheter Self Care; Incontinent Occasionally; Incontinent or Ostomy/Catheter Not Self Care; Not Determined etc.
13. Contains exactly one [1..1] **bladderContinence** with data type *Code*
    - Describes patient's bladder continence at time of Admission/Discharge. Possible Values are Continent or Ostomy/Catheter Self Care; Incontinent Occasionally; Incontinent or Ostomy/Catheter Not Self Care; Not Determined etc.
14. Contains exactly one [1..1] **mobility** with data type *Code*

- Describes patient's mobility at time of Admission/Discharge. Possible Values are Goes Outdoors Without Help; Goes Outdoors With Help; Confined Indoors, Not Bed Disabled; Bed Disabled; Not Determined etc.
15. Contains exactly one [1..1] **adaptiveTasksAbility** with data type *Code*
    - Describes the patient's ability to perform adaptive tasks at time of Admission/Discharge. Possible values are No Help, Requires Help, Not Determined etc.
16. Contains exactly one [1..1] **behavioralProblems** with data type *Code*
    - Whether or not the patient has behavior problems at time of Admission/Discharge. Possible values are Does Not Exhibit This Characteristic, Exhibits This Characteristic, Not Determined etc.
17. Contains exactly one [1..1] **disorientation** with data type *Code*
    - Whether or not the patient is disoriented at time of Admission/Discharge. Possible values are Does Not Exhibit This Characteristic, Exhibits This Characteristic, Not Determined etc.
18. Contains exactly one [1..1] **moodDisturbance** with data type *Code*
    - Whether or not the patient has a mood disturbance at time of Admission/Discharge. Possible values are Does Not Exhibit This Characteristic, Exhibits This Characteristic, Not Determined etc.
19. Contains exactly one [1..1] **careGiverLimitations** with data type *Code*
    - Describes the level of limitations for the caregiver at time of Admission/Discharge. Possible values are Minimal or None, Moderate, Moderately Severe, No Caregiver, Not Determined etc.

## Hbpc Discharge

This class includes data elements related to person eligibility and other administrative information that is evaluated at the time of discharge from the Home Based Primary Care (HBPC) Program.
1. Contains exactly one [1..1] **dateDischarged** with data type *Point In Time*
   - The date the patient was discharged from the HBPC Program.
2. Contains exactly one [1..1] **dischargeStatus** with data type *Code*
   - Describes the status of the patient at discharge. Possible Values are Transferred to Other Provider; Anticipated Institutionalization; Family or Self Care/No Regular Source; Died on HBPC; Moved Away/Lost to Contact; Not Determined etc.
3. Contains exactly one [1..1] **eligibilityCategory** with data type *Code*
   - The patient's eligibility at time of evaluation for HBPC program. Possible Values Include: Service Connected 50% or More; Aid & Attendance or Housebound; Service Connected Less Than 50%; Non-Service Connected, Receiving VA Pension; Other Non-Service Connected etc..
4. Contains exactly one [1..1] **livingArrangement** with data type *Code*
   - Living arrangement of a patient for HBPC Program. Possible Values Include: Alone; With Spouse; With Relatives; With Non-Relatives; Group Quarters, Not Health Related; Not Determined etc.
5. Contains exactly one [1..1] **maritalStatus** with data type *Code*
   - Marital Status of the patient at time of admission to the HBPC Program.
6. Contains zero or one [0..1] **destinationAgencyType**, where its type is *Care Agency*
   - Represents the patient's type of destination agency.
7. Contains zero or one [0..1] **dischargeAssessment**, where its type is *Hbpc Assessment*
   - Patient's Health Assessment at time of discharge from HBPC Program.

## Health Concern

"This class is used to track a patient's health concern observed by various providers at various points in time and locations. The name and nature of the concern is derived from the first health concern observation made, which could

be an indication of a negative assertion for an health concern, if necessary (e.g. not a diabetic)." - HL7 v3. A "health concern" can be anything that a clinician wishes to track about the patient, including items which the patient might not consider to be a "problem", such as the fact that the patient smokes.

1. Contains exactly one [1..1] **ageAtOnset** with data type *Time Quantity*

   - The age of the patient or subject at onset of the condition

2. Contains exactly one [1..1] **certainty** with data type *String*

   - "This field contains a qualitative representation of the certainty of a problem (e.g., high, low, medium, etc.)" - HL7 v2

3. Contains exactly one [1..1] **chronicity** with data type *Code*

   - This is a flag to indicate how critical this problem is for this patient; problems marked as Acute will be flagged on the Problem List display. A=Acute, C=Chronic

4. Contains exactly one [1..1] **classification** with data type *Code*

   - This field indicates the kind of problem. This field can be used to categorize problems so that they may be managed and viewed independently within different applications (e.g., admission, final, post-operative, pre-operative, outpatient, discharge, etc.).

5. Contains exactly one [1..1] **confirmationStatus** with data type *Code*

   - 

6. Contains exactly one [1..1] **dateCreated** with data type *Point In Time*

   - The date and time that the record of the Problem being described was originally created. Note that this property could be derived from the HealthConcernLifeCycle entries.

7. Contains exactly one [1..1] **dateEstabished** with data type *Point In Time*

   - "This field contains the date/time when the corresponding problem was initially identified by the caregiver." - HL7 v2.

8. Contains exactly one [1..1] **dateLastModified** with data type *Point In Time*

   - The date and time that the Problem being described was last modified. Note that this property could be derived from the HealthConcernLifeCycle entries.

9. Contains exactly one [1..1] **dateOfOnset** with data type *Point In Time*

   - The date and time that Problem being described began. Note that this date may be inprecise (e.g., "sometime in 2006").

10. Contains exactly one [1..1] **dateOfOnsetText** with data type *String*

11. Contains zero or one [0..1] **dateResolved** with data type *Point In Time*

    - The date and time that Problem being described was resolved (if it is resolved).

12. Contains exactly one [1..1] **healthConcern** with data type *Code*

    - Identifies the Problem or Health Concern being described. This property is code, which should come from an approved subset of SNOMED-CT, e.g., the "VA-KP Problem List Subset"

13. Contains exactly one [1..1] **id** with data type *Id*

    - Uniquely identifies the Health Concern (or "Problem") entry. This property is akin to a record number, and may not be unique outside of the organization that created it. However, the Id datatype allows for a assigning authority, which when combined with the local identifier, should make the Id unique. The id property allows on-going observations made on the same initial problem to be tracked as the same concern.

14. Contains exactly one [1..1] **informationSource** with data type *Code*

    - Provides an indication of how the existence of the problem came to be known. Possible values include Patient, Clinical Evidence, etc. Added for Ahlta.

15. Contains exactly one [1..1] **narrative** with data type *String*

    - A textual description of the Health Concern (or "Problem").

16. Contains exactly one [1..1] **severity** with data type *Code*

17. Contains exactly one [1..1] **status** with data type *Code*

- This property summarizes the current state of the Health Concern (or "Problem"), as indicated by the last observation made on this concern. Possible values include: Active, Inactive, Nullified, etc.

18. Contains zero or more [0..*] **diagnosis**, where its type is *Diagnosis List Entry*
19. Contains zero or more [0..*] **healthConcernLog**, where its type is *Health Concern Log*
20. Contains zero or more [0..*] **note**, where its type is *Comment Event*

- Note/s providing additional textual description of the problem.

21. Contains zero or more [0..*] **problemManagementClassification**, where its type is *Problem Management Classification*
22. Contains zero or more [0..*] **relatedConcern**, where its type is *Related Concern*
23. Contains zero or one [0..1] **responsibleClinic**, where its type is *Hospital Location*
24. Contains zero or one [0..1] **responsibleProvider**, where its type is *Responsible Party*
25. Contains zero or one [0..1] **responsibleService**, where its type is *Service Department*

- A pointer to the service file identifying the service primarily involved in the treatment of this problem.

- A pointer to the service file identifying the service primarily involved in the treatment of this problem.

# Health Concern Entry

1. Contains exactly one [1..1] **healthConcern**, where its type is *Health Concern*
2. Contains exactly one [1..1] **priority** with data type *String*

- Provides an indication of the importance of this Health Concern (or "Problem") entry vis a vis other entries.

3. Contains exactly one [1..1] **ranking** with data type *String*

- "This field contains a qualitative representation of the certainty of a problem (e.g., high, low, medium, etc.)" - HL7 v2

# Health Concern List

1. Contains exactly one [1..1] **patient**, where its type is *Patient*

- The patient whose problems are being observed and documented.

- The patient whose problems are being observed and documented.

2. Contains zero or more [0..*] **healthConcernEntry**, where its type is *Health Concern Entry*

# Health Concern Log

1. Contains exactly one [1..1] **dateCreated** with data type *Point In Time*

- The date and time that the record of the Problem being described was originally created. Note that this property could be derived from the HealthConcernLifeCycle entries.

2. Contains exactly one [1..1] **status** with data type *Code*

- This is the current activity status of this problem, whether active or inactive; if more detail is needed, a notation may be filed with this problem. A=Active, I=Inactive.

3. Contains exactly one [1..1] **author**, where its type is *Author*
4. Contains exactly one [1..1] **dataEnterer**, where its type is *Data Enterer*
5. Contains exactly one [1..1] **facility**, where its type is *Visit Location*

- A pointer to Location file identifying the location at which this problem was originally observed and documented.

- • A pointer to Location file identifying the location at which this problem was originally observed and documented.
6. Contains zero or one [0..1] **visit**, where its type is *Encounter Event*

## Health Factor Observation

An event in which a health factor is recorded.
1. Contains exactly one [1..1] **comments** with data type *String*
2. Contains exactly one [1..1] **dataSource** with data type *Code*
3. Contains exactly one [1..1] **healthFactor** with data type *Code*
   - • An event in which a health factor is recorded.
4. Contains exactly one [1..1] **id** with data type *Id*
   - • A unique identifier for the Act [HL7].
5. Contains exactly one [1..1] **severity** with data type *Code*
6. Contains exactly one [1..1] **softwarePackage** with data type *Code*
7. Contains exactly one [1..1] **encompassingVisit**, where its type is *Outpatient Visit*
8. Contains exactly one [1..1] **patient**, where its type is *Patient*

## Health Plan

'This refers to any kind of plan that covers health care services such as HMOs, insured plans, preferred provider organizations, etc.' eHealthInsurance.org This class represents a product offering that may be very closely associated with the organization that offers it, nonetheless, the organization is a separate concept (herein called Payer). The term Health Plan includes not only Private Insurance Plans, but also Public Health Plans, Military Health Programs, and State Health Insurance Programs. These capitalized terms were modeled as subclasses, but were removed on 5/25.
1. Contains exactly one [1..1] **effectiveDate** with data type *Point In Time*
   - • The date the plan is activated for providing services to the patient.
2. Contains zero or one [0..1] **homePlan** with data type *Id*
3. Contains exactly one [1..1] **id** with data type *Id*
   - • A unique identifier that the payer or information source uses to identify the Plan.
4. Contains exactly one [1..1] **insuranceType** with data type *Code*
   - • Such as HMO, PPO, Medicare, etc.
5. Contains exactly one [1..1] **planName** with data type *String*
   - • The name of the Plan as assigned by the Payer. Should this be 'description' instead of 'name'?
6. Contains exactly one [1..1] **financialArrangement**, where its type is *Financial Arrangement*
7. Contains exactly one [1..1] **group**, where its type is *Group Coverage*
8. Contains exactly one [1..1] **payer**, where its type is *Payer*
9. Contains exactly one [1..1] **planBenefitPackage**, where its type is *Healthcare Policy*
10. Contains exactly one [1..1] **planNetworkAffliliation**, where its type is *Plan Network Affliliation*
11. Contains zero or more [0..*] **providerPlanParticipation**, where its type is *Provider Plan Participation*

## Health Record

This class is used to store a reference to the health record that is the subject of the consent rules in the Consent Directive.
1. Contains exactly one [1..1] **recordId** with data type *Id*
   - • The id of the record that is the target of a consent directive.

2. Contains zero or one [0..1] **recordLocation** with data type *String*
   - The location of the record that is the target of a consent directive.

# Healthcare Order

This class represents those properties which are common to all orders. This class is "owned" by the Common package so as to avoid package interdependencies. Information that is specific to given order types (e.g., Lab, Pharmacy) are contained in subtypes to this class. These subtype classes are in the the respective domain packages (e.g., the LabRequest class is in the Lab package).

1. Contains exactly one [1..1] **callbackPhone** with data type *Telecommunications*
   - "Contains the telephone number to call for clarification of a request or other information regarding the order." - HL7 Version 2.8, ORC-14 "Contains the telephone number for reporting a status or a result using the standard format with extension and/or beeper number when applicable." - HL7 Version 2.8, OBR-17

2. Contains exactly one [1..1] **confidentialityCode** with data type *Code*
   - "This field contains information about the level of security and/or sensitivity surrounding the order (e.g., highly sensitive, not sensitive, sensitive, etc.)." - HL7 Version 2.8, ORC-28

3. Contains zero or one [0..1] **dangerCode** with data type *Code*
   - "Contains the code and/or text indicating any known or suspected patient or specimen hazards, e.g., patient with active tuberculosis or blood from a hepatitis patient." - HL7 Version 2.8, OBR-12

4. Contains exactly one [1..1] **dateTimeBegin** with data type *Point In Time*
   - "This field may be specified by the requester, in which case it indicates the earliest date/time at which the services should be started. In many cases, however, the start date/time will be implied or will be defined by other fields in the service request record (e.g., urgency STAT). In such a case, this field will be empty. The filling service will often record a value in this field after receipt of the service request, however, and compute an end time on the basis of the start date/time for the filling service's internal use." - HL7 Version 2.8, TQ1-7

5. Contains zero or one [0..1] **dateTimeCompleted** with data type *Point In Time*
   - The date/time this order is considered complete.

6. Contains exactly one [1..1] **dateTimeEnd** with data type *Point In Time*
   - "When filled in by the requester of the service, this field should contain the latest date/time that the service should be performed. If it has not been performed by the specified time, it should not be performed at all. The requester may not always fill in this value, yet the filling service may fill it in on the basis of the instruction it receives and the actual start time. Regardless of the value of the end date/time, the service should be stopped at the earliest of the date/times specified by either the duration or end date/time." - HL7 Version 2.8, TQ1-8

7. Contains exactly one [1..1] **dateTimeOrdered** with data type *Point In Time*
   - The date/time that the order was created by the ordering provider.

8. Contains exactly one [1..1] **duplicateProcedureReason** with data type *String*
   - "This field is used to document why the procedure found in OBR-44 - Procedure Code is a duplicate of one ordered/charged previously for the same patient within the same date of service and has been determined to be medically necessary." - HL7 Version 2.8, OBR-48

9. Contains zero or one [0..1] **isEscortRequired** with data type *Boolean*
   - Indicates whether "the patient needs to be escorted to the diagnostic service department." - HL7 Version 2.8, OBR-42

10. Contains exactly one [1..1] **isInpatientOrder** with data type *Boolean*
    - "This field indicates whether the order is to be executed in an inpatient setting or an outpatient setting." - HL7 Version 2.8, ORC-29

11. Contains exactly one [1..1] **placerOrderId** with data type *Id*
    - "This field is the placer application's order number." - HL7 Version 2.8, ORC-2

12. Contains exactly one [1..1] **priority** with data type *Code*

- "This field describes the urgency of the request. If this field is blank, the default is R" (Routine) - HL7 Version 2.8, TQ1-9

13. Contains exactly one [1..1] **placerSupplementalInfo** with data type *Code*

- "This field contains supplemental service information sent from the placer system to the filler system for the universal procedure code reported in OBR-4 Universal Service ID. This field will be used to provide ordering information detail that is not available in other specific fields in the OBR segment." - HL7 Version 2.8, OBR-46

14. Contains exactly one [1..1] **plannedPatientTransportComment** with data type *String*

- Contains "comments on special requirements for the transport of the patient to the diagnostic service department." - HL7 Version 2.8, OBR-43

15. Contains zero or one [0..1] **reasonForStudy** with data type *Code*

- "This is required for some studies to obtain proper reimbursement." - HL7 Version 2.8, OBR-31 Used to link various tests or procedures together in order to provide a more complete picture of a patient's condition. Also used for billing purposes.

16. Contains exactly one [1..1] **relevantClinicalInformation** with data type *String*

- "Contains the additional clinical information about the patient or specimen. This field is used to report the suspected diagnosis and clinical findings on requests for interpreted diagnostic studies." - HL7 Version 2.8, OBR-13

17. Contains exactly one [1..1] **remarks** with data type *String*

- General textual comments about this Order.

18. Contains zero or one [0..1] **resultHandling** with data type *Code*

- "Transmits information regarding the handling of the result. For example, an order may specify that the result (e.g., an x-ray film) should be given to the patient for return to the requestor.... If this field is not populated then routine handling is implied." - HL7 Version 2.8, OBR-49 Note that the HL7 V2 value set only contains values pertinent to Radiology (e.g., give film to patient). However, it is envisioned that other scenarios might be handled by this property. This property is optional.

19. Contains exactly one [1..1] **status** with data type *Code*

- "Specifies the status of an order.... The purpose of this field is to report the status of an order either upon request (solicited), or when the status changes (unsolicited). It does not initiate action. It is assumed that the order status always reflects the status as it is known to the sending application at the time that the message is sent. Only the filler can originate the value of this field." - HL7 Version 2.8, ORC-5 A code specifying the status of the Order. Valid status codes should reflect the HL7 state machine, e.g., Active, Held, Canceled, Aborted, New, Nullified, Obsolete.

20. Contains zero or one [0..1] **statusModifier** with data type *Code*

- "This field is a modifier or refiner of the ORC-5-Order status field. This field may be used to provide additional levels of specificity or additional information for the defined order status codes." - HL7 Version 2.8, ORC-25

21. Contains zero or one [0..1] **transportationArrangementResponsibility** with data type *String*

- Indicates "who is responsible for arranging transport to the planned diagnostic service. Examples: Requester, Provider, Patient." - HL7 Version 2.8, OBR-40

22. Contains zero or one [0..1] **transportationMode** with data type *String*

- "This field identifies how (or whether) to transport a patient, when applicable." - HL7 Version 2.8, OBR-30

23. Contains exactly one [1..1] **wasTransportArranged** with data type *Boolean*

- Indicates "whether transport arrangements are known to have been made." - HL7 Version 2.8, OBR-41

24. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

- "Contains the identity of the person who is responsible for creating the request (i.e., ordering physician)." - HL7 Version 2.8, ORC-12 "Identifies the provider who ordered the test." - HL7 Version 2.8, OBR-16 "Contains the address of the care provider requesting the order" - HL7 Version 2.8, ORC-24

25. Contains zero or more [0..*] **diagnosisList**, where its type is *Diagnosis List Entry*

   - Contains a list of diagnoses associated with the Healthcare Order.

26. Contains zero or one [0..1] **encounter**, where its type is *Encounter Event*

   - The PatientEncounter during which the Order was created.

27. Contains zero or more [0..*] **orderAction**, where its type is *Order Action*

   - A record of action has been taken on an order, including the signature and verification required to release to the service.

28. Contains exactly one [1..1] **patient**, where its type is *Patient*

   - Identifies the patient which is the subject of the Order.

29. Contains zero or one [0..1] **patientLocation**, where its type is *Service Delivery Location*

   - The physical location of the patient. This information is used to communicate to the performing Service where the Patient might be found, which is particularly important for services that involve the patient (e.g., a Lab Test ordered requires a blood draw).

30. Contains zero or more [0..*] **relatedOrder**, where its type is *Related Order*

   - Contains other Orders to which this Order is related.

31. Contains zero or one [0..1] **resultCopiesTo**, where its type is *Individual Provider*

   - "Identifies the people who are to receive copies of the results." - HL7 Version 2.8, OBR-28

32. Contains zero or one [0..1] **setOfOrders**, where its type is *Set Of Orders*

   - An aggregation of Orders that are assembled so that they might be managed as a group. The member Orders will generally be for a single Patient, and commonly issued by a single Provider, but otherwise these orders will have no other inherent relationships between themselves. This concept is different from an Order Set, Panel, or Battery, in that the SetOfOrders is composed after the orders have been created; wheras the latter concepts are defined before the order is created.

33. Contains zero or one [0..1] **standingOrder**, where its type is *Standing Order*

   - An order that is created by policy, and which is not tied to a single patient, but which is generated for a patient when certain conditions are met. For example, a policy might exist that persons deploying to a particular region must have a particular vaccination administered beforehand.

34. Contains zero or one [0..1] **verifier**, where its type is *Verifier*

   - "A person who verifies the correctness and appropriateness of the service (plan, order, event, etc.) and hence takes on accountability."- HL7 V3

35. Contains zero or one [0..1] **cosigner**, where its type is *Legal Authenticator*

   - Captures participation information (who, when, comments) of the person who co-signed the order.

# Healthcare Policy

1. Contains exactly one [1..1] **policyId** with data type *Id*

   - A unique identifier that the payer or information source uses to identify the Policy Holder as belonging to a specific Plan.

2. Contains exactly one [1..1] **policyTerm** with data type *Time Interval*

3. Contains zero or more [0..*] **coveredBenefit**, where its type is *Covered Benefit*

4. Contains exactly one [1..1] **group**, where its type is *Group Coverage*

5. Contains exactly one [1..1] **healthPlan**, where its type is *Health Plan*

6. Contains exactly one [1..1] **subscriber**, where its type is *Subscriber*

7. Contains zero or one [0..1] **coInsurance**, where its type is *Co Insurance*

8. Contains zero or one [0..1] **coPayment**, where its type is *Co Payment*

9. Contains zero or one [0..1] **deductible**, where its type is *Deductible*

## Healthcare Promise

This abstract class contains those properties which are common to all Promise classes (e.g., LabPromise, PharmacyPromise, etc.).

1. Contains zero or one [0..1] **chargeToPracticeCode** with data type *Code*

   - "This field is the charge to the ordering entity for the studies performed when applicable. The first component is a dollar amount when known by the filler. The second is a charge code when known by the filler (results only)." - HL7 Version 2.8, OBR-23 This property contains the charge code, if available.

2. Contains zero or one [0..1] **chargeToPracticeCost** with data type *Monetary Amount*

   - "This field is the charge to the ordering entity for the studies performed when applicable. The first component is a dollar amount when known by the filler. The second is a charge code when known by the filler (results only)." - HL7 Version 2.8, OBR-23 This property contains the dollar amount, if available.

3. Contains exactly one [1..1] **expectedAvailabilityDate** with data type *Point In Time*

   - "Specifies the date/time the filler expects the services to be available. For example when a prescription is ready for pickup or when a supply will be sent or picked up, or for when a laboratory result is expected to be available." - HL7 Version 2.8, ORC-27

4. Contains exactly one [1..1] **fillerOrderId** with data type *Id*

   - "This field is the order number associated with the filling application...." - HL7 Version 2.8, ORC-3 and OBR-3 Note that different terms have been historically been used for the filler order id in different domains. For example, in Pharmacy, the "filler order id" is typically called a "prescription number". Similarly in Lab, it is typically called an "accession number".

5. Contains exactly one [1..1] **fillerSupplementalInfo** with data type *Code*

   - "This field contains supplemental service information sent from the filler system to the placer system for the procedure code reported in OBR-4 Universal Service ID. This field will be used to report ordering information detail that is not available in other specific fields in the OBR segment. Typically it will reflect the same information as was sent to the filler system in OBR-46-Placer supplemental service information unless the order was modified, in which case the filler system will report what was actually performed using this field...." - HL7 Version 2.8, OBR-47

6. Contains exactly one [1..1] **scheduledDateTime** with data type *Point In Time*

   - "The date/time the filler scheduled an observation, when applicable.... This is a result of a request to schedule a particular test and provides a way to inform the placer of the date/time a study is scheduled (result only)." - HL7 Version 2.8, OBR-36

7. Contains exactly one [1..1] **status** with data type *Code*

   - "Contains the status of results for this order." - HL7 Version 2.8, OBR-25

8. Contains exactly one [1..1] **statusChangeDate** with data type *Point In Time*

   - "This field specifies the date/time results reported or status changed. This field is used to indicate the date and time that the results are composed into a report and released, or that a status, as defined in ORC-5-order status, is entered or changed. (This is a results field only)...." - HL7 Version 2.8, OBR-22

## Healthcare Provider

A person or organization which is authorized to perform healthcare-related services.

1. Contains at least one [1..*] **id** with data type *Id*

   - Uniquely identifies the practitioner. This property should not contain the Tax Id or the National Provider Id, as these types of Ids are called out separately.

2. Contains exactly one [1..1] **providerCategory** with data type *Code*

- Contains a categorization for the practitioner.
3. Contains zero or one [0..1] **taxId** with data type *Id*
    - This contains the tax ID for the practitioner, used for billing purposes.
4. Contains zero or more [0..*] **asLlicensedProvider**, where its type is *Licensed Provider*
    - A practitioner who has been authorized to perform certain activities that fall under the jurisdiction of the issuer of the license.
5. Contains zero or more [0..*] **providerPlanParticipation**, where its type is *Provider Plan Participation*
    - Represents the participation of a Healthcare Provider (either an Individual or an Organizational Provider) with a Health Plan for the purpose of providing healthcare services to members (i.e., patients) of that plan.
6. Contains zero or more [0..*] **specialty**, where its type is *Specialty*
    - This contains the code set that identifies the specialty of the Practicing Practitioner.
    - A specialty in medicine is a branch of medical science. After completing medical school, physicians or surgeons usually further their medical education in a specific specialty of medicine by completing a multiple year residency. Medical practitioners who engage in a medical specialty are known as medical specialists. Specialists may be Board Eligible or Board Certified. Board certified in medicine means a physician has taken and passed a medical specialty examination. Board eligible, by contrast, means that a physician has completed the requirements for admission to a medical specialty board examination but has not taken and passed the examination. For example, a physician must perform 3 years of training in an approved pediatric residency to be board eligible and then successfully complete a comprehensive written examination to be certified by the American Board of Pediatrics.
7. Contains zero or one [0..1] **asMedicareProvider**, where its type is *Medicare Provider*
8. Contains zero or one [0..1] **asMedicaidProvider**, where its type is *Medicaid Provider*
9. Contains zero or more [0..*] **asNationallyIdentifiedProvider**, where its type is *Nationally Identified Provider*

## Hema Trans Endocrine Proc

The treatment of Endocrine gland disease by the use of blood or blood derivatives, as in transfusion. [Source <http://dictionary.reference.com/search?q=00-database-info&db=ahsmd>: The American Heritage Stedman's Medical Dictionary ]

1. Extends *Cancer Treatment*
2. Contains exactly one [1..1] **hemaTransEndocrineProc** with data type *Code*
    - Identifies systemic therapeutic procedures administered as part of subsequent course of treatment at this and all other facilities. If none of these procedures were administered, then this item records the reason they were not performed. These include bone marrow transplants, stem cell harvests, surgical and/or radiation endocrine therapy. Possible values are Bone marrow transplant, NOS; Bone marrow transplant - autologous; Bone marrow transplant - allogeneic; Stem cell harvest; Endocrine surgery and/or radiation; Refused by pt; ETC.

## Histology

This class contains information from the microscopic study of the patient's cells and tissues.

1. Contains exactly one [1..1] **histologyIcdO3** with data type *Code*
    - "Identifies the microscopic anatomy of cells for primaries diagnosed in 2001 or later. This field also contains the BEHAVIOR CODE which records the behavior of the tumor being reported. The fifth digit of the morphology code is the behavior code. Possible values are CYST, EMBRYONIC; CYST, NEUROGLIAL-LINED; CYST, EPITHELIAL INCLUSION; CYST, COLLOID; SUSPICIOUS FOR MALIGNANT CELLS; HAMARTOMA; NEOPLASM, BENIGN; NEOPLASM, UNCERTAIN BENIGN OR MALIGNANT; NEOPLASM, IN SITU; NEOPLASM, MALIGNANT; TUMOR CELLS, BENIGN; TUMOR CELLS, UNCERTAIN BENIGN OR MALIGNANT; TUMOR CELLS IN SITU; TUMOR CELLS, MALIGNANT;

IN SITU TUMOR, SMALL CELL TYPE; MALIGNANT TUMOR, SMALL CELL TYPE; IN SITU TUMOR, GIANT CELL TYPE; etc. "

2. Contains exactly one [1..1] **siteSpecificFactorOne** with data type *Code*

   - "Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival. Answer must be 3 numerics, no decimal places. Possible values are None; Unknown; [site-specific title] cannot be assessed; Not documented in patient record; Not applicable for this site; Codes for different sitespecific schemas e.g. For Head and neck - Size of Lymph Nodes; For Liver - Alpha Fetoprotein (AFP); For Breast - Estrogen Receptor Assay (ERA); etc."

3. Contains exactly one [1..1] **siteSpecificFactorTwo** with data type *Code*

   - "Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival. Answer must be 3 numerics, no decimal places. Possible values are None; Unknown; [site-specific title] cannot be assessed; Not documented in patient record; Not applicable for this site; Codes for different sitespecific schemas e.g. For Head and neck - Extracapsular Extension, Lymph Nodes for Head and Neck; For Liver - Fibrosis Score; For Breast - Progesterone Receptor Assay (PRA); etc."

4. Contains exactly one [1..1] **siteSpecificFactorThree** with data type *Code*

   - "Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival. Answer must be 3 numerics, no decimal places. Possible values are None; Unknown; [site-specific title] cannot be assessed; Not documented in patient record; Not applicable for this site; Codes for different sitespecific schemas e.g. For Head and neck - Levels I-III, Lymph Nodes of Head and Neck; For Breast - Number of Positive Ipsilateral Axillary Lymph Nodes; etc."

5. Contains exactly one [1..1] **siteSpecificFactorFour** with data type *Code*

   - "Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival. Answer must be 3 numerics, no decimal places. Possible values are None; Unknown; [site-specific title] cannot be assessed; Not documented in patient record; Not applicable for this site; Codes for different sitespecific schemas e.g. For Head and neck - Levels IV-V, Lymph Nodes of Head and Neck; For Breast - Immunohistochemistry (IHC) of Regional Lymph Nodes; etc."

6. Contains exactly one [1..1] **siteSpecificFactorFive** with data type *Code*

   - "Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival. Answer must be 3 numerics, no decimal places. Possible values are None; Unknown; [site-specific title] cannot be assessed; Not documented in patient record; Not applicable for this site; Codes for different sitespecific schemas e.g. For Head and neck - Levels VI-VIII, Lymph Nodes of Head and Neck; For Breast - Molecular Studies of Regional Lymph Nodes; etc."

7. Contains exactly one [1..1] **siteSpecificFactorSix** with data type *Code*

   - "Identifies additional information needed to generate stage, or prognostic factors that have an effect on stage or survival. Answer must be 3 numerics, no decimal places. Possible values are None; Unknown; [site-specific title] cannot be assessed; Not documented in patient record; Not applicable for this site; Codes for different sitespecific schemas e.g. For Head and neck - Parapharyngeal, Parotid, Preauricular, and Sub-Occipital Lymph Nodes, Lymph Nodes for Head and Neck; For Breast - Size of Tumor--Invasive Component; etc."

## History Of Abuse Or Neglect Record

This class is intended to capture details related to any past abuse/violence and/or neglect. Violence is a significant problem in the United States (U.S.). From infants to the elderly, it affects people in all stages of life. In 2006, 18,573 people died as a result of homicide and 33,300 took their own life. The number of violent deaths tells only part of the story. Many more survive violence and are left with permanent physical and emotional scars. Violence also erodes communities by reducing productivity, decreasing property values, and disrupting social services. In 1979, violent behavior was identified by the U.S. Surgeon General as a key public health priority. Shortly thereafter, in 1980, CDC began studying patterns of violence. These early activities grew into a national program to reduce the death and disability associated with injuries outside the workplace. In 1992, CDC established the National Center for Injury Prevention and Control (NCIPC) as the lead federal organization for violence prevention. The Division of Violence Prevention (DVP) is one of three divisions within NCIPC.

1. Contains exactly one [1..1] **code** with data type *Code*
   - This is the coded attribute describing the type of abuse or neglect. It is not currently associated with any particular value set, but this may be captured using ICD-9-CM diagnostic codes.
2. Contains exactly one [1..1] **mostRecentIncidentDate** with data type *Point In Time*
   - This attribute is the date of the most recent incident of neglect or abuse that has been identified by the assessment.
3. Contains exactly one [1..1] **statusCode** with data type *Code*
   - This attributes whether the abuse or neglect is still in progress ('active') or was in the past ('completed').
4. Contains zero or one [0..1] **dateOfOnset** with data type *Point In Time*
   - This attribute is the date when the neglect or abuse started (e.g. first incident). (An imprecise date would be appropriate).
5. Contains exactly one [1..1] **typeCode** with data type *Abuse Type*
   - This attribute specifies whether the history of abuse refers to neglect, physical, or sexual abuse.
6. Contains exactly one [1..1] **clinicalNoteText** with data type *String*
7. Contains zero or one [0..1] **historyOfAbuse/Neglect**, where its type is *History Of Abuse Or Neglect Record*
   - This is an association between a client/patient and their History of Abuse and Neglect records.
8. Contains exactly one [1..1] **patientbehavioralhealth**, where its type is *Patient Behavioral Health*
   - This is an association between a client/patient and their History of Abuse and Neglect records.
9. Contains zero or one [0..1] **riskOfViolence**, where its type is *Violent Behavior Risk*

## Home Base Primary Care Encounter

Patient is being treated "In-Home" for this encounter.
1. Extends *Abstract Durable Encounter*

## Home Based Primary Care Episode

Patient's Epsiode of care for Home Based Primary Care Program.
1. Contains exactly one [1..1] **admitRejectStatus** with data type *Code*
2. Contains exactly one [1..1] **evaluationDate** with data type *Point In Time*
   - Represents date the patient was considered/reviwed/evaluated/admitted for the HBPC Program.
3. Contains exactly one [1..1] **id** with data type *Id*
   - "A unique identifier for the Act." (HL7 3.0)
4. Contains zero or one [0..1] **evaluatingLocation**, where its type is *Service Delivery Location*
   - Service Delivery Location.
5. Contains exactly one [1..1] **evaluationAtAdmissionToHbpc**, where its type is *Hbpc Admission*
   - Evaluation at the time of admission to the HBPC Program.
6. Contains zero or one [0..1] **evaluationAtDischargeFromHbpc**, where its type is *Hbpc Discharge*
   - Evaluation at the time of discharge from the HBPC Program.
7. Contains exactly one [1..1] **patient**, where its type is *Patient*
8. Contains exactly one [1..1] **periodOfService**, where its type is *Military Service Conflict*
   - The Period of time patient served in military.
9. Contains zero or one [0..1] **rejectionWithdrawal**, where its type is *Rejection Or Withdrawl Event*
   - Rejection/Withdrawal from HBPC Program.

# Home Telehealth Monitor

<HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY>This class contains the identity of  the device used to transmit the vital sign(s).  Note that this device may be associated with multiple measurement devices.</BODY></HTML>

This class contains the information for the Home TeleHealth Monitor Equipment used by the patient.

1. Contains zero or one [0..1] **homeAppliance** with data type *String*
   - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 12.75pt" height=17> <TD style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 12.75pt; BACKGROUND-COLOR: transparent" width=590 height=17><FONT face=Arial size=2>This field identify the type of Home Telehealth Monitor used by patient</FONT></TD></TR></TBODY></TABLE></BODY></HTML>
   - <p> This field identify the type of Home Telehealth Monitor used by patient. </p>
2. Contains zero or one [0..1] **measurementDevice** with data type *String*
   - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 12.75pt" height=17> <TD style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 12.75pt; BACKGROUND-COLOR: transparent" width=590 height=17><FONT face=Arial size=2>This field contains the identity of the measurement device for the Home Teleheath Monitor</FONT></TD></TR></TBODY></TABLE></BODY></HTML>
   - This field contains the identity of the measurement device for the Home Teleheath Monitor.
3. Contains zero or one [0..1] **vendor** with data type *String*
   - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 38.25pt" height=51> <TD class=xl24 style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 38.25pt; BACKGROUND-COLOR: transparent" width=590 height=51 x:str="This field contains the vendor id for Home Telehealth Monitor. Vendor is the name of the company from which this appliance was or is to be purchased. The vendor may or may not be the same as the manufacturer. "><FONT size=2><FONT face=Arial>This field contains the vendor id for Home Telehealth Monitor. Vendor is the name of the company from which this appliance was or is to be purchased.<SPAN style="mso-spacerun: yes">  </SPAN>The vendor may or may not be the same as the manufacturer.<SPAN style="mso-spacerun: yes"> </SPAN></FONT></FONT></TD></TR></TBODY></TABLE></BODY></HTML>
   - <p> This field contains the vendor id for Home Telehealth Monitor. Vendor is the name of the company from which this appliance was or is to be purchased.  The vendor may or may not be the same as the manufacturer. </p>

# Hormone Therapy

The therapeutic use of hormones <treated for cancer of the prostate by hormonotherapy -Journal of the American Medical Association. [Source <http://dictionary.reference.com/medical/aboutmwmed.html>: Merriam-Webster's Medical Dictionary]

1. Extends *Cancer Treatment*

**2.** Contains exactly one [1..1] **hormoneTherapy** with data type *Code*

- Indicates the type of hormone therapy administered as first course of treatment or subsequent treatment at this and all other facilities. If hormone therapy was not administered, then this item records the reason it was not administered to the patient. Hormone therapy consists of a group of drugs that may affect the long-term control of a cancer's growth. It is not usually used as a curative measure. Possible values are None; Hormone therapy; Not admin/contraindicated; Pt died prior to tx; Not admin, no reason given; Refused by pt; Unknown if admin; Unknown, death cert; etc.

# Hospital Affiliation

**1.** Extends *Provider Affiliation*
**2.** Contains exactly one [1..1] **hospital**, where its type is *Hospital Organization*
**3.** Contains exactly one [1..1] **isFullUnrestrictedPrivilege** with data type *Boolean*
**4.** Contains exactly one [1..1] **isTemporaryPrivilege** with data type *Boolean*

# Hospital Location

"A facility, often associated with a hospital or medical school, that is devoted to the diagnosis and care of outpatients." The American Heritage Stedman's Medical Dictionary. This class is equivalent to File 44 (Hospital Location) in Vista.

**1.** Extends *Service Delivery Location*

# Hospital Organization

**1.** Extends *Organization*

# Household Composition

This section identifies specific household traits of the patient. This section may help identify whether substance abuse is present in the household since it often a pre-condition to staying sober. Other household traits (e.g. primary source of income) are derived from this assessment section.

**1.** Contains exactly one [1..1] **sourceOfIncome** with data type *Code*

- This coded attribute specifies the type of income (e.g. supplemental social security insurance -SSI, food stamps, employment).

**2.** Contains exactly one [1..1] **presenceofSubstanceAbuse** with data type *Boolean*

- This boolean attribute specifies the presence of substance abuse in the household shared by the patient.

# Human Patient

A specialization of the Patient role containing information specific to only human patients (such as confidentiality code).

**1.** Extends *Patient*
**2.** Contains zero or one [0..1] **confidentialityCode** with data type *Code*

- 'Codes that identify how sensitive a piece of information is and/or that indicate how the information may be made available or disclosed.' HL7 RIM.

3. Contains exactly one [1..1] **bloodType** with data type *Code*

   • Identifies the patient's blood type, if known. Possible values include: 0+, O-, A+, A-, B+, B-, AB+, AB-

4. Contains zero or one [0..1] **identityReliabilityCode** with data type *Code*

   • "This field contains a coded value used to communicate information regarding the reliability of patient/person identifying data transmitted via a transaction. Values could indicate that certain fields on a PID segment for a given patient/person are known to be false (e.g., use of default or system-generated values for Date of Birth or Social Security Number)." - HL7 Version 2.8, PID-32

5. Contains exactly one [1..1] **isIdentityUnknown** with data type *Boolean*

   • "This field indicates whether or not the patient's/person's identity is known." - HL7 Version 2.8, PID-31

6. Contains exactly one [1..1] **isOrganDonor** with data type *Boolean*

   • Indicates whether the patient has consented to be an organ donor upon their demise.

7. Contains exactly one [1..1] **lastUpdateDateTime** with data type *Point In Time*

   • "This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment. Receiving systems will use this field to determine how to apply the transaction to their systems. If the receiving system (such as an enterprise master patient index) already has a record for the person with a later last update date/time, then the EMPI could decide not to apply the patient's/person's demographic and identifying data from this transaction." - HL7 Version 2.8, PID-33

8. Contains exactly one [1..1] **lastUpdateFacility** with data type *Code*

   • "This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment. Receiving systems or users will use this field to determine how to apply the transaction to their systems. If the receiving system (such as a hospital's patient management system) already has a record for the patient/person, then it may decide to only update its data if the source is a "trusted" source. A hospital might consider other hospitals trusted sources, but not "trust" updates from non-acute care facilities." - HL7 Version 2.8, PID-34

9. Contains zero or one [0..1] **veryImportantPerson** with data type *Code*

   • "Identifies the type of VIP." - HL7 Version 2.8, PV1-16 A code specifying the patient's special status granted by the organization at which they are a patient, often resulting in preferred treatment and special considerations. For example, board member, diplomat, etc. 9/28/2011: Make this a boolean? What other values are possible here? The HL7 V2 table (99) does not have any suggested values. HL7 V3 has a code, but not sure whether they're applicable to US Govt uses. Check with DoD and IHS.

10. Contains zero or more [0..*] **contactParty**, where its type is *Contact Party*

   • The person who should be contacted on the patients behalf under specified situations.

11. Contains exactly one [1..1] **subject**, where its type is *Person*

   • Identifies the person who is playing the role of patient (HumanPatient).

## Humanitarian Case

Indicates a condition whereby the Veteran is not required to enroll. Veterans do not have to be enrolled if they: (1) have a service-connected disability of 50 percent or more (2) want care for a disability the military determined was incurred or aggravated in the line of duty, but which VA has not yet rated, during the 12-month period following discharge; or (3) want care for a service-connected disability only.

1.

## IV Adminstration

1. Extends _ *Medication Administration Event*
2. Contains exactly one [1..1] **actualIvLimitation** with data type *String*

- This is the maximum length of time to administer, or the maximum volume to administer, for IV fluid orders. The value may be in ML or CC for milliliters, L for liters, D for days, or H for hours.

3. Contains exactly one [1..1] **infusionRate** with data type *Rate Quantity*

- Infusion: "Introduction of a solution into the body through a vein for therapeutic purposes." (American Heritage Stedman's Medical Dictionary). This is the rate at which the solution is introduced into the body. Expressed as volume/time (e.g., 500 ml/hr)

4. Contains exactly one [1..1] **syringeSize** with data type *String*

- Size of the syringe to be used to administer IV. Do we need this???

# IV Promise

An inpatient request for intravenous medication to be administered for this patient.

1. Extends *Pharmacy Promise*
2. Contains exactly one [1..1] **infusionRate** with data type *Rate Quantity*

- Infusion: "Introduction of a solution into the body through a vein for therapeutic purposes." (American Heritage Stedman's Medical Dictionary). This is the rate at which the solution is introduced into the body. Expressed as volume/time (e.g., 500 ml/hr)

3. Contains exactly one [1..1] **infusionSite** with data type *Code*

- The site of the patient's body at which the infusion takes place. Note that there is a question, in cases where the patient is receiving multiple infusions simultaneously, whether this code should include something about the specific line, or whether there needs to be another attribtue.

4. Contains exactly one [1..1] **infusionVelocity** with data type *Code*

- Indicates whether the infusion is Continuous or Intermittant. (or Bolus?) Another possible name is infustionPersistance? (May need a better name)

5. Contains exactly one [1..1] **ivType** with data type *Code*

- Categorizes the intravenous infusion to occur. Possible values include Admixture, Piggyback, or Syringe. (May need a better name)

6. Contains exactly one [1..1] **requestedIvLimitation** with data type *String*

- This is the maximum length of time or the maximum volume to administer, for IV fluid orders. The value may be in milliliters, L for liters, D for days, or H for hours.

7. Contains exactly one [1..1] **pharmacyManufacturedProduct**, where its type is *Pharmacy Manufactured Product*

# Id

An identifier that uniquely identifies a thing or object. This *abstract* datatype represents a "identifier" - some series of letters or numbers which uniquely identifies something. In practice, this datatype will be substituted with specific "flavors" of the Id datatype for use in particular standards-based payloads.

1. Contains zero or one [0..1] **identifier** with data type *String*

- This is a placeholder for the "entity identifier," which is usually defined to be unique within the series of identifiers created by the "assigning authority". Note that this property will be replaced by some other concept or group of concepts when this abstract class is replaced by a specific class for a given target platform.

2. Contains zero or one [0..1] **idType** with data type *String*

- Indicates what kind of identifier is being represented. For example, the idType might be represent a Driver's Licence, in which case the assigning Authority might be the Virginia Department of Motor Vehicles. Note that: a) this information can (and probably should) be also be made clear by the name and definition of the property whose datatype is an Id; and b) this property might be an enumeration in the future.

3. Contains zero or one [0..1] **assigningAuthority** with data type *String*

   - This is a placeholder for the "assigning authority", which is a unique identifier of the system (or organization or agency or department) that creates the data. Note that this property will be replaced by some other concept or group of concepts when this abstract class is replaced by a specific class for a given target platform.

# Image

This class represents an Image, particularly but not limited to, diagnostic images. The class may also be used for scanned documents and incoming facsimiles.

1. Contains exactly one [1..1] **id** with data type *Id*

   - Uniquely identifies the image.

# Image Group

This calss contains attributes related to the cross-reference that keeps track of which images belong to which group.

1. Extends *Related Image*
2. Contains exactly one [1..1] **dicomSeriesNumber** with data type *Id*

   - This is a cross-reference that keeps track of which images belong to which group, and indicates in which sequence the images are intended to appear.
3. Contains exactly one [1..1] **dicomImageNumber** with data type *Id*

   - This is a cross-reference that keeps track of which images belong to which group, and indicates in which sequence the images are intended to appear.

# Image Route Event

This class contains the data elements and associations related to an DICOM (Digital Imaging and Communications in Medicine)-compliant image copy event. Maintains an audit trail of the copy.

1. Contains exactly one [1..1] **destinationId** with data type *Code*

   - Identifies the destination organization of the transmission.
2. Contains exactly one [1..1] **destinationName** with data type *String*

   - Identifies the destination organization of the transmission.
3. Contains exactly one [1..1] **logId** with data type *Id*

   - It is an integer number that indicates the entry in the "permanent" log of all routed copies of the current image (as required by HIPAA). This value is used to record when images are purged from their routed destination.
4. Contains exactly one [1..1] **purgeTime** with data type *Point In Time*

   - The date and time when the copy of the current image was purged from the location that is described in the current record.
5. Contains exactly one [1..1] **transmitTime** with data type *Point In Time*

   - The date and time when the current image was transmitted to the location described in the current record.
6. Contains zero or one [0..1] **copyToLocation**, where its type is *Image Storage*

   - A pointer to the Network Location when an image is transmitted using the "copy" method.
7. Contains exactly one [1..1] **imageType** with data type *Code*

   - Indicates what type of image file was transmitted). Possible values are NON-DICOM; IMAGE; CURVE; OVERLAY; LUT; PRES_STATE; AVEFORM; SR; etc. [non-dicom images might need more classification]

## Image Storage

This class contains attributes and associations related to the storage of the image like file reference and extension, name of the host locstion etc.

1. Contains exactly one [1..1] **dateSaved** with data type *Point In Time*

    - Date and time that the file was copied to the network location.
2. Contains exactly one [1..1] **fileExtension** with data type *String*

    - Extension of the file that was successfully copied to the network location.
3. Contains exactly one [1..1] **fileName** with data type *String*

    - The unique image filename of the image stored on the Vista Imaging file servers.
4. Contains exactly one [1..1] **filePath** with data type *String*

    - The location at which the file is stored. Can be a URI.
5. Contains exactly one [1..1] **storageMediaType** with data type *Code*

    - Indicates the kind of storage media upon which the file is stored, such as magnetic, worm, jukebox, etc. This is needed in order to determine what functions are necessary to access the file, etc.

## Imaging Event

This class contains attributes and associations that are helpful in interpretation of the radiology/nuclear medicine image as known by the originating VistA system. File 2005.

1. Contains exactly one [1..1] **dateLastAccessed** with data type *Point In Time*

    - The date and time the image was last viewed or accessed.
2. Contains exactly one [1..1] **dateTimeImageCreated** with data type *Point In Time*

    - Contains the date and time on which the image was captured. It is not the same as the date and time of the procedure or exam.
3. Contains exactly one [1..1] **externalImageId** with data type *String*

    - When an image is created from an external PACS system, this property will contain the unique identifier for the image within that system.
4. Contains exactly one [1..1] **fileType** with data type *Code*

    - This is a code for the type of data that is stored in the file that is described in the current record. Possible values are Text; Large X-Ray; Targa(TM); Thumbnail; DICOM; etc.
5. Contains exactly one [1..1] **id** with data type *Id*

    - The Internal Entry Number of the Image File Entry
6. Contains exactly one [1..1] **imageCategory** with data type *Code*

    - A categorization of the image, which can be used for searching and sorting. See VistA table 2005.82 for example values. Possible values (from VA) include: Administrative, Clinical, Admin/Clinical.
7. Contains exactly one [1..1] **imageName** with data type *String*

    - This is the natural language name of the object; usually consists of the patient name, social security number, and object description.
8. Contains exactly one [1..1] **imageType** with data type *Code*

    - A categorization of the image, which can be used for searching and sorting. See VistA table 2005.83 for example values.
9. Contains exactly one [1..1] **isDuplicate** with data type *Boolean*

- Identifies and enables screening of images that have duplicate instances in the archive file and the image file. Possible values are YES; etc.

10. Contains exactly one [1..1] **isIntegrityQuestionable** with data type *Boolean*

- Indicates that this image entry has questionable integrity. Possible values are YES etc.

11. Contains exactly one [1..1] **longDescription** with data type *String*

- This is the description of the image at length.

12. Contains exactly one [1..1] **microscopicObjective** with data type *String*

- Description of the Microscopic Objective selected by the pathologist. It identifies the power of the microscope objective used when capturing the image of the slide.

13. Contains exactly one [1..1] **originCategory** with data type *Code*

- A categorization of the image based on the organization which originated the image. For the VA, possible values include VA, Non-VA, DOD, Fee-Basis, etc. Similar concepts can be generalized for other agencies.

14. Contains exactly one [1..1] **pathologyAccessionId** with data type *String*

- Contains the Anatomic Pathology accession number - the identifying number for the slide.

15. Contains exactly one [1..1] **procedureCategory** with data type *Code*

- Categorizes the procedure that generated the image. Possible values include: Colonoscopy, Surgery, Surgical pathology, Radiology. This property can be used to help locate individual images or even classes of images for research.

16. Contains exactly one [1..1] **procedureDateTime** with data type *Point In Time*

- The date and time the image was last viewed or accessed.

17. Contains exactly one [1..1] **procedureSubCategory** with data type *Code*

- A more finely grained categorizaton (than the procedureCategory) of the procedure that generated the image. Used for sorting and searching of the images. See VistA table 2005.85 for example values.

18. Contains zero or one [0..1] **radiologyReport**, where its type is *Rad Nuc Report*

- Represents the radiology/nuclear medicine report as known by the originating VistA system. Equivalent to File 74.

19. Contains exactly one [1..1] **shortDescription** with data type *String*

- A brief, one-line description of the image or object.

20. Contains exactly one [1..1] **softwareCategory** with data type *Code*

- Categorizes the software system or package that generated and/or accesses the image. Used to locate appropriate images when accessed by the software package. Possible values include (from the VA): Radiology, Laboratory, Medicine, Clinical Document, Surgery, Photo ID, etc.

21. Contains exactly one [1..1] **specialtyCategory** with data type *Code*

- A categorization of the image by specialty/subspecialty, which can be used for searching and sorting. See VistA table 2005.84 for example values.

22. Contains exactly one [1..1] **stainDescription** with data type *String*

- Description of the Histological Stain used in the preparation of the specimen.

23. Contains zero or one [0..1] **acquisitionDevice**, where its type is *Device*

- Device that performed the image Acquisition. Pointer to file #2006.04.

24. Contains zero or one [0..1] **acquisitionSite**, where its type is *Institution*

- The location at which the image was taken

25. Contains exactly one [1..1] **author**, where its type is *Author*

26. Contains zero or one [0..1] **clinic**, where its type is *Hospital Location*

- The location where the professional service was performed. Pointer to file #44.

27. Contains zero or one [0..1] **fileStorage**, where its type is *Image Storage*

- A pointer to the Network Location file giving the jukebox platter where the image is stored (provided there is a jukebox in the Imaging System).
28. Contains zero or more [0..*] **imageRouteEvent**, where its type is *Image Route Event*
    - Contains the data elements and associations related to an DICOM (Digital Imaging and Communications in Medicine)-compliant image copy event. Maintains an audit trail of the copy.
29. Contains zero or one [0..1] **nullifiedBy**, where its type is *Nullify Act*
    - Person who deletes/Nullifies this treatment record.
30. Contains exactly one [1..1] **patient**, where its type is *Patient*
    - The patient that the image or object belongs to. Pinter to File #2.
31. Contains zero or more [0..*] **relatedImage**, where its type is *Related Image*
32. Contains zero or one [0..1] **specimen**, where its type is *Specimen*
33. Contains zero or one [0..1] **treatingSpeciality**, where its type is *Facility Treating Specialty*
    - Medical specialty that performed the Non OR procedure. Equivalent to a pointer to File #2005.84

## Imaging Location

Represents the radiology hospital location as known by the originating VistA system. Equivalent to File 79.
1. Contains exactly one [1..1] **id** with data type *Id*
    - Unique identifier for the radiology/imaging hospital location as known by the originating VistA system. Equivalent to a pointer to File 79.

## Immunization Event

The act of creating immunity usually against a particular disease <immunization against smallpox>; especially : treatment of an organism for the purpose of making it immune to subsequent attack by a particular pathogen Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.
1. Contains exactly one [1..1] **category** with data type *Code*
    - What the immunization is for
2. Contains exactly one [1..1] **contraIndication** with data type *Boolean*
    - ContraIndicated is the indicator if this immunization should be continued or should be stopped due to an adverse reaction being opserved.
3. Contains exactly one [1..1] **date** with data type *Point In Time*
    - The date and time the immunization was given.
4. Contains exactly one [1..1] **id** with data type *Id*
    - Unique id given to the immunization test
5. Contains exactly one [1..1] **series** with data type *Code*
    - Indicates which type of series the patient has been given. Current valid values are Series 1 through 8, Partially complete, booster, or complete
6. Contains zero or one [0..1] **reaction**, where its type is *Observed Reaction*
    - The response of cells or tissues to an antigen, as in a test for immunization
    - The response of cells or tissues to an antigen, as in a test for immunization
7. Contains exactly one [1..1] **subject**, where its type is *Patient*
8. Contains exactly one [1..1] **visit**, where its type is *Outpatient Visit*
    - An encounter for the patient at one site within a specifie length of time.
9. Contains exactly one [1..1] **author**, where its type is *Author*

## Immunotherapy

The treatment of or prophylaxis against disease by attempting to produce active or passive immunity called also immune therap. [Source <http://dictionary.reference.com/medical/aboutmwmed.html>: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.]

1. Extends *Cancer Treatment*
2. Contains exactly one [1..1] **immunotherapy** with data type *Code*
   - Indicate the type of immunotherapy administered as first course of treatment or subsequent treatment at this and all other facilities. If immunotherapy was not administered, then this item records the reason it was not administered to the patient. Immunotherapy consists of biological or chemical agents that alter the immune system or change the host's response to the tumor cells. Possible values are None; Immunotherapy; Not admin/contraindicated; Pt died prior to tx; Not admin, no reason given; Refused by pt; Unknown if admin; Unknown, death cert; etc

## Inactivate Act

Contains information about the cancellation of an Action or record. This class is especially used for Orders.

1. Contains exactly one [1..1] **comment** with data type *String*
   - Any comments or remarks regarding the cancelation of the Activity or Order.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
   - The date/time the Activity (e.g., Order) was cancelled.
3. Contains exactly one [1..1] **reason** with data type *Code*
   - The reason the Activity (e.g., Order) was cancelled.
4. Contains exactly one [1..1] **author**, where its type is *Individual Provider*
   - Indicates the practitioner who created the cancellation. In other words, the practitioner who canceled the action.

## Individual Provider

A person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.

1. Extends *Healthcare Provider*
2. Contains exactly one [1..1] **signatureBlockName** with data type *Person Name*
   - Contains the name and title of the Practitioner as they wish it to be displayed with the notation that they signed the document electronically. For example, a practitioner who routinely uses a nickname for most correspondence would likely want their legal name on the signature block. In addition, this property would contain the title that they would use when electronically signing a document. For example, a practitioner may hold multiple titles, but would choose one to be used for signing. Examples of titles are Chief of Surgery, Dietician, Clinical Pharmacist, etc.
3. Contains exactly one [1..1] **mobilePhone** with data type *Telecommunications*
   - A telecommunication device that moves and stays with its owner. Suitable for urgent matters, the mobile phone is not the first choice for routine business.
4. Contains exactly one [1..1] **pager** with data type *Telecommunications*
   - A paging device suitable to solicit a callback or to leave a very short message.
5. Contains exactly one [1..1] **workAddress** with data type *Address*

- The person's office address. First choice for business related contacts during business hours.
6. Contains exactly one [1..1] **workEmail** with data type *Telecommunications*
   - The email address that a person uses while at their place of business. First choice for business related contacts during business hours.
7. Contains exactly one [1..1] **workPhone** with data type *Telecommunications*
   - The phone number for a person at their office location. First choice for business related contacts during business hours.
8. Contains zero or more [0..*] **asPrescribingProvider**, where its type is *Prescibing Provider*
   - This contains the state DEAID for the prescribing medical practitioner.
   - Represents information about the practitioner who has been licensed to prescribe medications under the jurisdiction of the issuer of the license.
9. Contains exactly one [1..1] **asPerson**, where its type is *Person*
   - Links to information about the Person who is playing the role of Practitioner.
10. Contains zero or more [0..*] **providerAffiliation**, where its type is *Provider Affiliation*
   - Represents information about the association between an Individual Healthcare Provider and an Organizational Healthcare Provider.
11. Contains zero or more [0..*] **providerEducation**, where its type is *Provider Education*
   - Represents information about the educational experience of an Individual Healthcare Provider. This includes both formal training resulting in some sort of degree or certification, as well as practical experience such as an internship.

## Infection

US Standard Certificate Of Birth Field 42 This class represents an infection present and/or treated during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Gonorrhea; Syphilis; Chlamydia; Hepatitis B; Hepatitis C; None of the above.
1. Contains exactly one [1..1] **category** with data type *Code*
   - US Standard Certificate Of Birth Field 42 Categorizes an infection present and/or treated during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Gonorrhea; Syphilis; Chlamydia; Hepatitis B; Hepatitis C; None of the above.

## Informant

Identifies the person who informed the authorites of the decedent's death.
1. Contains exactly one [1..1] **relationToDecedent** with data type *String*
   - Specifies the relationship between the person who informed the authorites of the decedent's death to the decedent.
2. Contains exactly one [1..1] **person**, where its type is *Person*

## Information Object

This class represents a reference to specific type of information object that may be referenced by a policy or consent directive (e.g., document, order, etc.). This information object refers to the types of objects that may be used in a permission.

1. Contains zero or one [0..1] **category** with data type *Code*
   - Coded attribute that identifies the type of object referenced in the policy.

## Information Reference

This class and it associations specify the attributes of the protected information referenced by a policy (e.g., IIHI).

1. Contains zero or one [0..1] **category** with data type *Code*
   - Information category (e.g. medication, allergies, laboratory).
2. Contains zero or one [0..1] **confidentialityIndicator** with data type *Code*
   - The confidentiality indicator is a coded attribute that assigns access controls on client health records based on the information or type of access.
3. Contains zero or more [0..*] **dataIntegrity** with data type *Code*
   - This attribute was renamed from the DAM, wherein it was named 'integrityCode'. That attribute had no definition.
4. Contains zero or more [0..*] **integrityCode**, where its type is *Code*
   - Data integrity is an implied privacy concept but it is explicit in security policy specifications.
5. Contains zero or more [0..*] **informationObject**, where its type is *Information Object*
   - A reference to specific type of information object that may be referenced by a policy or consent directive (e.g., document, order, etc.).
6. Contains zero or one [0..1] **sensitivity** with data type *Code*
   - Coded attribute that describes the sensitivity of a user or information artifact. Sensitivity is a characteristic of a resource which implies its value or importance, and may include its vulnerability [ISO 7498-2:1989]. Sensitivity may be associated with a user or information artifact.
7. Contains zero or one [0..1] **subjectOfRecord**, where its type is *Subject Of Record*
   - This class represents the patient or population that is the subject of the record in question.
8. Contains zero or more [0..*] **informationCustodian**, where its type is *Organizational Provider*
   - Identifies the organizational provider that is the custodian of the record in question.
9. Contains zero or more [0..*] **coverageType**, where its type is *Policy Program Source*
10. Contains zero or more [0..*] **relatedCondition**, where its type is *Clinical Condition*
    - The health condition(s) associated with the policy. Conditions when specified, are coded concepts expressed in a standard vocabulary (e.g., LOINC, SNOMED CT, etc.). These may include indications of 'substance abuse' or 'HIV-related' illnesses, etc. An obligationCode may be implemented as a 'condition'.
11. Contains zero or more [0..*] **informationRecipient**, where its type is *Organizational Provider*
    - Identifies the organizational provider that is the intended recipient of the record in question.

## Ingredient

This class identifies the compound or component of the drug that is associated with this allergy event.

1. Contains zero or one [0..1] **uniqueIngredientIdentifier** with data type *Code*
   - Uniquely identifies the Ingredient. For drugs in the United States, this code should be a UNII code (Unique Ingredient Identifier), which is issued by FDA.

## Injury

Information related to cases where the decedents death was due to injury or poisoning.

1. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   • The date and time that the injury or poisoning occured that eventually lead to the decedent's death.

2. Contains exactly one [1..1] **howInjuryOccurred** with data type *String*

   • A textual description of how the injury occured.

3. Contains exactly one [1..1] **injuryPlace** with data type *String*

   • The general place (such as restaurant, vacant lot, or home) where the injury occurred. Company or organization names are not to be used. (For example, factory , not Standard Manufacturing, Inc. )

4. Contains exactly one [1..1] **injuryPlaceAddress** with data type *Address*

   • The street address of the location at which the injury or poisoning occured.

5. Contains exactly one [1..1] **transportationInjuryCategory** with data type *Code*

   • If the injury was tranportation related, this property categories whether the injury occured while the decedent was a: Driver/Operator, Passenger, Pedestrian, or Other. Driver/operator and passenger should be designated for modes other than motor vehicles such as bicycles. Other applies to watercraft, aircraft, animal, or people attached to outside of vehicles (e.g. surfers).

6. Contains exactly one [1..1] **wasWorkplaceInjury** with data type *Boolean*

   • Indicates whether the injury or poisoning occurred at work. An injury may occur at work regardless of whether the injury occurred in the course of the decedent s usual occupation.

## Inpatient Encounter Event

Patient has been admitted to the facility and assigned a bed.

1. Extends *Abstract Durable Encounter*
2. Contains exactly one [1..1] **lengthOfStay** with data type *Physical Quantity*

   • Will contain the actual, calculated quantity (the actual days quantity cannot be simply calculated from the admission and discharge dates because of possible leaves of absence) instead of the expected length of stay.

## Inpatient Medication Dispense

The dispensing or issuing of medication for an inpatient.

1. Extends *Medication Dispense*
2. Contains exactly one [1..1] **ward**, where its type is *Ward*

   • The ward where the dispense took place.

## Institution

"An established or organised society or corporation; an establishment, especially of a public character, or affecting a community; ... also, a building or the buildings occupied or used by such organization". This class is equivalent to File 4 in Vista.

1. Extends *Service Delivery Location*

## Instructor

"A person who instructs; teacher" - Dictionary.com. This participation identifies the clinician who provided instruction to another person, typically the patient.

    **1.** Extends *Practitioner Participation Lite*

## Insufficient Reason

    **1.** Contains exactly one [1..1] **code** with data type *Code*

- Contains the code that identifies the type of examination performed for the patient.

## Integer Interval

An interval of integer numbers stating the minimal and maximal number of repetitions of the Act.

This data type represents an Interval, where the Low and High Limits are Integers. An Interval is a "set of consecutive values of an ordered base data type." - HL7 V3 "Integer numbers are precise numbers that are results of counting and enumerating. Integer numbers are discrete, the set of integers is infinite but countable. No arbitrary limit is imposed on the range of integer numbers." - HL7 V3

    **1.** Contains exactly one [1..1] **low** with data type *Integer*

- The minimal number of repetitions of the Act.
- "The low limit of the interval. The low limit SHALL NOT be positive infinity." - HL7 V3

    **2.** Contains zero or one [0..1] **high** with data type *Integer*

- The maximal number of repetitions of the Act.
- "The high limit of the interval. The high limit SHALL NOT be negative infinity, and SHALL be higher than the low limit if one exists." - HL7 V3

## Integer Question

This class represents a question that requires a numeric answer.

    **1.** Extends *Question*

    **2.** Contains exactly one [1..1] **question**

- This attribute is used to define the code associated with the Behavioral Health assessment question that requires a numeric (integer) response.

    **3.** Contains zero or more [0..*] **answer** with data type *Integer*

- This attribute represents a numeric response as a numeric to a specific assessment question. If a response is not provided, the null value may be qualified by an ASKU (asked but unknown) null flavor.

## Integer Ratio

A ratio (numerator : denominator) specifying the relative quantities of the Entity playing the Role in the Entity scoping the Role, used for Roles that represent composition relationships between the scoping and playing Entities.

This data type represents an Ratio, where the Numerator and Denominator are Integers. A Ratio is "a quantity constructed as the quotient of a numerator quantity divided by a denominator quantity. Common factors in the numerator and denominator are not automatically cancelled out. The RTO data type supports titers (e.g., "1:128") and other quantities produced by laboratories that truly represent ratios." - HL7 V3 "Integer numbers are precise numbers that are results of counting and enumerating. Integer numbers are discrete, the set of integers is infinite but countable. No arbitrary limit is imposed on the range of integer numbers." - HL7 V3

    **1.** Contains exactly one [1..1] **numerator** with data type *Integer*

- The quantity that is being divided in the ratio. The default is the integer number 1

- "The quantity that is being divided in the ratio. The default is the integer number 1 (one)." - HL7 V3

2. Contains exactly one [1..1] **denominator** with data type *Integer*

   - The quantity that divides the numerator in the ratio. The default is the integer number 1 (one.) The denominator must not be zero.
   - "The quantity that devides the numerator in the ratio. The default is the integer number 1 (one). The denominator SHALL not be zero." - HL7 V3

## Interdisciplinary Note Action

The IN (Interdiscipl'ry Note) action is the universal action for operations on Interdisciplinary Notes. This class contains attributes pertaining to the action (i.e., Attachment or Detachment) that was carried out for a given ID Entry.

1. Contains exactly one [1..1] **action** with data type *String*

   - The set of codes describes the action that was carried out for a given ID Entry. Possible valuesw are Attachment, Detachment., etc.

2. Contains exactly one [1..1] **date** with data type *Point In Time*

   - The Date and Time at which the entry was attached to (or detached from) its ID Parent.

3. Contains exactly one [1..1] **status** with data type *Code*

   - The STATUS of the Entry at the time of the action

4. Contains zero or one [0..1] **idParent**, where its type is *Clinical Document Event*

   - Identifies the Parent Document when the action occurred.

5. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

## Interpretation Event

1. Contains zero or one [0..1] **principalResultInterpreter**, where its type is *Individual Provider*

   - "Identifies the physician or other clinician who interpreted the observation and is responsible for the report content." - HL7 Version 2.8, OBR-32

2. Contains zero or one [0..1] **assistantResultInterpreter**, where its type is *Individual Provider*

   - "Identifies the clinical observer who assisted with the interpretation of this study." - HL7 Version 2.8, OBR-33

## Intervention

1. Contains zero or more [0..*] **interventionEvent**, where its type is *Intervention Event*
2. Contains exactly one [1..1] **type** with data type *Code*
3. Contains exactly one [1..1] **status** with data type *Code*

## Intervention Event

1. Contains exactly one [1..1] **activity** with data type *Code*
2. Contains exactly one [1..1] **description** with data type *String*
3. Contains exactly one [1..1] **endTime** with data type *Point In Time*
4. Contains exactly one [1..1] **startTime** with data type *Point In Time*
5. Contains exactly one [1..1] **type** with data type *Code*

## Intolerance Condition

Describes an observation of an "Intolerance Condition" of the Patient. Intolerance Conditions are typically allergies, but the concept of an intolerance condition is broader than just allergies. For example, an adverse reaction such as the patient becomes nausious after taking a particular antibiotic is not an allergy, but may serve as a contra-indicator to the use of that antibiotic. In general, Intolerance Conditions as caused by Food, Drugs, or some environmental factor such as mold or pet dander.

1. Extends *Intolerance Condition Entry*
2. Contains exactly one [1..1] **dateOfOnset** with data type *Point In Time*
   - Date when this particular Intolerance Condition or Allergy first manifested itself or was confirmed via testing if it had not yet manifested itself.
3. Contains exactly one [1..1] **intoleranceCategory** with data type *Code*
   - Categorizes the intolerance along two axes: whether the reactant is a Drug, Food, or other substance, and whether the intolerence is a true allergy, an intolerance, or propensity to adverse reaction. Possible values are members of the SNOMED Allergy Event value set. This property is required for Meaningful Use.
4. Contains exactly one [1..1] **isAbsolutelyContraIndicated** with data type *Boolean*
5. Contains exactly one [1..1] **mechanism** with data type *Code*
   - Categorizes whether the underlying process (mechanism) of the Intolerance Condition is an Immunoglobulin-E (IgE)-mediated response, an expected response to a pharmacologic substance, or unknown. Allergy: An allergy reaction must have symptoms (reaction) consistent with an actual allergy - rash, hives, severe swelling, redness, itchiness, difficulty breathing (due to swelling around breathing areas), etc. Pharmacologic: A pharmacologic reaction is an adverse event rather then an allergy. It is a reaction based on the pharmacologic properties of the drug and has to do with a reaction that can be expected due to the pharmacologic activity of the drug. It can occur when the patient takes the right amount or an amount greater or less than the recommended doses. Some examples are: an antidiarrheal agent (like Immodium) causing constipation, a laxative causing diarrhea, a beta blocker causing bradycardia (slow heart rate), furosemide (a diuretic) causing excessive urination, or a blood pressure medication causing low blood pressure (will be fully modeled in a subsequent phase). Unknown: An unknown reaction is a reaction experienced by the patient that cannot be explained by either of the other two mechanisms, for example, eating a pear and developing a cough or taking a blood pressure medication and developing right elbow pain. This type of reaction is consistent, disappears upon withdrawing the agent, and reappears when the agent or food item is restarted/eaten again.
6. Contains exactly one [1..1] **reactant** with data type *Code*
   - Identifies the substance to which the patient has an intolerance or allergy. The reactant will point to a value set, which will be a superset of valuesets for Drug Product, Drug Class, Ingredient, Food Product, and Environmental reactants.
7. Contains at least one [1..*] **reactantCategory** with data type *Code*
   - Categorizes the reactant to which the patient has demonstrated an intolerance or an allergy. Possible values include Drug Product, Drug Class, Ingredient, Food Product, and Environmental. Note that this property may contain more than one value.
8. Contains zero or more [0..*] **reaction**, where its type is *Reaction*

## Intolerance Condition Entry

1. Contains exactly one [1..1] **dateRecorded** with data type *Point In Time*
   - Date/time this allergy/adverse reaction was entered into the system.
2. Contains exactly one [1..1] **id** with data type *Id*
   - Uniquely identifies the Intolerance Condition record.
3. Contains exactly one [1..1] **informationSourceCategory** with data type *Code*

- Indicates whether the Intolerance Condition was observed by a clinician (or was medically verified) or was merely reported by the patient. Provides a measure of trustworthiness of the information. Note that in VistA, this is called Observed if observed by a clinician, or Historical if patient-reported.

4. Contains exactly one [1..1] **status** with data type *Code*

 - A code specifying the state of the Intolerance Condition Observation record. See HL7 V3 Act.statusCode. When the StatusCode is set to 'Nullified' iindicates the allergy was entered in error.

5. Contains exactly one [1..1] **author**, where its type is *Author*

 - "A party that originates the Act and therefore has responsibility for the information given in the Act and ownership of this Act." - HL7 V3

6. Contains zero or more [0..*] **comment**, where its type is *Comment Event*

 - Contains all l comments reqarding the allergy event that were not captured in the Clinical Document process.

7. Contains exactly one [1..1] **dataEnterer**, where its type is *Data Enterer*

 - "A person entering the data into the originating system. The data entry person is collected optionally for internal quality control purposes. This includes the transcriptionist for dictated text." - HL7 V3

8. Contains zero or more [0..*] **inactivateAct**, where its type is *Inactivate Act*

9. Contains zero or one [0..1] **nullify**, where its type is *Nullify Act*

 - Records the nullification of an Act. Typically used when an erroneous record is "deleted". Because medical records should never be deleted, the record is instead "nullified", and is rendered not visible to typical users, but still exists in the system for the purpose of audit trails, etc.

10. Contains zero or more [0..*] **obsoleteAct**, where its type is *Obsolete Act*

11. Contains zero or more [0..*] **reactivateAct**, where its type is *Reactivate Act*

12. Contains zero or more [0..*] **relatedIntoleranceCondition**, where its type is *Related Intolerance Condition*

13. Contains exactly one [1..1] **serviceDeliveryLocation**, where its type is *Service Delivery Location*

 - The location at which the Intolerance condition was noted.

14. Contains exactly one [1..1] **verifier**, where its type is *Verifier*

 - "A person who verifies the correctness and appropriateness of the service (plan, order, event, etc.) and hence takes on accountability."- HL7 V3

15. Contains zero or one [0..1] **visit**, where its type is *Encounter Event*

# Intolerance Condition List

1. Contains exactly one [1..1] **patient**, where its type is *Patient*
2. Contains zero or more [0..*] **intoleranceConditionEntry**, where its type is *Intolerance Condition Entry*

# Intubation Evaluation

Evaluationof the introduction of a tube into a hollow organ.

1. Contains exactly one [1..1] **lengthTube** with data type *Physical Quantity*

 - Contains the length of the endotracheal tube at the external reference point.

2. Contains exactly one [1..1] **sizeTube** with data type *Physical Quantity*

 - Contains the size of the endotracheal tube.

## Intubation Event

The introduction of a tube into a hollow organ (as the trachea or intestine) to keep it open or restore its patency if obstructed

1. Contains exactly one [1..1] **laryngoscopeType** with data type *Code*
   - Contains a code Set that identifies the type of scope or laryngoscope blade used to facilitate endotracheal intubation.
2. Contains exactly one [1..1] **id** with data type *Id*
   - Unique identifier for the type of larynoscope used.
3. Contains zero or more [0..*] **laryngoscope**, where its type is *Surgery Device*
   - Indicates the type of scope or laryngoscope blade used to facilitate endotracheal intubation.
4. Contains zero or one [0..1] **stylet**, where its type is *Surgery Device*
   - Indicates the stylet that was used to shape the endotracheal tube during intubation.
5. Contains zero or one [0..1] **endotrachealTube**, where its type is *Surgery Device*
   - Indicates the endotracheal tube used during the major portion of the procedure.
6. Contains zero or one [0..1] **biteBlock**, where its type is *Surgery Device*
   - Indicates whether a bite block is used to protect the endotracheal tube
7. Contains zero or one [0..1] **trauma**, where its type is *Intubation Trauma*
   - A fine wire that is run through a catheter, cannula, or hollow needle to keep it stiff or clear of debris.
8. Contains exactly one [1..1] **value**, where its type is *Intubation Evaluation*
   - An assigned or calculated numerical quantity

## Intubation Trauma

Trauma identifies as a result of the Intubation event.

1. Contains exactly one [1..1] **traumaCode** with data type *Code*
   - An injury (as a wound) to living tissue caused by an extrinsic agent <surgical trauma>

## Irrigation Evaluation

Evaluating the fluid used to clean the wound or body organ when flushing or washing out with water or a medicated solution.

1. Contains exactly one [1..1] **amtUsed** with data type *Physical Quantity*
   - Contains the total amount of irrigation solution used in the operative site.
2. Contains exactly one [1..1] **id** with data type *Id*
   - Unique identifier for the type of irrigation fluid used.

## Irrigation Event

The process of cleaning a wound or body organ by flushing or washing out with water or a medicated solution

1. Contains exactly one [1..1] **irrigationType** with data type *Code*
   - Identifies the type of solution used for irrigation during the operative procedure.

2. Contains exactly one [1..1] **timeIrrigation** with data type *Point In Time*
   - Contains the date and time that the irrigation solution was utilized.
3. Contains at least one [1..*] **evalutation**, where its type is *Irrigation Evaluation*
   - Contains the type of irrigation fluid that is being observed for evaluation.

## Isolation Precautions

The type of isolation and/or special precautions that the patient is under.

1. Contains exactly one [1..1] **isolationPrecautions** with data type *Code*
   - A code indicating the type of isolation or special precautions that the patient is under.

## Issued Item

A role that stores the items issued in a prosthetics transaction.

1. Contains zero or one [0..1] **acquisitionSource** with data type *Code*
   - The source from which an item was acquired, either VA or Commercial.
2. Contains zero or one [0..1] **prostheticHCPCS** with data type *Code*
   - "The Prosthetics HCPCS code for the item. HCPCS is a uniform method to report professional services, procedures and supplies for healthcare providers and medical suppliers. "
3. Contains zero or one [0..1] **quantity** with data type *Integer Ratio*
   - The number of units that was issued or repaired for the transaction
4. Contains zero or more [0..*] **itemInformation**, where its type is *Prosthetics Appliance*
   - Informaiton pertinent to the prosthetic device for the patient.
5. Contains exactly one [1..1] **vendor**, where its type is *Vendor*
   - The company from which an item was or is to be purchased. The vendor may or may not be the same as the manufacturer.

## Jurisdiction

'The territory over which authority is exercised.' - dictionary.com. This class represents the organization that has authority over a given territory or area of endeavor. In other words, this class represents a government or governmental agency. The government may be a national (e.g., Canada) or territorial (e.g., Virginia).

1. Contains exactly one [1..1] **id** with data type *Code*
   - An unique string or token used to identify the jurisdiction
2. Contains exactly one [1..1] **name** with data type *String*
   - The name of the jurisdiction

## Lab Referral

1. Contains exactly one [1..1] **cost** with data type *Monetary Amount*
2. Contains exactly one [1..1] **orderDate** with data type *Point In Time*
   - The date/time that the order was created by the ordering provider.
3. Contains exactly one [1..1] **placerOrderId** with data type *Id*

- Uniquely identifies the order within the ordering provider's system.
4. Contains exactly one [1..1] **priority** with data type *Code*
   - A code (e.g., routine, emergency), specifying the urgency under which the order is requested to happen.
5. Contains exactly one [1..1] **remarks** with data type *String*
6. Contains exactly one [1..1] **status** with data type *Code*
   - A code specifying the status of the order. Valid status codes should reflect the HL7 state machine, e.g., Active, Held, Canceled, Aborted, New, Nullified, Obsolete).
7. Contains zero or one [0..1] **statusModifier** with data type *Code*
8. Contains zero or one [0..1] **performingOrganization**, where its type is *Service Delivery Location*
9. Contains zero or one [0..1] **fillerAccession**, where its type is *Accession*

# Lab Report Section

Contains all the test results observations for the lab tests.
1. Contains exactly one [1..1] **sectionTitle** with data type *Code*
   - Categorizes the section of the report. Possible values include: Brief Clinical History, Frozen Section, Gross Description, MicroscopicExamination, Operative Findings, Post-operative Diagnosis, Pre-operative Diagnosis, etc.
2. Contains exactly one [1..1] **text** with data type *String*
   - Contains the lab report results in textual format.

# Lab Test Promise

The act of accepting the role of filler. HL7 uses the terms promise and filler interchangeably with promise being the preferred term. This promise act initiates the accessioning for lab actions. Accession: "An increase by means of something added to record as acquired" (Websters). The act of accepting a laboratory test, and entering the test into the laboratory's workload.
1. Contains exactly one [1..1] **dateExpected** with data type *Point In Time*
2. Contains zero or one [0..1] **dateReportCompleted** with data type *Point In Time*
   - This attribute is added to indicate the date lab report is completed.
3. Contains zero or one [0..1] **dateScheduled** with data type *Point In Time*
   - "This field is the date/time the filler scheduled an observation, when applicable (e.g., action code in OBR-11-specimen action code = "S"). This is a result of a request to schedule a particular test and provides a way to inform the placer of the date/time a study is scheduled (result only)." - HL7 V2
4. Contains exactly one [1..1] **dateStatusChanged** with data type *Point In Time*
   - "Specifies the date/time when the results were reported or status changed.... (This is a results field only.) ..." - HL7 Version 2.8, OBR.22
5. Contains exactly one [1..1] **fillerOrderId** with data type *Id*
   - "The order number associated with the filling application. This is a permanent identifier for an order and its associated observations...." - HL7 Version 2.8, OBR.3
6. Contains exactly one [1..1] **priority** with data type *Code*
   - This field has been retained for backward compatibility only. It is not used. Previously priority (e.g., STAT, ASAP), but that information is carried as the sixth component of OBR-27-quantity/timing.
7. Contains exactly one [1..1] **producersReference** with data type *String*
8. Contains zero or more [0..*] **reportableResult**, where its type is *Reportable Result*
9. Contains exactly one [1..1] **status** with data type *Code*
   - "Contains the status of results for this order." - HL7 Version 2.8, OBR.25

10. Contains zero or one [0..1] **accession**, where its type is *Accession*
11. Contains zero or more [0..*] **billingProcedureList**, where its type is *Procedure List Entry*
    - "This field contains a unique identifier assigned to the procedure, if any, associated with the charge." - HL7 Version 2.8, OBR-44 "This field contains the procedure code modifier to the procedure code reported in OBR-44-procedure code, when applicable.... Multiple modifiers may be reported...." - HL7 Version 2.8, OBR-45
12. Contains zero or one [0..1] **labReferral**, where its type is *Lab Referral*
13. Contains exactly one [1..1] **labTestRequest**, where its type is *Lab Test Request*
14. Contains zero or more [0..*] **performingOrganization**, where its type is *Service Delivery Location*
    - Represents "the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here" - HL7 Version 2.8, OBR-24
15. Contains zero or more [0..*] **relatedLabPromise**, where its type is *Related Lab Promise*
16. Contains zero or more [0..*] **specimenAssessment**, where its type is *Specimen Assessment*
17. Contains zero or more [0..*] **specimenCollectionEvent**, where its type is *Specimen Collection Event*
18. Contains zero or one [0..1] **verifier**, where its type is *Verifier*

## Lab Test Request

This class contains attributes associated with a record of the investigative procedure requested to be performed in the laboratory. Need to flesh out how to model both Panels and individual tests at the same time. It is not reasonable to expect to be able to standardize panels, but may have to enumerate the tests that make up the panel ordered.

1. Extends *Healthcare Order*
2. Contains exactly one [1..1] **frequency** with data type *Time Interval*
   - An administration schedule for how often the requested test should be done.
3. Contains exactly one [1..1] **intendedDuration** with data type *Time Interval*
   - The number of days over which one or more LabTestRequests are executed.
4. Contains at least one [1..*] **labTestOrPanelOrdered** with data type *Code*
   - "This field contains the identifier code for the requested observation/test/battery." - HL7 Version 2.8, OBR-4
5. Contains exactly one [1..1] **referralType** with data type *Code*
   - If the test was accepted as a referral from another facility, only portions of the test may need to be performed. For example, CHCS lists the following: Procedure Only, Report Only, and Outside Films.
6. Contains exactly one [1..1] **specimenActionCode** with data type *Code*
   - "Identifies the action to be taken with respect to the specimens that accompany or precede this order...." - HL7 Version 2.8, OBR-11
7. Contains zero or one [0..1] **collectingLocation**, where its type is *Institution*
8. Contains zero or one [0..1] **labTestPromise**, where its type is *Lab Test Promise*
9. Contains zero or one [0..1] **pointOfCare**, where its type is *Hospital Location*
   - An association from LabTestRequest to HospitalLocation identifying a facility that is devoted to the diagnosis and care.
10. Contains zero or one [0..1] **requestingLocation**, where its type is *Institution*
    - An association from LabTestRequest to Institution identifying a requesting organization that is devoted to the diagnosis and care.
11. Contains exactly one [1..1] **subject**, where its type is *Subject*

## Labeler

1. Contains exactly one [1..1] **id** with data type *Id*

- Uniquely identifies the manufacturer.

## Labor And Delivery Characteristic

US Standard Certificate Of Birth Field 45 This class represents an observation regarding the labor and delivery of the infant. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Induction of labor; Augmentation of labor; Non-vertex presentation; Steroids (glucocorticoids) for fetal long maturation received by the mother prior to delivery; Antibiotics received by the mother during labor; Clinical chorioamnionitis diagnosed during labor or maternal temperature >= 38C (100.4F); Moderate/heavy meconium staining of the amniotic fluid; Fetal intolerance of labor such that one or more of the following actions were taken: in-utero resuscitative measures, further fetal assessment, or operative delivery; Epidural or spinal anesthesia during labor; None of the above.

1. Contains exactly one [1..1] **category** with data type *Code*
   - US Standard Certificate Of Birth Field 45 Categorizes the observation regarding the labor and delivery of the infant. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Induction of labor; Augmentation of labor; Non-vertex presentation; Steroids (glucocorticoids) for fetal long maturation received by the mother prior to delivery; Antibiotics received by the mother during labor; Clinical chorioamnionitis diagnosed during labor or maternal temperature >= 38C (100.4F); Moderate/heavy meconium staining of the amniotic fluid; Fetal intolerance of labor such that one or more of the following actions were taken: in-utero resuscitative measures, further fetal assessment, or operative delivery; Epidural or spinal anesthesia during labor; None of the above.

## Laboratory

A place equipped for experimental study in a science or for testing and analysis. This term is used for both the location at which analyis is performed and the organization which performs such analysis.

1. Extends *Ancillary Service*

## Language Capability

The language communication capabilities for a Person.

1. Contains zero or one [0..1] **isPreferred** with data type *Boolean*
   - An indicator specifying whether or not the language is preferred by the person for the associated method of expression.
2. Contains zero or one [0..1] **language** with data type *Code*
   - A value representing a language for which the Person has some level of proficiency for written or spoken communication.
3. Contains zero or one [0..1] **methodOfExpression** with data type *Code*
   - The means by which the person is capable of communicating in the language. Examples of method of expression would be written and spoken.
4. Contains zero or one [0..1] **proficiencyLevel** with data type *Code*
   - 'A value representing the level of proficiency in a language.' (HL7 v3).

## Lead Provider

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Legal Authenticator

"A verifier who legally authenticates the accuracy of an act. An example would be a staff physician who sees a patient and dictates a note, then later signs it. Their signature constitutes a legal authentication."- HL7 V3

1. Extends *Verifier*

## Legal Problem

This class is used to record answers related to any criminal justice issues (e.g. criminal record, parole status).

1. Extends *Behavioral Health Assessment Domain*

## Level Of Understanding

This class captures information about patient's level of understanding after education is given to the patient.

1. Contains exactly one [1..1] **levelOfUnderstanding** with data type *Code*

   - Impression of how well the patient understood the education received. Example values include: Poor, Fair, Good, Group - no assessment, Refused, etc.

## Licensed Provider

A practitioner who has been authorized to perform certain activities that fall under the jurisdiction of the issuer of the license.

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*

   - An interval of time specifying the period during which the license is in valid, if such time limit is applicable and known.
2. Contains exactly one [1..1] **licenseCategory** with data type *Code*

   - A classification of the provider's license.
3. Contains exactly one [1..1] **licenseId** with data type *Id*

   - Identifies a certification of a practitioner to perform certain activities that fall under the jurisdiction of the issuer of the license.
4. Contains exactly one [1..1] **status** with data type *Code*

   - Indicates the current state of the provider's license. The possible values are defined in the HL7 Role state-transition model.
5. Contains exactly one [1..1] **licensingJurisdiction**, where its type is *Jurisdiction*

   - Identifies the state or jurisdiction which authorized the Healthcare Provider to prescribe medications Note that a state or jurisdiction is an Organization.

## Linked Data Object

The external data object to be linked to the selected document e.g. a path to a fileserver, and a filename for the object (VA1$:[IMAGES]JR042696.BMP, or i:\images\jr042696.bmp), etc.

1. Contains exactly one [1..1] **uri** with data type *String*

- The path to a fileserver, and a filename for the object (VA1$:[IMAGES]JR042696.BMP, or i:\images \jr042696.bmp), etc.

## Linked Item

This class contains attributes that gives context to the task. It links the task that you create to an order, for example follow up based upon lab result.

1. Contains zero or one [0..1] **id** with data type *Id*

- This is an identifier for item that have been linked to this task.

2. Contains exactly one [1..1] **description** with data type *String*

## Living Arrangement

This section identifies the living arrangements for a client/patient. This class may have overlaps with FamilySocialHistoryArea so this may go away.

1. Contains exactly one [1..1] **code** with data type *Code*

- The value sets for this attribute are based on the HL7 Living Arrangements coding system (2.16.840.1.113883.5.63) used to specify whether the patient is homeless, transient, living in a community shelter, or institutionalized.

## Location

"A bounded physical place or site, including any contained structures. A place may be natural or man-made. The geographic position of a place may or may not be constant. Places may be work facilities (where relevant acts occur), homes (where people live) or offices (where people work). Places may contain sub-places (floor, room, booth, bed). Places may also be sites that are investigated in the context of health care, social work, public health administration (e.g., buildings, picnic grounds, day care centers, prisons, counties, states, and other focuses of epidemiological events). Examples include a field, lake, city, county, state, country, lot (land), building, pipeline, power line, playground, ship, truck." - HL7 V3.

1. Contains exactly one [1..1] **address** with data type *Address*

- The postal address of the location.

2. Contains exactly one [1..1] **id** with data type *Id*

- Uniquely identifies the location.

3. Contains exactly one [1..1] **name** with data type *String*

- A moniker for the location.

## Long Term Care Facility

1. Extends *Service Delivery Location*

## Lymph Node Evaluation

LymphNodeEvaluation Evaluation of the patient's masses of lymphoid tissue that are surrounded by a capsule of connective tissue, are distributed along the lymphatic vessels, and contain numerous lymphocytes which filter the

flow of lymph passing through the node called also lymph gland Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.

1. Contains exactly one [1..1] **lymphNodesSeer** with data type *Code*
   - "Identifies SEER lymph node involvement. Possible values are number between 0 and 9 - No lymph node involvement; One positive ipsilateral node <3 cm in greatest diameter; One positive ipsilateral node 3 and <6 cm in greatest diameter; Multiple positive ipsilateral nodes <6 cm; Ipsilateral, node size not stated; Bilateral and/or contralateral; positive nodes <6 cm or size not stated; Any positive node(s), at least one >6 cm; Other than above; Lymph Nodes, NOS; UNKNOWN; not stated; etc."

2. Contains exactly one [1..1] **csRegionalLymphNodes** with data type *Code*
   - "Identifies the regional lymph nodes involved with cancer at the time of diagnosis. 2 numerics; 01 - 99; None; Possible values are No regional lymph node involvement; Lymph nodes, NOS; Unknown; regional lymph nodes cannot be assessed; not stated in patient record; Not applicable; site/histology specific codes; etc"

3. Contains exactly one [1..1] **regionalNodesPositive** with data type *Code*
   - Indicates the exact number of regional lymph nodes examined by the pathologist and found to contain metastases. Possible values are All nodes examined are negative; 1-89 nodes are positive (Code exact number of nodes positive); 90 or more nodes are positive; 95 Positive aspiration of lymph node(s) was performed; 97 Positive nodes are documented, but the number is unspecified; 98 No nodes were examined; 99 It is unknown whether nodes are positive; not applicable; not stated in patient record; etc.

4. Contains exactly one [1..1] **regionalNodesExamined** with data type *Code*
   - Indicates the total number of regional lymph nodes examined by the pathologist. Possible values are No nodes were examined; 1-89 nodes were examined; 90 or more nodes were examined; 95 No regional nodes were removed, but aspiration of regional nodes was performed; 96 Regional lymph node removal was documented as a sampling, and the number of nodes is unknown/not stated; 97 Regional lymph node removal was documented as a dissection, and the number of nodes is unknown/not stated; 98 Regional lymph nodes were surgically removed, but the number of lymph nodes is unknown/not stated and not documented as a sam pling or dissection; nodes were examined but the number is unknown; 99 It is unknown whether nodes were examined; not applicable or negative; not stated in patient record; etc

5. Contains exactly one [1..1] **clinicalN** with data type *Code*
   - Identifies the absence or presence of regional lymph node (N) metastasis and describes the extent of regional lymph node metastasis as recorded by the physician. Possible values are Not recorded by the physician.; NX; N0; N1; N1b; N2c; N3; Not Applicable.

6. Contains exactly one [1..1] **pathologicN** with data type *Code*
   - Identifies the absence or presence of regional lymph node (N) metastasis and describes the extent of regional lymph node metastasis as recorded by the physician. Not recorded by the physician; NX, N0; N0(i-); N0(i+); N0(mol-); N0(mol+); N1mi; Not applicable etc.

7. Contains exactly one [1..1] **otherN** with data type *Code*
   - Indicates the code that classifies the regional lymph nodes and describes the absence or presence and the extent of node metastases. Possible values are NX, NO, N1A, N1B, N2, N2A, N2B, N2C, N3, Not Applicable etc.

# Mail Order Dispense

1. Extends *Outpatient Medication Dispense*
2. Contains exactly one [1..1] **carrier** with data type *Code*
3. Contains exactly one [1..1] **dateTimeMailed** with data type *Point In Time*
   - The date and time that the medication was dispensed. Dispense = "to make up and distribute (medicine), esp. on prescription." (Random House Unabridged Dictionary)
4. Contains zero or one [0..1] **dateTimeReceived** with data type *Point In Time*
   - The date and time that the medication was dispensed. Dispense = "to make up and distribute (medicine), esp. on prescription." (Random House Unabridged Dictionary)

5. Contains zero or one [0..1] **trackingId** with data type *String*

# Managed Participation

"A participation that will be operated on over time and thus whose state and identity must be managed" - HL7 V3
1. Extends *Practitioner Participation*
2. Contains exactly one [1..1] **status** with data type *Code*
   - "The status of the ManagedParticipation. Examples: Pending, active, complete, cancelled" - HL7 V3

# Manufactured Material

"A subtype of Material representing an Entity or combination of Entities transformed for a particular purpose by a non-natural or manufacturing process." (HL7)
1. Contains exactly one [1..1] **id** with data type *Id*
   - Uniquely identifies the manufactured material.
2. Contains exactly one [1..1] **name** with data type *String*
   - The name of the manufactured material.

# Manufacturer

The organization that produced an item of interest.
1. Contains exactly one [1..1] **id** with data type *Id*
   - Uniquely identifies the manufacturer.
2. Contains exactly one [1..1] **name** with data type *String*
   - The name of the manufacturer.
3. Contains exactly one [1..1] **mvx** with data type *Code*

# Manufacturing Lot

1. Contains exactly one [1..1] **expirationDate** with data type *Point In Time*
   - "The date and time the manufacturer no longer ensures the safety, quality, and/or proper functioning of the material." (HL7 3.0)
2. Contains exactly one [1..1] **lotId** with data type *String*
   - "An alphanumeric string used to identify a particular batch of manufactured material." (HL7 3.0)
3. Contains exactly one [1..1] **lotSize** with data type *Physical Quantity*

# Material

"A subtype of Entity that is inanimate and locationally independent. Materials are entities that are neither Living Subjects nor places. Manufactured or processed products are considered material, even if they originate as living matter. Materials come in a wide variety of physical forms and can pass through different states (ie. Gas, liquid, solid) while still retaining their physical composition and material characteristics." - HL7 V3.
1. Contains exactly one [1..1] **id** with data type *Id*
   - Uniquely identifies the material.

## Material Category

"A specification of a kind of medicine, food material, or any product for the purpose of (a) describing a specific product with classification categories and (b) referring to a kind of product or material for describing drug-drug interactions or adjunct treatments. The classifying category may refer to any of various classifications and abstractions of products by any aspect, including, mechanism of action category, physiologic effect category, chemical structure category, or "clinical drug" category. This may also be used to represent a specific material or an ingredient when specifying drug-drug interactions or adjunct treatments." - HL7 V3

1. Contains exactly one [1..1] **code** with data type *Code*
   - "Code specifying a kind of medicine, food material, or any product. The code may refer to any of various classifications and abstractions of products by any aspect, including, mechanism of action category, physiologic effect category, chemical structure category, or "clinical drug" category. It may also represent a specific material or an ingredient of material." - HL7 V3

## Material Specimen Collection Event

1. Extends *Specimen Collection Event*
2. Contains exactly one [1..1] **collectionSite** with data type *Code*
   - The location on the patient's body from which the specimen was obtained.

## Maternal Morbidity

US Standard Certificate Of Birth Field 47 This class represents a complications associated with labor and delivery. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Maternal transfusion; Third or fourth degree perineal laceration; ruptured uterus; Unplanned hysterectomy; Admission to intensive care unit; Unplanned operating room procedure following delivery; None of the above.

1. Contains exactly one [1..1] **category** with data type *Code*
   - US Standard Certificate Of Birth Field 47 Categorizes complications associated with labor and delivery. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Maternal transfusion; Third or fourth degree perineal laceration; ruptured uterus; Unplanned hysterectomy; Admission to intensive care unit; Unplanned operating room procedure following delivery; None of the above.

## Means Test

An inquiry into the financial position of the Veteran applying for enrollment, including both annual household income and net worth.
1.

## Measurement With Reference Range Result

An observation of the quantity of the analyte found within the sample. Note that loinc and procedure codes are identifying more specifically the type of test being performed. Because there may be multiple methodologies available to measure the same substance, these codes are more specific than the analyte and testCode referenced in the ChemistryTest class. Note that this class has 5 subtypes to handle the different kinds of result values. Most chemistry

tests are physical quanties (e.g., mg/dL). Some are coded, and even those that normally are physical quantities might be replaced by a coded observation of Quantity Not Sufficient.

1. Extends *Reportable Result*
2. Contains exactly one [1..1] **id** with data type *Id*

   • A unique identifier assigned to reference the investigative procedure performed.
3. Contains zero or one [0..1] **interpretation** with data type *Code*

   • Provides an automated indication of the result, based upon "normal" values as indicated by the reference range. Examples include High, Low, Critically High, Critically Low, etc.
4. Contains zero or one [0..1] **referenceRange** with data type *Physical Quantity Interval*

   • The range of normal values (low and high) determined for a test. For toxicology, this range is the theraputic range.
5. Contains exactly one [1..1] **status** with data type *Code*

   • Identifies the status of an investigative procedures performed in the laboratory.
6. Contains exactly one [1..1] **value** with data type *Any*

   • The value of the Chemistry Observation expressed as free-form text.
7. Contains zero or more [0..*] **referenceRangeCriterion**, where its type is *Reference Range Criterion*
8. Contains zero or one [0..1] **deviceInstance**, where its type is *Device Instance*

   • A unique identifier assigned to reference the device used for the investigative procedure performed.

## Mediastinoscopy

Examination of the mediastinum through an incision above the sternum [Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc. ]

1. Contains exactly one [1..1] **mediastinoscopy** with data type *Code*

   • Indicates the results of the diagnostic test MEDIASTINOSCOPY. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.
2. Contains exactly one [1..1] **dateOfMediastinoscopy** with data type *Point In Time*

   • The date of the diagnostic test MEDIASTINOSCOPY.

## Medicaid Provider

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*

   • An interval of time specifying the period during which the Medicaid enrollment is in effect, if such time limit is applicable and known.
2. Contains exactly one [1..1] **medicaidId** with data type *Id*

   • An identifier, assigned by the State Medicaid office, to identify the Provider.
3. Contains exactly one [1..1] **status** with data type *Code*

   • Indicates the current state of Medicaid enrollment. The possible values are defined in the HL7 Role state-transition model.
4. Contains exactly one [1..1] **state**, where its type is *State*

## Medical Complication

This class contains information regarding the spinal cord injury medical complications for the patient.

This class contains information regarding the spinal cord injury medical complications for the patient.

1. Contains exactly one [1..1] **bladderDrainage** with data type *Code*

   - Contains a code set that identifies the bladder drainage method
   - Contains a code set that identifies the bladder drainage method

## Medical Specialty

"A branch of medicine or surgery in which a physician specializes; the field or practice of a specialist." - The American Heritage Stedman's Medical Dictionary. This class is equivalent to File 723 in Vista.

1. Extends *Organization*

## Medical Specialty

"A branch of medicine or surgery in which a physician specializes; the field or practice of a specialist." - The American Heritage Stedman's Medical Dictionary. This class is equivalent to File 723 in Vista.

1. Extends *Organization*

## Medicare Provider

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*

   - An interval of time specifying the period during which the Medicare enrollment is in effect, if such time limit is applicable and known.

2. Contains exactly one [1..1] **medicareId** with data type *Id*

   - An identifier, assigned by the Centers for Medicare and Medicaid Services (CMS), to identify the Provider.

3. Contains exactly one [1..1] **status** with data type *Code*

   - Indicates the current state of Medicare enrollment. The possible values are defined in the HL7 Role state-transition model.

## Medication

This problem area/section of the assessment is used to identify the medications administered to the patient.

1. Extends *Behavioral Health Assessment Domain*
2. Contains zero or more [0..*] **medicationAdministered**, where its type is *Pharmacy Promise*

   - This directed association describes the relationship between the Medications that the client/patient is taking as defined in the Medications Area of the assessment.

## Medication Dispense

The dispensing or issuing of medication to a patient or representative.

1. Contains zero or more [0..*] **comments** with data type *String*

   - Contains comments as deemed necessary by the pharmacy staff for originalDispense or partialDispense or refillDispense (Free text).Note changes made June 2 2009 per CDS\Hdr order set issue. VHIM disagrees with approach needs be re-reviewed in the future. Changes are set attribute comments multipilicity to '*'.

2. Contains zero or one [0..1] **dateTimeDispensed** with data type *Point In Time*

- • The date and time that the medication was dispensed. Dispense = "to make up and distribute (medicine), esp. on prescription." (Random House Unabridged Dictionary)
3. Contains zero or one [0..1] **dateTimeFilled** with data type *Point In Time*
   - • The date and time that the medication was dispensed. Dispense = "to make up and distribute (medicine), esp. on prescription." (Random House Unabridged Dictionary)
4. Contains zero or one [0..1] **daysSupply** with data type *Integer*
   - • The length of time in days that the quantity dispensed will last if consumed at the rate prescribed. For example if the patient is instructed to take 2 pills a day, 60 pills will last 30 days.
5. Contains exactly one [1..1] **fillSequenceNumber** with data type *Integer*
   - • "The code indicating whether the prescription is an original or a refill." Valid values are 0=original; 1-99=refills. - NCPDP Data Element 403-D3 |Telecom^Claim^4 3-D3^Fill Number| | Script^SRC^030^7897^Fill Number|
6. Contains exactly one [1..1] **id** with data type *Id*
   - • The unique identifier for this dispense, also known as a "Fill Id". Question: Do all fills get a fill id, or only refills and partial fills?
7. Contains zero or one [0..1] **quantityDispensed** with data type *Physical Quantity*
   - • The quanitity of the medication dispensed to this patient in fulfillment of a request.
8. Contains exactly one [1..1] **specialPackaging** with data type *Code*
9. Contains zero or one [0..1] **attender**, where its type is *Attender*
10. Contains exactly one [1..1] **pharmacist**, where its type is *Individual Provider*
    - • The pharmacist responsible for dispensing the medication for this outpatient order.
11. Contains exactly one [1..1] **pharmacy**, where its type is *Pharmacy*
    - • The Outpatient Pharmacy Division which filled the prescription.
12. Contains zero or one [0..1] **pharmacyManufacturedProduct**, where its type is *Pharmacy Manufactured Product*
13. Contains zero or one [0..1] **productInstance**, where its type is *Medicinal Product Instance*
14. Contains zero or one [0..1] **dispenseRecipient**, where its type is *Dispense Recipient*
15. Contains zero or one [0..1] **filler**, where its type is *Individual Provider*
16. Contains zero or one [0..1] **dispenser**, where its type is *Individual Provider*
17. Contains zero or more [0..*] **device**, where its type is *Device*

# Medicinal Product

1. Extends *Product*
2. Contains zero or more [0..*] **auxilliaryLabel** with data type *String*
   - • Contains remarks to personnel handling the medication. Examples include: Do not freeze, Keep refrigerated, Do not use after <such and such> date, Do not take if pregnant.
3. Contains exactly one [1..1] **controlledSubstanceSchedule** with data type *Code*
   - • A code that represents the special regulations of a drug based upon its degree of potential abuse and level of federal control as specified by the Drug Enforcement Administration (DEA) in accordance with the Controlled Substance Act. This attribute should contain a number between 1 and 5, with 1 representing the most controlled drugs (illegal drugs) and 5 representing the least controlled drugs. In addition a value of 0 is valid for drugs having no schedule.
4. Contains zero or one [0..1] **investigationalNewDrugId** with data type *Code*
   - • The unique identifier for the manufacturer's investigational new drug.
5. Contains exactly one [1..1] **isOverTheCounter** with data type *Boolean*
   - • Indicates whether this medication is sold over the counter.
6. Contains zero or one [0..1] **newDrugApplicationId** with data type *Code*

- The unique identifier for the manufacturer's new drug application for this medicine.
7. Contains zero or one [0..1] **genericMedicine**, where its type is *Generic Medicine*
    - "The non-proprietary, generic substance as which the same medicines is known in the literature independent of a specific manufacturer." - HL7 V3
8. Contains at least one [1..*] **ingredient**, where its type is *Drug Ingredient*
    - "Relates a product (typically medicine) to a substance which it contains as an ingredient." - HL7 V3
9. Contains zero or more [0..*] **drugClass**, where its type is *Drug Class*
10. Contains exactly one [1..1] **packagedMedicinalProduct**, where its type is *Packaged Medicinal Product*

## Medicinal Product Instance

"A product instance is (a) an individual product instance, i.e., an individually identified thing with a serial number; (b) a product lot, i.e., a set of things of the same kind (e.g., 1000 for expressing a number of tablets) or an amorphous mass (e.g., 100 L of a liquid raw material), or (c) any subset, member, or portion of a product lot. The distinction between an individual thing and a lot is made in the quantity attribute, which is set to 1 (one) for individual items, or any number e.g., 1000 or amount 100 L for sets of things or amorphous masses respectively." - HL7 V3 This class contains information about the actual drug dispensed.

1. Contains zero or one [0..1] **id** with data type *Id*
    - "A unique identifier for this instance. If the product instance represents a single individual product (quantity = 1) then this id is also called the "serial number". If the product instance represents a product lot, the id is also called the "lot number"." - HL7 V3
2. Contains zero or one [0..1] **unitPrice** with data type *Monetary Amount*
    - This is the price of the medication per dispense unit.
3. Contains exactly one [1..1] **packagedMedicinalProduct**, where its type is *Packaged Medicinal Product*
4. Contains zero or more [0..*] **drugPricing**, where its type is *Drug Pricing*
5. Contains zero or one [0..1] **manufacturingLot**, where its type is *Manufacturing Lot*

## Mental Health Assessment

This type of assessment is intended to evaluate the mental health problems affecting the patient. This class is a specialization/restriction of the BehavioralHealthAssessment class.

1. Extends *Behavioral Health Assessment*

## Metastasis Evaluation

Transmission of pathogenic microorganisms or cancerous cells from an original site to one or more sites elsewhere in the body, usually by way of the blood vessels or lymphatics

1. Contains exactly one [1..1] **clinicalM** with data type *Code*
    - Idenifiies the presence or absence of distant metastasis (M) as recorded by the physicain. Possible values are Not recorded by the physician; MX, M0; M1; M1a; M1b; M1c; not applicable etc.
2. Contains exactly one [1..1] **csMetastasisAtDx** with data type *Code*
    - Identifies the distant site(s) of metastatic involvement at time of diagnosis. Possible values are 00 No; Distant lymph node(s); Distant metastases except code 10 Distant metastasis, NOS Carcinomatosis; (40) + (10); Unknown; distant metastasis cannot be assessed,not stated in patient record; Not applicable etc.
3. Contains exactly one [1..1] **pathologicM** with data type *Code*
    - Identifies the presence or absence of distant metastasis (M) as recorded by the physician. Possible values are MX, M0; M1; M1a; M1b; M1c; Not applicable; etc.

4. Contains exactly one [1..1] **otherM** with data type *Code*

   • Indicates the code that identifies the presence or absence of distant metastases. Possible values are MX, M0, M1, M1A, M1B, M1C, Not Applicable; etc.

5. Contains exactly one [1..1] **metastasis1** with data type *Code*

   • Identifies only the site(s) of distant metastasis identified during initial diagnosis and workup. Possible values are None; Peritoneum; Lung; Pleura; Liver; Bone; Central nervous system; Skin; Lymph nodes (distant); Other/Gen/Carcinomatosis/Unkn; etc.

6. Contains exactly one [1..1] **metastasis2** with data type *Code*

   • Identifies the second site of distant metastasis identified during initial diagnosis and workup. Possible values are None; Peritoneum; Lung; Pleura; Liver; Bone; Central nervous system; Skin; Lymph nodes (distant); Other/Gen/Carcinomatosis/Unkn; etc.

7. Contains exactly one [1..1] **metastasis3** with data type *Code*

   • Identifies the third site of distant metastasis identified during initial diagnosis and workup. Possible values are None; Peritoneum; Lung; Pleura; Liver; Bone; Central nervous system; Skin; Lymph nodes (distant); Other/Gen/Carcinomatosis/Unkn; etc.

## Method Of Delivery

US Standard Certificate Of Birth Field 46 This class represents an observation regarding the delivery of the infant. Possible values include: Was delivery with forceps attempted by unsuccessful? - Yes; Was delivery with forceps attempted by unsuccessful? - No; Was delivery with vacuum extraction attempted by unsuccessful? - Yes; Was delivery with vacuum extraction attempted by unsuccessful? - No; Fetal presentation at birth, Cephalic; Fetal presentation at birth, Breech; Fetal presentation at birth, Other; Final route and method of delivery, Vaginal/Spontaneous; Final route and method of delivery, Vaginal/Forceps; Final route and method of delivery, Vaginal/Vacuum; Final route and method of delivery, Cesarean, trial of labor attempted; Cesarean, trial of labor not attempted.

1. Contains exactly one [1..1] **category** with data type *Code*

   • US Standard Certificate Of Birth Field 46 Categorizes the observation regarding the delivery of the infant. Possible values include: Was delivery with forceps attempted by unsuccessful? - Yes; Was delivery with forceps attempted by unsuccessful? - No; Was delivery with vacuum extraction attempted by unsuccessful? - Yes; Was delivery with vacuum extraction attempted by unsuccessful? - No; Fetal presentation at birth, Cephalic; Fetal presentation at birth, Breech; Fetal presentation at birth, Other; Final route and method of delivery, Vaginal/Spontaneous; Final route and method of delivery, Vaginal/Forceps; Final route and method of delivery, Vaginal/Vacuum; Final route and method of delivery, Cesarean, trial of labor attempted; Cesarean, trial of labor not attempted.

## Microbe Identification

This class documents each Microbiology identification observation (note that in this case, "Microbiology" includes Bacteriology, Mycobacteriology, Mycology, Parasitology, and Virology).

1. Extends *Reportable Result*

2. Contains at least one [1..*] **organismObserved**, where its type is *Organism*

   • The organism identified as being present within a observation event.

3. Contains exactly one [1..1] **organismQuantity** with data type *Physical Quantity*

   • The quantification the organism detected. e.g., >100,000 CFU/ML.

4. Contains zero or more [0..*] **antibioticSensitivity**, where its type is *Antibiotic Sensitivity Observation Event*

   • An association from BecteriologyResultt to AntibioticSensitivityObservationEvent identifying a drug challenge test of the susceptibility of an organism to a specific concentration of an antibiotic.

## Military Service Conflict

Indicates the Veteran's involvement in a specific period of war.

1. Contains exactly one [1..1] **conflictCode** with data type *Code*

   • The specific war the Vet was involved in.

2. Contains exactly one [1..1] **dateRange** with data type *Time Interval*

   • The date range of the war or conflict.

3. Contains exactly one [1..1] **id** with data type *Id*

   • A unique identifier for the war.

4. Contains exactly one [1..1] **prisonerOfWar**, where its type is *Prisoner Of War*

   • prisonerOfWar.

## Military Service Episode

Indicates a Veteran's stint in active military service.

1. Contains exactly one [1..1] **branchCode** with data type *Code*

   • The specific branch of the military.

2. Contains exactly one [1..1] **dateRange** with data type *Time Interval*

   • The timeframe the Vet served in the military branch.

3. Contains exactly one [1..1] **id** with data type *Id*

   • The unique identifier for this military service stint.

4. Contains exactly one [1..1] **militaryServiceId** with data type *Id*

   • A unique identifier for this military service act.

5. Contains at least one [1..*] **qualifyingServiceDetail**, where its type is *Qualifying Service Detail*

   • qualifyingServiceDetail.

6. Contains exactly one [1..1] **militaryServiceConflict**, where its type is *Military Service Conflict*

   • militaryServiceConflict.

## Modality

This class contains attributes that identify whether more than one method of treatment were used or not.

1. Contains exactly one [1..1] **clinicalMultiModality** with data type *Boolean*

   • The first method of therapy is other than cancer-directed surgery. The patient is first treated with radiation therapy, chemotherapy, hormone therapy, immunotherapy, "other" therapy, or any combination of these therapies. The stage is based on a pathologic resection of the primary done after at least one of the other therapies has started. The other therapy may or may not be complete. This stage should supplement the clinical AJCC stage, not replace it. Possible values are Yes; No;

2. Contains exactly one [1..1] **multiModality** with data type *Boolean*

   • MULTIMODALITY THERAPY determines whether the pTNM category will have a "y Prefix" (eg yT1 N0M0). The "y Prefix" indicates those cases in which classification is performed during or following initial multimodality therapy. The ypTNM categorizes the extent of tumor actually present at the time of that examination. The "y" category is not an estimate of the extent of tumor prior to multimodality therapy. Possible values are Yes; No;

## Monetary Amount

Indicates the monetary amount to be transferred from the debit to the credit account.

"A quantity expressing an amount of money in some currency. While the monetary amount is a single kind of quantity (money) the exchange rates between the different units are variable. This is the principle difference between PQ and MO, and the reason why currency units are not physical units." - HL7 V3

1. Contains exactly one [1..1] **currency** with data type *Code*
   - Currencies are the units in which monetary amounts are denominated in different economic regions.
   - "The currency unit as defined in ISO 4217" - HL7 V3
2. Contains exactly one [1..1] **value** with data type *Real*
   - The amount of money in some currency.
   - "The magnitude of the Monetary Amount in terms of currency" - HL7 V3

## Mood Journal Entry

1. Extends *Patient Journal Entry*
2. Contains exactly one [1..1] **journalEntryType**
3. Contains exactly one [1..1] **mood** with data type *Code*

## NCI Person

A specialization of Person that adds properties specifically needed by NCI

1. Extends *Person*

## Nation

'A relatively large group of people organized under a single, usually independent government; a country.' - American Heritage Dictionary. An organization created to govern a country, which has the power to grant citizenship to its people.

1. Contains exactly one [1..1] **code** with data type *Code*
   - Identifies the nation. This would ordinarily be an Id, but because there are a finite number of tribes, nations are normally represented as codes.

## National Procedure

"An Act whose immediate and primary outcome (post-condition) is the alteration of the physical condition of the subject." - HL7 v3 This is equivalent to File 725 in VistA.

1. Contains exactly one [1..1] **id** with data type *Id*
   - Unique Identifier for the EventCapture for the Patient

## Nationally Identified Provider

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*

- An interval of time specifying the period during which the National Provider Id is in effect, if such time limit is applicable and known.
2. Contains exactly one [1..1] **nationalProviderId** with data type *Id*
   - An identifier that uniquely identifies all persons and organizations who perform medical services within the United States. This identifier is mandated by HIPAA and is maintained by CMS.
3. Contains exactly one [1..1] **npiEntityType** with data type *Code*
   - A categorization of the Entity to which the National Provider Id applies
4. Contains exactly one [1..1] **status** with data type *Code*
   - Indicates the current state of National Provider Id. The possible values are defined in the HL7 Role state-transition model.
5. Contains at least one [1..*] **taxonomyCode** with data type *Code*

## Network

1. Extends *Organization*
2. Contains exactly one [1..1] **planNetworkAffliliation**, where its type is *Plan Network Affliliation*

## Network Affliliation

<p> Represents information about the association between an Individual Healthcare Provider and a Network.  A Network is an organization which maintains a contractual relationship with multiple providers and with Health Plans. </p>

1. Extends *Provider Affiliation*
2. Contains exactly one [1..1] **network**, where its type is *Network*

## New Complex Type1

1.

## Newborn Abnormal Condition

US Standard Certificate Of Birth Field 54 This class represents an abnormal condition of the newborn. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Assisted ventilation required immediately following delivery; Assisted ventilation required for more than six hours; NICU admission; Newborn given surfactant replacement therapy; Antibiotics received by the newborn for suspected neonatal sepsis; Seizure or serious neurologic dysfunction; Significant birth injury (skeletal fractures(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which require intervention); None of the above.

1. Contains exactly one [1..1] **category** with data type *Code*
   - US Standard Certificate Of Birth Field 54 Categorizes the of abnormal condition of the newborn. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Assisted ventilation required immediately following delivery; Assisted ventilation required for more than six hours; NICU admission; Newborn given surfactant replacement therapy; Antibiotics received by the newborn for suspected neonatal sepsis; Seizure or serious neurologic dysfunction; Significant birth injury (skeletal fractures(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which require intervention); None of the above.

## Newborn Congenital Anomaly

US Standard Certificate Of Birth Field 55 This class represents a congenital anomaly of the newborn. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of anomalies listed above", so if that one is chosen, there should not be any others chosen. Possible values include: Anencephaly; Meningomyelocele/Spinal bifida; Cyanotic congenital heart disease; Congenital diaphramic hernia; Omphalocele; Gastroschisis; Limb reduction defect (excluding congenital amputation and dwarfing syndromes); Cleft lip with or without cleft palate; Cleft palate alone; Down Syndrome, Karyotype confirmed; Down Syndrome, Karyotype pending; Suspected chromosomal disorder, Karyotype confirmed; Suspected chromosomal disorder, Karyotype pending; Hypospadias; None of anomalies listed above.

1. Contains exactly one [1..1] **category** with data type *Code*

   - US Standard Certificate Of Birth Field 55 Categorizes the congenital anomaly of the newborn. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of anomalies listed above", so if that one is chosen, there should not be any others chosen. Possible values include: Anencephaly; Meningomyelocele/Spinal bifida; Cyanotic congenital heart disease; Congenital diaphramic hernia; Omphalocele; Gastroschisis; Limb reduction defect (excluding congenital amputation and dwarfing syndromes); Cleft lip with or without cleft palate; Cleft palate alone; Down Syndrome, Karyotype confirmed; Down Syndrome, Karyotype pending; Suspected chromosomal disorder, Karyotype confirmed; Suspected chromosomal disorder, Karyotype pending; Hypospadias; None of anomalies listed above.

## No Known Allergy Entry

1. Extends *Intolerance Condition Entry*

## Non Person Living Subject

A subtype of LivingSubject that includes all living things except the species homo sapiens. *** Note: This class serves as a placeholder for information needed to support future use cases. ***

1. Extends *Biological Entity*
2. Contains zero or one [0..1] **breed** with data type *Code*

   - "The specific breed of animal. This field, unlike Species and Strain is specific to animals and cannot be generally used for all living organisms." - HL7 Version 2.8, PID-36 "A relatively homogenous group of animals within a species" - Dictionary.com *** Note: This property serves as a placeholder for information needed to support future use cases. The possible values of the value set for this property will be determined at a future date. ***

3. Contains exactly one [1..1] **name** with data type *String*

   - A name used to identify the non-human individual. Typically used only when the individual is a pet or a beast of burden. Examples include "Spot", "Fido", "Seattle Slew". Note that this property is typically not used when the subject is a lower order organism. *** Note: This property serves as a placeholder for information needed to support future use cases. ***

4. Contains exactly one [1..1] **primaryIntent** with data type *Code*

   - "Contains the code and/or text indicating the primary use for which the living subject was bred or grown." - HL7 Version 2.8, PID-38 *** Note: This property serves as a placeholder for information needed to support future use cases. ***

5. Contains exactly one [1..1] **species** with data type *Code*

   - "The species of living organism. This may include the common or scientific name, based on the coding system(s) used." - HL7 Version 2.8, PID-35 A categorization of non-human biological entities. Possible

values include canine, feline, staphylococcus aureus, etc. *** Note: This property serves as a placeholder for information needed to support future use cases. The possible values of the value set for this property will be determined at a future date. ***

6. Contains exactly one [1..1] **strain** with data type *Code*

   - "Contains the specific strain of animal. It can also be expanded to include strain of any living organism and is not restricted to animals." - HL7 Version 2.8, PID-37 "The body of descendants of a common ancestor, as a family or stock. 5. a variety, especially of microorganisms." - Dictionary.com *** Note: This property serves as a placeholder for information needed to support future use cases. The possible values of the value set for this property will be determined at a future date. ***

## Non Us Mailing Address

A specialization of Address for non-US postal addresses. Note that the Address class does not have a State or Province attribute - the US Mailing Address includes a code for the State, whereas the Non-US Mailing address merely has a string for the "jurisdiction", which would have the state or province as needed by that country's postal designation conventions.

1. Extends *Address*
2. Contains exactly one [1..1] **jurisdiction** with data type *String*

   - This property is a string for the "jurisdiction", which would have the state or province as needed by the country's postal designation conventions. In some cases, this property will be blank, and the jurisdiction would be part of one of the street address lines.

## Nuclear Medicine

A radiopharmaceutical used in the diagnosis, management, and treatment of disease.

1. Extends *Medicinal Product Instance*
2. Contains exactly one [1..1] **activity** with data type *Physical Quantity*

   - The measured quantity of the activity of the radiopharmaceutical used.

## Nullify Act

Records the nullification of an Act. Typically used when an erroneous record is "deleted". Because medical records should never be deleted, the record is instead "nullified", and is rendered not visible to typical users, but still exists in the system for the purpose of audit trails, etc.

1. Contains exactly one [1..1] **comment** with data type *String*

   - Any comments or remarks regarding the nullification of the Activity record or Order.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   - The date/time the Activity record or Order was nullified.
3. Contains exactly one [1..1] **reason** with data type *Code*

   - The reason why the Order or Activity record was nullified.
4. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

   - Indicates the practitioner who created the nullification record. In other words, the practitioner who nullified the action.

## Nutrition Assessment

1. Contains exactly one [1..1] **sex** with data type *Code*
2. Contains exactly one [1..1] **age** with data type *Real*
3. Contains exactly one [1..1] **height** with data type *Real*
4. Contains exactly one [1..1] **heightQualifier** with data type *Code*
5. Contains exactly one [1..1] **weight** with data type *Real*
6. Contains exactly one [1..1] **weightQualifier** with data type *Code*
7. Contains exactly one [1..1] **dateWeightTaken** with data type *Point In Time*
8. Contains exactly one [1..1] **usualWeight** with data type *Real*
9. Contains exactly one [1..1] **idealWeight** with data type *Real*
10. Contains exactly one [1..1] **frameSize** with data type *Code*
11. Contains exactly one [1..1] **percentAputated** with data type *Real*
12. Contains exactly one [1..1] **kCalRequired** with data type *Real*
13. Contains exactly one [1..1] **protienRequired** with data type *Physical Quantity*
14. Contains exactly one [1..1] **fluidsRequired** with data type *Physical Quantity*
15. Contains exactly one [1..1] **riskCategory** with data type *Code*
16. Contains exactly one [1..1] **nuitritionalProblem** with data type *Code*
17. Contains exactly one [1..1] **appearance** with data type *String*
18. Contains exactly one [1..1] **bodyMassIndex** with data type *Real*
19. Contains exactly one [1..1] **bodyMassIndexPercentile** with data type *Real*
20. Contains exactly one [1..1] **nitrogenBalance** with data type *Real*
21. Contains exactly one [1..1] **tricepsSkinFold** with data type *Physical Quantity*
22. Contains exactly one [1..1] **tricepsSkinFoldPercentile** with data type *Real*
23. Contains exactly one [1..1] **subscapularSkinFoldPercentile** with data type *Real*
24. Contains exactly one [1..1] **subscapularSkinFold** with data type *Physical Quantity*
25. Contains exactly one [1..1] **armCircumference** with data type *Physical Quantity*
26. Contains exactly one [1..1] **armCircumferencePercentile** with data type *Real*
27. Contains exactly one [1..1] **calfCircumference** with data type *Physical Quantity*
28. Contains exactly one [1..1] **calfCircumferencePercentile** with data type *Real*
29. Contains exactly one [1..1] **boneFreeArmMuscleArea** with data type *Physical Quantity*
30. Contains exactly one [1..1] **boneFreeArmMuscleAreaPercentile** with data type *Real*
31. Contains exactly one [1..1] **patient**, where its type is *Patient*

## Nutritional Status

A record of the patient's nutritional status.

1. Extends *Dietetics Request*
2. Contains exactly one [1..1] **nutritionalStatus** with data type *Code*
   - A code representing the patient's nutritional status.

## Obligation Policy

An obligation policy may be used to specify additional privacy preferences specified by a client/patient. An obligation policy may be specified in addition to a ConstraintPolicy to fully describe a patient's access control preferences. In some cases an obligation policy may be used to indicate that the receiver of an information object may not be allowed to re-disclose it or persist that information object indefinitely. According to ISO 22600-2, ObligationPolicy instances 'are event-triggered and define actions to be performed by manager agent'.

1. Extends *Basic Policy*
2. Contains zero or more [0..*] **eventCode** with data type *Code*
   - This attribute identifies the action required before completing the step in the workflow. We assume it is coded concept but in today's implementations it's primarily an ad-hoc rule reference (e.g., the name of a data base stored procedure). An obligation may be associated with the release of an object. For example, it may require a

signature. This information is passed as rule for an application to enforce. In other cases it may require that an audit record be created.

# Observation Report

This class represents the written report prepared by the practitioner. Each type of report will typically contain multiple pre-defined sections, which are represented by the ReportSection association. The section may also contain the entire report as fullText. The report contains the observation result as text and optionally as a coded value.

1. Contains exactly one [1..1] **documentId** with data type *Id*

   • An identifier identifying each observation report; typically unique to the Observation Report.

2. Contains exactly one [1..1] **documentPart** with data type *Code*

   • "Indicates the type of report section that is represented by a given instance of this class." Possible values are: Clinical Diagnosis, Cytologic Diagnosis, Frozen Diagnosis, Gross Diagnosis, Microscopic Diagnosis, Pathologic Diagnosis, Pre-operative Diagnosis, Post-operative Diagnosis, Previous Cytologic Diagnosis, Clinical History, Findings, and Recommentations. Also clinicalHistory, findings, and recommendations have been added as ReportSections.

3. Contains exactly one [1..1] **documentText** with data type *String*

   • The text of the report in it's entirety, as signed by the practitioner. Can also mean the text that comprises the report section.

4. Contains zero or more [0..*] **interpretationResult** with data type *Code*

   • Captures the interpretation of an observation result. This property may contain multiple values in order to acccomodate interpretations or categorizations from multiple coding systems, but especially codes from the American College of Radiology Index for Radiological Diagnoses.

5. Contains exactly one [1..1] **author**, where its type is *Author*

   • Identifies the practitioner who created this Observation Report.

# Observation Request

A record of vital sign request. Definition of Act: "A record of something that is being done, has been done, can be done, or is intended or requested to be done." (HL7 3.0)

1. Extends *Healthcare Order*

2. Contains exactly one [1..1] **frequency** with data type *Time Interval*

   • An administration schedule for how often the requested vital(s) should be taken.

3. Contains exactly one [1..1] **orderedObservation** with data type *Code*

   • Identifies a kind of vital sign observation that can be, is, or has been requested as part of an order.

# Observed Reaction

An adverse drug reaction is any unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and suspected to be related to the drug. Adverse drug reactions can be divided into two types: Type A (augmented) reactions result from an exaggeration of a drug's normal pharmacological actions when given at the usual therapeutic dose and are normally dose-dependent (e.g. low blood pressure with antihypertensives, low blood sugar with insulin). They also include reactions that are not directly related to the desired clinical action of the drug (e.g. dry mouth associated with tricyclic antidepressants). Type B (bizarre) reactions represent a novel response not expected from the known pharmacological actions of the drug (e.g. anaphylaxis with penicillin, angioedema with angiotensin-converting enzyme-inhibiting drugs). They are not normally dependent on the dose.

1. Extends *Reaction*
2. Contains zero or one [0..1] **observationTime** with data type *Point In Time*

   - Date/time this allergy/adverse reaction was entered into the system.
3. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

## Obsolete Act

Contains information about the cancellation of an Action or record. This class is especially used for Orders.

1. Contains exactly one [1..1] **comment** with data type *String*

   - Any comments or remarks regarding the cancelation of the Activity or Order.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   - The date/time the Activity (e.g., Order) was cancelled.
3. Contains exactly one [1..1] **reason** with data type *Code*

   - The reason the Activity (e.g., Order) was cancelled.
4. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

   - Indicates the practitioner who created the cancellation. In other words, the practitioner who canceled the action.

## Obstetric Procedure

US Standard Certificate Of Birth Field 43 This class represents obstetric procedures performed during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Cervical cerclage; Tocolysis; External cephalic version, Successful; External cephalic version, Failed; None of the above.

1. Contains exactly one [1..1] **category** with data type *Code*

   - US Standard Certificate Of Birth Field 43 Categorizes the obstetric procedure performed during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Cervical cerclage; Tocolysis; External cephalic version, Successful; External cephalic version, Failed; None of the above.

## Occurrence Assessment

The gathering of a occurence assessment information( non surgical procedure/s that were performed during the Surgical process).

1. Contains exactly one [1..1] **categoryGrouping** with data type *Code*

   - This is the name of the category in which this occurrence may be grouped. It should be entered for all occurrences and will be used by Surgery Central Office for reporting needs. Required for National reporting
2. Contains exactly one [1..1] **date** with data type *Point In Time*

   - Contains the date and time of the occurrence.
3. Contains exactly one [1..1] **occurrenceId** with data type *Id*

   - Unique Identifier for the Occurrence.
4. Contains exactly one [1..1] **result**, where its type is *Occurrence Assessment Result*

   - The response result to an non surgical occurrence assessment question.

## Occurrence Assessment Result

Contains comments regarding the responses to the group of related non surgical occurrence assessment questions.

1. Contains exactly one [1..1] **id** with data type *Id*

   • uniquely identifies the intraoperative occurrence.

2. Contains exactly one [1..1] **occurenceCode** with data type *Code*

   • Code indicating the question asked as part of the non surgical occurrence assessment performed.

## Occurrence Result Text

Contains the response to an non surgical occurrence assessment question requiring a textual answer.

1. Extends *Occurrence Assessment Result*
2. Contains exactly one [1..1] **resultText** with data type *String*

   • Contains the response to an non surgical occurrence assessment question requiring a textual answer.

## Onset Of Labor

US Standard Certificate Of Birth Field 44 This class represents an adverse event associated with the onset of labor. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Premature rupture of the membranes (prolonged, > 12 hours); Precipitous labor; Prolonged labor; None of the above.

1. Contains exactly one [1..1] **category** with data type *Code*

   • US Standard Certificate Of Birth Field 44 Categorizes an adverse event associated with the onset of labor. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Premature rupture of the membranes (prolonged, > 12 hours); Precipitous labor; Prolonged labor; None of the above.

## Operation

This abstract class specifies the permission that is assigned by the consenter to specific users of client health record information. The permission may control collection, access, use, or disclosure of a specific type of protected information (including IIHI). Note that this class was named 'OperationType' in the original DAM.

1. Contains zero or one [0..1] **operationCategory** with data type *Code*

   • This attribute identifies the operation that is either allowed or prohibited by the permission. Note that this property was named 'OperationCode' in the original DAM.

## Operator

The HL7 Version 3 definition for Participation class is an association between an Act and a Role. The Entity playing the Role is the actor. In this example, the Entity Pilot is participating in the Act of an AirFlight in the Role of operator of an AirFlight. A Participation represents performance of an Act.

1.

# Order Action

A record of action has been taken on an order, including the signature and verification required to release to the service.

1. Contains exactly one [1..1] **actionCategory** with data type *Code*
   - Indicates the action that was ordered (e.g., New, Hold, Discontinue, etc)
2. Contains zero or one [0..1] **advanceBeneficiaryNoticeCode** with data type *Code*
   - "This field indicates the status of the patient's or the patient's representative's consent for responsibility to pay for potentially uninsured services. This element is introduced to satisfy CMS Medical Necessity requirements for outpatient services. This element indicates (a) whether the associated diagnosis codes for the service are subject to medical necessity procedures, (b) whether, for this type of service, the patient has been informed that they may be responsible for payment for the service, and (c) whether the patient agrees to be billed for this service" - HL7 Version 2.8, ORC-20
3. Contains zero or one [0..1] **advanceBeneficiaryNoticeOverrideReason** with data type *String*
   - "This field contains the reason why the patient did not sign an Advanced Beneficiary Notice." - HL7 Version 2.8, ORC-26
4. Contains exactly one [1..1] **comment** with data type *String*
   - Contains any remarks about the Order Action
5. Contains exactly one [1..1] **effectiveDate** with data type *Point In Time*
   - "Contains the date/time that the changes to the request took effect or are supposed to take effect...." - HL7 Version 2.8, ORC-15
6. Contains exactly one [1..1] **orderActiondate** with data type *Point In Time*
   - "Contains the date and time of the event that initiated the current transaction as reflected in ORC-1 Order Control Code." - HL7 Version 2.8, ORC-9
7. Contains exactly one [1..1] **reasonForAction** with data type *Code*
   - "This field contains a coded explanation of the reason for the order event described by the order control code " - HL7 Version 2.8, ORC-16
8. Contains exactly one [1..1] **reasonForActionNarrative** with data type *String*
   - "This field contains the explanation (in text form) of the reason for the order event described by the order control code" - HL7 Version 2.8, ORC-16
9. Contains exactly one [1..1] **releaseStatus** with data type *Code*
   - This field tracks the status of the order action. This is different from the order status. Valid values are Unreleased, Pre-release, Rejected, or Discontinued due to Edit.
10. Contains exactly one [1..1] **author**, where its type is *Author*
    - "This field contains the identity of the person who initiated the event represented by the corresponding order control code. For example, if the order control code is CA (cancel order request), this field represents the person who requested the order cancellation. This person is typically a care provider but may not always be the same as ORC-12 ordering provider" - HL7 Version 2.8, ORC-19
11. Contains zero or one [0..1] **dataEnterer**, where its type is *Data Enterer*
    - "Contains the identity of the person who actually keyed the request into the application." - HL7 Version 2.8, ORC-10
12. Contains zero or more [0..*] **detectedIssueEvent**, where its type is *Detected Issue Event*
    - Identifies any issues that were detected (aka Order Checks) during the creation of the Order Action.
13. Contains zero or one [0..1] **enteringDevice**, where its type is *Device Instance*
    - "This field identifies the physical device (terminal, PC) used to enter the order." - HL7 Version 2.8, ORC-18
14. Contains zero or one [0..1] **orderingFacility**, where its type is *Service Delivery Location*

- "This field contains the name of the facility placing the order." - HL7 Version 2.8, ORC-21 "This field contains the address of the facility placing the order." - HL7 Version 2.8, ORC-22 "This field contains the telephone number of the facility placing the order." - HL7 Version 2.8, ORC-23

15. Contains zero or one [0..1] **ordForingLocation**, where its type is *Service Delivery Location*

- "This field identifies the organization that the enterer belonged to at the time he/she enters/maintains the order, such as medical group or department." - HL7 V2 ORC 17

16. Contains zero or one [0..1] **releaseAct**, where its type is *Release Act*

- "To allow to be known, issued, done, or exhibited: to release an article for publication." - Dictionary.com. Represents the release of an Order Action such that it is now visible to and actionable by other persons.

17. Contains zero or more [0..*] **relatedOrderAction**, where its type is *Related Order Action*

- Contains other OrderActions to which this OrderAction is related.

18. Contains exactly one [1..1] **trigger**, where its type is *Order Patient Event*

- A patient-related event that automatically triggers an order action. For example, if the patient is scheduled for surgery, an particular Order Action might be placed on hold (i.e., "held") four hours before surgery.

19. Contains zero or more [0..*] **verifier**, where its type is *Verifier*

- "Contains the identity of the person who verified the accuracy of the entered request." - HL7 Version 2.8, ORC-11 "A person who verifies the correctness and appropriateness of the service (plan, order, event, etc.) and hence takes on accountability."- HL7 V3

20. Contains zero or one [0..1] **chartReview**, where its type is *Chart Review*

- Identifies a chart review that was performed on this Order Action.

## Order Patient Event

A patient-related event that automatically triggers an Order Action. For example, if the patient is scheduled for surgery, an particular Order Action might be placed on hold (i.e., "held") four hours before surgery.

1. Contains exactly one [1..1] **patientRelatedEventCode** with data type *Code*

- Identifies the patient-related event that automatically triggers an order action.

2. Contains zero or one [0..1] **author**, where its type is *Author*

- Identifies the clinician who recorded that the Patient Event occurred.

## Orderable Pharmacy Item

"This field identifies the treatment product or treatment ordered to be given to the patient; it is analogous to OBR-4-universal service ID in function. Examples of treatments products include medications and certain devices or supplies, e.g., inhaler spacers, blood glucose monitors, syringes, infusion sets, which might require prescription." - HL7 Version 2.8, RXO-1

1. Contains exactly one [1..1] **product**, where its type is *Product*

## Ordering Provider

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Organism

The organism identified as being present within a specimen sample. "Organism" as used here is not the full spectrum of possible living things, but rather is limited to a member of the following: Bacteria, Fungus, Mycobacterium, Parasite, or Virus.

1. Contains exactly one [1..1] **organism** with data type *Code*

   • The organism identified. Since this unique identifier is a coded element, it contains both a code and a display name.

# Organization

"An Entity representing a formalized group of entities with a common purpose (e.g. administrative, legal, political) and the infrastructure to carry out that purpose." (HL7)

1. Contains exactly one [1..1] **address** with data type *Address*

   • The person's office address. First choice for business related contacts during business hours.
2. Contains exactly one [1..1] **id** with data type *Id*

   • A unique string or token used to identify the organization
3. Contains exactly one [1..1] **name** with data type *String*

   • The name of the organization.
4. Contains exactly one [1..1] **asOrganizationalProvider**, where its type is *Organizational Provider*

   • Represents information about an organization which is authorized to provide health care services.

# Organization Name

"A word or term by which a person or thing is commonly and distinctively known." - Collins English Dictionary. This datatype represents a organization's name.

1. Contains exactly one [1..1] **name** with data type *String*

   • "A word or term by which a person or thing is commonly and distinctively known." - Collins English Dictionary. This property represents a organization's name. Note that the datatype is simply a string, unlike HL7 V3's complex collection of name parts.

# Organizational Provider

An organization which is authorized to provide health care services.

1. Extends *Healthcare Provider*
2. Contains zero or more [0..*] **networkAffliliation**, where its type is *Network Affliliation*

   • Represents information about the association between an Individual Healthcare Provider and a Network. A Network is an organization which maintains a contractual relationship with multiple providers and with Health Plans.
3. Contains exactly one [1..1] **organization**, where its type is *Organization*

   • Links to information about the Organizaton which is playing the role of Practitioner.

## Original Provider

1.  Contains exactly one [1..1] **comment** with data type *String*
2.  Contains exactly one [1..1] **time** with data type *Point In Time*

## Other Amount

1.  Contains exactly one [1..1] **amount** with data type *Monetary Amount*
2.  Contains exactly one [1..1] **code** with data type *Code*

## Other Policy Info

1.  Contains exactly one [1..1] **medicaidId** with data type *Id*
    *   X2 - contains the two-character state code
2.  Contains exactly one [1..1] **medicaidAgencyId** with data type *Id*
    *   X2 - contains the two-character state code
3.  Contains exactly one [1..1] **medigapId** with data type *String*

## Other Provider

1.  Contains exactly one [1..1] **comment** with data type *String*
2.  Contains exactly one [1..1] **time** with data type *Point In Time*

## Other Treatment

Other treatment that cannot be defined as surgery, radiation, or systemic therapy.

1.  Extends *Cancer Treatment*
2.  Contains exactly one [1..1] **otherTreatment** with data type *Code*
    *   Identifies other treatment that cannot be defined as surgery, radiation, or systemic therapy according to the defined data elements in the FORDS manual. Possible values are None; Other; 'Other - Experimental; Other - Double Blind; Other - Unproven; Refusal; Recommended, unknown if administered; Unkown; etc.

## Outcome

This class is used specify the outcome of Behavioral Health treatment as described by changes to the patient's state reflected in the that patient's responses to assessment questions.

1.  Contains exactly one [1..1] **startDate** with data type *Point In Time*
2.  Contains exactly one [1..1] **endData** with data type *Point In Time*
3.  Contains at least one [1..*] **performanceMeasure** with data type *Id*

## Outpatient Medication Dispense

The dispensing or issuing of medication to an outpatient or representative.

1. Extends *Medication Dispense*
2. Contains zero or one [0..1] **dateTimeReleased** with data type *Point In Time*
   - The date and time that the medication was dispensed. Dispense = "to make up and distribute (medicine), esp. on prescription." (Random House Unabridged Dictionary)
3. Contains exactly one [1..1] **deliveryModality** with data type *Code*
   - Indicates whether the medication dispensed will be mailed to the patient, or the patient will pick up the medication at the pharmacy window, or home delivery.
4. Contains zero or one [0..1] **levelOfUnderstanding** with data type *Code*
   - Impression of how well the patient understood the education received. Example values include: Poor, Fair, Good, Group - no assessment, Refused, etc.
5. Contains zero or one [0..1] **numberOfRefillsRemaining** with data type *Integer*
   - Represents the calculated value of number of refills. CHDR sends number of refills but not enough information such as numberofrefillsauthorized to properly calculate the value.
6. Contains exactly one [1..1] **partialFillStatus** with data type *Code*
7. Contains exactly one [1..1] **paymentType** with data type *Code*
8. Contains zero or one [0..1] **salesTransactionId** with data type *String*
9. Contains zero or one [0..1] **salesTransactionTime** with data type *Point In Time*
   - The actual date and time the medication was released for inventory purposes and copay billing if applicable. (VistA) In the commercial world, "release date" typically corresponds to the date/time that the patient took possession of the medication. Need to verifiy the VistA usage.
10. Contains exactly one [1..1] **wasPatientCounseled** with data type *Boolean*
    - Captures whether or not the patient received counseling regarding the dispensed medication.
11. Contains zero or one [0..1] **couponRedemption**, where its type is *Coupon Redemption*

## Outpatient Visit

One or more encounters at one site within a specified length of time.

1. Extends *Encounter Event*
2. Contains exactly one [1..1] **serviceCategory** with data type *Code*
   - A categorization of the outpatient visit, based on the services provided and/or the circumstances under which the visit occurred. Possible values include: Ambulatory, In-Hospital (i.e., an patient made an "outpatient" visit while concurrently being an inpatient), Day Surgery, Observation, Nursing Home, Day Hospitalization, etc.

## Oxygen Administration

This class includes information about any Supplemental Oxygen administered to the patient; it affects the interpretation of a pulse oximetry observation.

1. Contains zero or one [0..1] **concentration** with data type *Physical Quantity Interval*
   - Concentration % entered in Vista. Note that currently the rate and concentration are entered as freetext in VistA and thus the"rateAndConcentration" attribute will be used. As soon as this this field enters usage, the "rateAndConcentration" will be deprecated.
2. Contains zero or one [0..1] **flowRate** with data type *Rate Quantity*
   - "Identifies the speed with which the substance is introduced into the subject. Expressed as a physical (extensive) quantity over elapsed time (e.g., examples are 100 mL/h, 1 g/d, 40 mmol/h, etc.)
   " (HL7) Note that currently in VistA the rate and concentration are entered as freetext in VistA and thus the "rateAndConcentration" attribute will be used. As soon as this this field enters usage, the "rateAndConcentration" will be deprecated.

# Packaged Medicinal Product

"A product in a container, or package. Represents the entirety of a product that has been packaged in a container for sale or supply; this representation of the Packaged Medicine may be in its real or actual form as something made, or described more conceptually, generically, or virtually, but it must represent a product contained in a package." - HL7 V3

1. Contains exactly one [1..1] **capType** with data type *Code*

   - <p> "The type of container cap. In some cases, it is important for this to be consistent with decapping, piercing or other automated manipulation. Notions such as "child-proof cap" or "resealable bag" may also be indicated here." - HL7 V3 </p>

2. Contains zero or one [0..1] **code** with data type *Integer*
3. Contains zero or more [0..*] **codeModifier** with data type *Code*
4. Contains exactly one [1..1] **description** with data type *String*

   - A text description of the packaged product. This may include a discussion of the container.

5. Contains exactly one [1..1] **name** with data type *String*

   - A name for the packaged product, usually the same as the name of the product (except where the name contains some reference to the packaging (e.g., "tempo super-pack", "tic-tac easy-box").

6. Contains exactly one [1..1] **nationalDrugCode** with data type *Code*

   - "Each drug product listed under Section 510 of the Federal Food, Drug, and Cosmetic Act is assigned a unique 10-digit, 3-segment number. This number, known as the National Drug Code (NDC), identifies the labeler/ vendor, product, and trade package size." (FDA)

7. Contains exactly one [1..1] **packageCapacity** with data type *Physical Quantity*

   - Captures the number of product units the package would contain if fully loaded.

8. Contains exactly one [1..1] **packageType** with data type *Code*

   - The package type, such as "box" or "bottle". Terminology: Equivelent to HL7 V3 ContainerEntityType.

9. Contains exactly one [1..1] **manufacturer**, where its type is *Manufacturer*
10. Contains exactly one [1..1] **medicinalProduct**, where its type is *Medicinal Product*
11. Contains zero or more [0..*] **productInstance**, where its type is *Medicinal Product Instance*
12. Contains zero or more [0..*] **labeler**, where its type is *Labeler*

# Palliative Procedure

The relieving or soothing the symptoms of the patient's disease or disorder without effecting a cure. Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.

1. Contains exactly one [1..1] **palliativeProcedure** with data type *Code*

   - Identifies any procedure performed in an effort to palliate or alleviate symptoms. Palliative procedures are performed to relieve symptoms. Possible Values are No palliative care; Surgery; Radiation; Chemotherapy/ hormone therapy/systemic drugs; Pain management; 1, 2, and/or 3 w/o 4; 1, 2, and/or 3 with 4; Palliative care, type unknown; Unknown, not stated; etc.

2. Contains zero or one [0..1] **palliativeProcAtFacility**, where its type is *Service Delivery Location*

   - Indicates the name of the institution providing treatment.

# Parasite

1. Extends *Organism*

2. Contains exactly one [1..1] **stage** with data type *Code*

## Pathologic Extension Evaluation

This is the extension caused by or altered by or manifesting disease or pathology; "diseased tonsils"; "a morbid growth"; "pathologic tissue"; "pathological bodily processes" Source: The American Heritage Stedman's Medical Dictionary

1. Contains exactly one [1..1] **pathologicExtension** with data type *Code*

   • Indicates the farthest documented pathologic extension of tumor from the prostate, either by contiguous extension or distant metastasis. Possible Values are 00 IN SITU: Noninvasive; intraepithelial; Involvement of one lobe, NOS (B) (pT2a); More than one lobe involved (B) (pT2b); Localized, NOS; confined to prostate, NOS; Intracapsular involvement only; Stage B, NOS, (pT2, | NOS); Into prostatic apex/arising in prostatic apex, NOS; Arising in prostatic apex; Extending into prostatic apex; Invasion into (but not beyond) prostatic capsule (C1); No extracapsular ; extension but margins involved; Extension to periprostatic tissue (C1):; Extracapsular extension (beyond prostatic capsule), NOS, Through capsule, NOS; Unilateral extracapsular extension (pT3a); Bilateral extracapsular extension (pT3a); Extension to seminal vesicle(s) (C2) (pT3b); Extracapsular extension and margins involved; etc.

## Pathology Result

This class documents each Anatomicalpathology observation event (note that in this case, "AnatomicalPathology" includes Cytopathology, ElectronMicroscopy, and SurgicalPathology and some autopsy observations.

1. Extends *Reportable Result*
2. Contains exactly one [1..1] **comments** with data type *String*

   • Contains comments about the pathological observation in textual format.
3. Contains exactly one [1..1] **dateSpecimenReceived** with data type *Point In Time*

   • Contains the date the the specimen was received.
4. Contains exactly one [1..1] **anatomicPathologist**, where its type is *Individual Provider*

   • The person in the role of responsible party the Pathologist.

   • A clinician who is board certified in the field of Anatomic Pathology. This person may or may not also be board certified in the field of Clinical Pathology. This person is responsible for applying clinical judgement to arrive at an interpretation of the subject of the study.
5. Contains zero or more [0..*] **image**, where its type is *Image*

   • Image associated with surgical pathology reports are stored in this multiple within the surgical pathology field of the lab data file.

   • Image associated with surgical pathology reports are stored in this multiple within the surgical pathology field of the lab data file.
6. Contains exactly one [1..1] **residentAnatomicPathologist**, where its type is *Individual Provider*

   • The person in the role of resident Pathologist.

   • A clinician who is currently undergoing a Anatomic Pathology residency program. This person is responsible for applying clinical judgement to arrive at an interpretation of the subject of the study, subject to the delegated authority and confirmation from the anatomic pathologist.
7. Contains zero or more [0..*] **diagnosis**, where its type is *Diagnosis*

   • The process of determining by examination the nature and circumstances of a diseased condition.

   • The process of determining by examination the nature and circumstances of a diseased condition.
8. Contains exactly one [1..1] **dataEnterer**, where its type is *Individual Provider*

- The person in the role of data enterer.

- The person in the role of data enterer.

9. Contains zero or more [0..*] **labReportSection**, where its type is *Lab Report Section*

10. Contains zero or one [0..1] **clinicalPathologist**, where its type is *Individual Provider*

- A clinician who is board certified in the field of Clinical Pathology. This person may or may not also be board certified in the field of Anatomic Pathology. This person is responsible for applying clinical judgement to arrive at an interpretation of the subject of the study, but limited to the clinical, non-anatomic pathology testing (e.g., hematology, chemistry)

## Patient

A role of a person or animal as a recipient of health care services from a healthcare provider.

1. Contains at least one [1..*] **patientId** with data type *Id*

- An identification of the person or animal while in the role of Patient. This id is basically an 'account number'. A single person will have multiple patient ids at various healthcare providers. Indeed it is not uncommon for a person to have multiple patient ids or 'account numbers' at a single institution - often a new account number is created for each episode of care. This is also the case in long-term care situations, where a new account number may be created each month in order to facilitate monthly billing. "This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient (e.g., medical record number, billing number, birth registry, national unique individual identifier, etc.)." - HL7 Version 2.8, PID-3 "This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account." - HL7 Version 2.8, PID-18

2. Contains exactly one [1..1] **status** with data type *Code*

- Indicates the state of the Patient's record, as defined in the state-transition model in the HL7 RIM. Examples include Active, Pending, Terminated, etc. Additional states might be defined such as 'Temporary' or 'Permanent'.

3. Contains zero or one [0..1] **healthRecord**, where its type is *Health Record*

- Records regarding the Patient's healthcare that are subject to the consent rules in Consent Directives.

4. Contains zero or one [0..1] **primaryCareProvider**, where its type is *Primary Care Provider*

- A doctor selected by the patient to be the first physician contacted for any medical problem. The doctor acts as the patient's regular physician and coordinates any other care the patient needs, such as a visit to a specialist or hospitalization.

5. Contains zero or more [0..*] **patientRisk**, where its type is *Patient Risk*

## Patient Behavioral Health

This class represents a specialization of the Patient role declared in the FHIM Patient Demographics domain.

1. Extends *Human Patient*

2. Contains exactly one [1..1] **biologicalGender** with data type *Code*

- This attribute is currently in this domain but it will be moved to 'Person'. It specifies the biological gender of a client/patient. This attribute is optional (i.e. cardinality [0..1]). HL7 Version 3 does not currently have a Concept Domain corresponding to Biological Gender. There is a concept domain for AdministrativeGender which has the definition ' the gender of a person used for administrative purposes (as opposed to clinical gender)' .

3. Contains zero or one [0..1] **immigrationStatus** with data type *Code*

- The primary purpose for this attribute is for reporting purposes, although in some instances, immigration status could be used to determine eligibility for Behavioral Health services. Example enumerations have

been provided for this attribute in the Terminology section of this publication. This attribute is optional (i.e. cardinality [0..1]).

4. Contains zero or one [0..1] **custodialStatus** with data type *Code*

   - The primary purpose for this attribute is for reporting purposes. Custodial status refers to the legal guardianship according to example enumerations that were provided to this analysis and which appear in the Terminology section of this publication. There are no values currently defined to indicate prison incarceration however. This attribute is optional (i.e. cardinality [0..1]).

5. Contains zero or more [0..*] **psychiatricDiagnosis**, where its type is *Psychiatric Diagnosis*

   - This is a directed association between a behavioral patient/client and their psychiatric diagnoses.

   - This is an association between the patient and their psychiatric diagnoses. The cardinality of this association is * to allow zero or more psychiatric diagnoses to be specified.

6. Contains zero or more [0..*] **problem**, where its type is *Health Concern*

   - This is a directed association between a behavioral patient/client and all of their behavioral health problems or concerns.

   - This is an association between the patient and their problems. The cardinality of this association is * to allow zero or more problems to be specified.

7. Contains zero or one [0..1] **historyOfAbuseOrNeglect**, where its type is *History Of Abuse Or Neglect Record*

   - This is an association between the patient and their history of abuse or neglect history records.

8. Contains zero or one [0..1] **suicidalIdeation**, where its type is *Suicidal Ideation Observation*

   - This is a directed association between a patient/client and the details of a health concern related to suicidal ideation.

   - This is an association between the patient and their records of suicidal ideation, suicide attempts, and alerts.

## Patient Case Management

1. Contains exactly one [1..1] **caseId** with data type *Id*

   - A unique identifier that the payer or information source can use to identify the person as a Policy Holder.
2. Contains zero or more [0..*] **diagnosisList**, where its type is *Diagnosis List Entry*
3. Contains exactly one [1..1] **dateRange** with data type *Time Interval*
4. Contains zero or more [0..*] **priorAuthorization**, where its type is *Prior Authorization*
5. Contains exactly one [1..1] **isResidentOfCmsQualifiedFacility** with data type *Boolean*
6. Contains zero or more [0..*] **clinicalInformation**, where its type is *Clinical Information*

## Patient Document Presentation

1. Contains exactly one [1..1] **dateOfPresentation** with data type *Point In Time*
2. Contains at least one [1..*] **vaccineInformationStatement**, where its type is *Vaccine Information Statement*

## Patient Education

This class captures information about the education given to the patient or his responsible care giver.

1. Contains zero or one [0..1] **comment** with data type *String*

- Comment related to the patient's education.

2. Contains exactly one [1..1] **educationTopic** with data type *Code*

   - Represents the education given to the patient.

3. Contains exactly one [1..1] **id** with data type *Id*

   - A unique string or token used to identify the instance of the patient education.

4. Contains exactly one [1..1] **author**, where its type is *Author*

   - Indicates the practitioner who provided the education or counseling to the patient.

5. Contains zero or one [0..1] **location**, where its type is *Service Delivery Location*

   - The location at which the patient education or counseling was provided.

6. Contains exactly one [1..1] **patient**, where its type is *Patient*

   - The person to whom the education or counseling was provided.

7. Contains zero or one [0..1] **service**, where its type is *Service Department*

   - The service department at which the patient education or counseling was provided.

8. Contains zero or one [0..1] **levelOfUnderstanding**, where its type is *Level Of Understanding*

   - Impression of how well the patient understood the education or counseling received.

9. Contains exactly one [1..1] **visit**, where its type is *Encounter Event*

   - The visit during which the education or counseling was provided.

## Patient Entered Data

1. Contains exactly one [1..1] **patient**, where its type is *Patient*
2. Contains zero or more [0..*] **patientJournalEntry**, where its type is *Patient Journal Entry*
3. Contains zero or more [0..*] **patientEnteredVitalSign**, where its type is *Patient Entered Vital Sign*

## Patient Entered Vital Sign

1. Contains exactly one [1..1] **vitalSignObservationEvent**, where its type is *Vital Sign Observation Event*

## Patient Followup History

Contains information pertinent patient followup history. e.g. follow-up status, vital status, the source from which the latest follow-up information was obtained. etc.

1. Contains exactly one [1..1] **dateOfLastContactOrDeath** with data type *Point In Time*

   - The date of last contact with the patient or the date of death.

2. Contains exactly one [1..1] **followupSource** with data type *Code*

   - Indicates the source from which the latest follow-up information was obtained. Possible values are Reported hospitalization; Readmission; Physician; Patient; Department of Motor Vehicles; Medicare/Medicaid file; Death certificate; Other; Unknown; etc.

3. Contains exactly one [1..1] **followupStatus** with data type *Code*

   - Indicates the patient's followup status. Possible values are Inactive; Active; LTF; etc.

4. Contains exactly one [1..1] **vitalStatus** with data type *Boolean*

   - Indicates the vital status of the patient as of the date entered in DATE OF LAST CONTACT OR DEATH. Possvile values are Dead; Alive; etc.

5. Contains zero or one [0..1] **followupRegistry**, where its type is *Service Delivery Location*

   • Cancer followup registry

6. Contains exactly one [1..1] **lastFollowupContact**, where its type is *Contact Party*

   • The Patient's last follow-up contact.

# Patient IT User

This class represents additional properties of the Patient when communicating with them electronically. This class was called simply 'Patient' in the HL7 Security and Privacy DAM, the definition of which is: 'This class is intended to capture the properties of a Consenter/Client or 'Patient'. See 'Actors' specified in the Use Case Analysis for additional detail. A consenter may be the person whose preferences it represents or their designated Substitute Decision Maker (SDM).'

1. Extends *Patient*
2. Contains exactly one [1..1] **sharedSecret** with data type *String*

   • This keyword/shared secret may be used by a patient to provide temporary access to their electronic health records. This attribute is required to support use case P.12 originated in Canada.

# Patient Journal Entry

1. Contains exactly one [1..1] **journalEntryType** with data type *Code*
2. Contains exactly one [1..1] **entryDate** with data type *Point In Time*
3. Contains exactly one [1..1] **comments** with data type *String*
4. Contains exactly one [1..1] **allowAccessByClinicalStaff** with data type *Boolean*

# Patient Lite

<deprecated>

1. Contains exactly one [1..1] **id** with data type *Id*

   • <deprecated>

2. Contains zero or one [0..1] **name** with data type *Person Name*

   • <deprecated>

# Patient Record Flag Assignment

This class contains attributes related to the original assignment of the flag only.

1. Contains zero or one [0..1] **id** with data type *Id*

   • Internal entry number (IEN) which is assigned to each record of this file. [A unique identifier for the Act. (HL7 3.0)]

2. Contains exactly one [1..1] **flagName** with data type *Code*

   • Indicates the Patient Record Flag Name that is assigned to a patient. Possible values are behavioral; etc.

3. Contains exactly one [1..1] **assignmentStatus** with data type *Code*

   • Indicates if the patient record flag assignment is Active or Inactive for this Patient. Possible values are Inactive; Active etc.

4. Contains zero or one [0..1] **assignmentReviewDate** with data type *Point In Time*

   • The date that the flag assignment is due for review to determine continuing appropriateness

5. Contains exactly one [1..1] **assignmentNarrative** with data type *String*

   • This is a text description of the incident or reason that generated the need for this patient record flag assignment, followed by the recommended actions that should be performed by a person working with this specific patient.

6. Contains at least one [1..*] **assignmentHistory**, where its type is *Patient Record Flag Assignment History*

   • Patient Record Flag Assignment History.

7. Contains exactly one [1..1] **patient**, where its type is *Patient*

   • Patient who is the subject of this Patient Record Flag.

8. Contains exactly one [1..1] **assignmentOwnedBy**, where its type is *Service Delivery Location*

   • Indicates the current site that owns this patient flag assignment.

9. Contains exactly one [1..1] **assignmentOriginatedBy**, where its type is *Service Delivery Location*

   • Indicates the site that initially assigned the patient record flag to this patient.

## Patient Record Flag Assignment History

This class contains attributes related to all subsequent action of an original assignment of the flag. This is the audit information associated with PRF Assignment.

1. Contains zero or one [0..1] **assignmentHistoryId** with data type *Id*

   • Internal entry number (IEN) which is assigned to each record of this file. A unique identifier for the Act. (HL7 3.0)

2. Contains exactly one [1..1] **assignmentDate** with data type *Point In Time*

   • The Date and Time of either the initial ASSIGNMENT of the PATIENT RECORD FLAG or the REVIEW Date/Time of the PATIENT RECORD FLAG.

3. Contains exactly one [1..1] **assignmentHistoryAction** with data type *Code*

   • Indicates the event that created this PRF ASSIGNMENT HISTORY record. Possible values are New Assignment; Continue; Inactivate; Reactivate; Entered in Error; etc.

4. Contains exactly one [1..1] **assignmentHistoryComments** with data type *String*

   • The comments associated with the patient record flag assignment history. The history comments should describe the reason that the history record was generated.

5. Contains zero or one [0..1] **tiuDocument**, where its type is *Clinical Document Event*

   • The Progress Note IEN that will be linked to this assignment history record.

6. Contains exactly one [1..1] **verifier**, where its type is *Individual Provider*

7. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

## Patient Record Task

This class contains all attributes - supporting as well as tracking of each one's cancellation or fulfillment - related to patient tasks (Care Management). Note that this class may not be supported by HDR but rather from other repository.

1. Contains exactly one [1..1] **dateTaskCreated** with data type *Point In Time*

   • This is the date and time the task was created.

2. Contains exactly one [1..1] **taskSubjectDescription** with data type *String*

   • This is the subject of the task.

3. Contains exactly one [1..1] **taskPriority** with data type *Code*

   - Priority for accomplishing this task. Possible values are LOW; MEDIUM; HIGH

4. Contains zero or one [0..1] **taskDueDate** with data type *Point In Time*

   - The date [and time] by which this task should be completed.

5. Contains exactly one [1..1] **patient**, where its type is *Patient*

   - The patient that this task applies to.

6. Contains zero or more [0..*] **item**, where its type is *Linked Item*

   - Item linked to this task.

7. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

## Patient Reported Medication

Contains information about a medication which the patient has received or is receiving, as reported by the patient.

1. Contains exactly one [1..1] **discontinueDate** with data type *Point In Time*

   - This is the date the patient stopped taking the patient reported Medication.

2. Contains exactly one [1..1] **dosage** with data type *Physical Quantity Interval*

   - The amount of the described medication to be administered to the patient in a single point in time.

3. Contains exactly one [1..1] **orderablePharmacyItem**, where its type is *Orderable Pharmacy Item*

## Patient Risk

1.

## Patient State Observation

Provides an indication of the state of the patient at the time of the observation. For example, a blood pressure may be taken while the patient is exercising or at rest.

1. Contains exactly one [1..1] **patientState** with data type *Code*

   - Provides an indication of the state of the patient at the time of the observation. For example, a blood pressure may be taken while the patient is exercising or at rest.

## Patient Subscriber

1. Contains exactly one [1..1] **subscriber**, where its type is *Subscriber*

## Patient Transfer

The act of transferring a patient from one location or responsible organization to another. Note that a transfer from organization to another will, by definition, trigger a new encounter. Note that a transfer from one location to another may trigger a new encounter depending on whether the responsible organization has changed. A movement from one bed within the same ward to another probably will not, but a movement from one ward to another probably would.

1. Contains exactly one [1..1] **category** with data type *Code*

- Categorizes the patient transfer. Possible values include Admission, Transfer, Discharge, etc.

2. Contains exactly one [1..1] **id** with data type *Id*

   - Uniquely identifies the patient transfer

3. Contains exactly one [1..1] **movementDate** with data type *Point In Time*

   - Date of the movement of the patient.

4. Contains exactly one [1..1] **transferFromLocation**, where its type is *Service Delivery Location*

   - "Contains the prior patient location if the patient is being transferred. The old location is null if the patient is new." - HL7 Version 2.8, PV1-6

5. Contains exactly one [1..1] **transferToLocation**, where its type is *Service Delivery Location*

   - "Contains the prior patient location if the patient is being transferred. The old location is null if the patient is new." - HL7 Version 2.8, PV1-6

6. Contains exactly one [1..1] **transferReason** with data type *String*

   - "Contains the short description of the reason for a patient location change." - HL7 Version 2.8, PV2-4

## Patient Treatment Assessment

Contains information pertinent to patient's pre treatment assessment.

1. Contains exactly one [1..1] **dateFirstSurgicalProcedure** with data type *Point In Time*

   - The earliest date on which any first course surgical procedure was performed.

2. Contains exactly one [1..1] **dateOfNoTreatment** with data type *Point In Time*

   - The date on which it is decided not to treat the patient. If the physician decides not to treat the patient, record the date of this decision as the DATE OF NO TREATMENT. The physician may decide not to treat the patient because of co-morbid conditions, advanced disease, or because the accepted management of the cancer is to observe until the disease progresses or until the patient becomes symptomatic.

3. Contains exactly one [1..1] **readmissionWithinThirtyDaysSurgery** with data type *Code*

   - Records a readmission to the same hospital within 30 days of discharge following a hospitalization for surgical resection of the primary site. Possible values are No surgery/not readmitted; Unplanned readmission; Planned readmission; Planned and unplanned readmission; Unknown if surgery or readmission; etc.

4. Contains exactly one [1..1] **reasonForNoRadiation** with data type *Code*

   - Indicates the reason that no regional radiation therapy was administered to the primary site. Possible values are Radiation administered; Not part of 1st course; Contraindicated; Patient died prior to tx; Not administered, no reason; Refused by patient; Unknown if administered; Unknown, death cert/autopsy cases; etc.

5. Contains exactly one [1..1] **reasonNoSurgeryOfPrimary** with data type *Code*

   - Indicates the reason for no SURGERY OF PRIMARY SITE, SCOPE OF LYMPH NODE SURGERY, and SURGERY OF OTHER SITES/NODES. Codes 1-2 and 6-9 are valid only when the field SURGERY OF PRIMARY SITE is coded 00, SCOPE OF LYMPH NODE SURGERY is coded 0, and SURGERY OF OTHER SITES/NODES is coded 0. Possible values are Surgery performed; Not part of 1st course; Contraindicated/risk factors; Patient died prior to surgery; No reason in record; Refused by patient; Unknown if performed; Unknown/dx at autopsy/death cert; etc.

## Payee

1. Contains exactly one [1..1] **address** with data type *Us Mailing Address*
2. Contains exactly one [1..1] **billingType** with data type *Code*
3. Contains exactly one [1..1] **id** with data type *Id*

**4.** Contains exactly one [1..1] **name** with data type *String*

## Payer

The public or private organization that is responsible for payment for health care expenses. Payers may be insurance companies or self-insured employers.

**1.** Contains exactly one [1..1] **address** with data type *Address*

- The full address of the organization (e.g. 112 Main St, Suite 23, Cambridge, MA, 02140-3314, USA) it is broken down into its constituent parts (street address line 1, street address line 2, city name, state or province code, postal code, country code)

**2.** Contains exactly one [1..1] **id** with data type *Id*

- A unique identifier that is used to identify the payer. For example Medicare assigns an identifier to a payer, Blue Cross/Blue Shield assigns an identifier to a payer. 270/271 p 343, 358 example

**3.** Contains exactly one [1..1] **name** with data type *String*

- The name of the organization (e.g. Harvard Pilgrim Health Care)

**4.** Contains exactly one [1..1] **phone** with data type *Telecommunications*

- The phone number for a person at their office location. First choice for business related contacts during business hours.

**5.** Contains exactly one [1..1] **pointOfContact** with data type *Person Name*
**6.** Contains exactly one [1..1] **healthPlan**, where its type is *Health Plan*
**7.** Contains zero or more [0..*] **organization**, where its type is *Organization*
**8.** Contains zero or more [0..*] **PayerOrAgent**, where its type is *Processor*

## Performance Monitors

A record of the performance measures to be monitored during the patient's care.

**1.** Contains exactly one [1..1] **performanceMonitor** with data type *Code*

- A performance measure to be monitored for this patient.

## Performer

**1.** Contains exactly one [1..1] **comment** with data type *String*
**2.** Contains exactly one [1..1] **time** with data type *Point In Time*

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1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Periodontal Observation

Prerio Perio Dental Obseravation during treatment planning.

1. Contains exactly one [1..1] **periodontalInformation** with data type *String*

   • Information for the periodontal examination used in by the Discus program.
2. Contains exactly one [1..1] **perioNullData** with data type *String*

   • Represents the Discus dental hex code for perio nulls to differentiate between a '0'.

## Permission

This class corresponds to a Role-Based Access Control (RBAC) permission. It specifies an information object and action/operation allowed on that object. A permission contains one operation and precisely one information reference.

1. Contains exactly one [1..1] **id** with data type *Id*

   • This attribute is used to specify the unique identifier of the permission.
2. Contains exactly one [1..1] **operationType**, where its type is *Operation*

   • This association identifies the action or operation that is specified by a permission.
3. Contains exactly one [1..1] **informationObject**, where its type is *Information Object*

   • This association identifies the information resources specified by a permission.

## Permission Catalog

The permission catalog specifies a set of standard permissions. The permission catalog is the subject of separate HL7 standards. This reference is intended to show it relates to the rest of the information classes required to support the use cases.

1. Contains exactly one [1..1] **status** with data type *Code*

   • Identifies the current state of the Permission. The state should correspond to the HL7 Act State machine.
2. Contains exactly one [1..1] **version** with data type *String*

3. Contains at least one [1..*] **permission**, where its type is *Permission*

- A Role-Based Access Control (RBAC) permission. It specifies an information object and action/operation allowed on that object. A permission contains one operation and precisely one information reference.

## Perpetrator Of Abuse Or Neglect Record

This class is intended to record any additional attributes required to describe a history of abuse from the perspective of the perpetrator. This is not typical but it is an optional content of a behavioral health record.

1. Extends *History Of Abuse Or Neglect Record*
2. Contains exactly one [1..1] **code**

- This coded attribute may be used to indicate that the patient is a registered sex offender, convicted of arson, etc.

## Person

This class represents a human being of interest to the enterprise. The person may potentially play many different roles, including those of a patient, a provider, or an employee. It is noted that the same person may play different roles at different times. For example, an employee may also be a licensed healthcare provider and may also at times be a patient.

1. Extends *Biological Entity*
2. Contains exactly one [1..1] **administrativeGender** with data type *Code*

- 'Gender is used to refer to administrative sex rather than biological sex and therefore should easily be classified into female and male. It is included in the exchange for purposes of linking to insurance information and other patient identification linkages and the value chosen by the patient should reflect the information under which any insurance or financial information will be filed, as well as the same information given to other healthcare providers, institutions or health data exchange networks' HITSP C154 'The gender (i.e., the behavioral, cultural, or psychological traits typically associated with one sex) of a living subject as defined for administrative purposes. This attribute does not include terms related to clinical gender. Gender is a complex physiological, genetic, and sociological concept that requires multiple observations in order to be comprehensively described. The purpose of this attribute is to provide a high-level classification that can also be used for the appropriate allocation of inpatient bed assignment.' HL7 RIM. Note that the this concept is restricted to those societal roles as perceived in the U.S. "This field contains the patient's sex." - HL7 Version 2.8, PID-8

3. Contains zero or one [0..1] **birthAddress** with data type *Birth Address*

- "This field indicates the location of the patient's birth, for example 'St. Francis Community Hospital of Lower South Side'" - HL7 Version 2.8, PID-23. The city, state (or other designation such as province or region) and country where a person was born. Used for both identification and statistical purposes.

4. Contains zero or one [0..1] **birthName** with data type *Person Name*

- A name that a person had shortly after being born. Usually for family names but may be used to mark given names at birth that may have changed later. In western cultures, this name can be used for "maiden name." Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc. "This field contains one or more of the names of the patient." - HL7 Version 2.8, PID-5 Note that in HL7, the PersonName datatype contains a type code to indicate what kind of name is being referenced. The FHIM explicitly models the name type, so in this case the attribute name is "Birth Name", and the type code would be set to "birth name" when targeting an HL7 implementation.

5. Contains zero or one [0..1] **educationLevel** with data type *Code*

- 'The highest level of education a person achieved.' HL7 RIM. This property is a code, examples of which include: Elementary school; high school or secondary school degree complete; college or baccalaureate degree complete.

6. Contains zero or more [0..*] **ethnicity** with data type *Code*

   - An ethnic group (or ethnicity) is a group of people whose members identify with each other, through a common heritage, often consisting of a common language, a common culture (often including a shared religion) and an ideology that stresses common ancestry or endogamy . In addition, an ethnic group often shares an interest in a homeland connected with a specific geographical area common traditions, including food preferences (Wikipedia). Note that unlike race, which concentrates on a person s physical heritage, ethnicity is concerned with the cultural heritage with which a person identifies themselves. Examples of Ethnicity include: German, Scandinavian, Italian, Irish, etc. These ethnic groups are of the same race (Caucasian, or white ). Note also that the set of Ethnicity values used may vary based on the purpose for collecting this information. The U.S. Office of Management and Budget (OMB) issues a set to be used for census purposes. See OMB publication 15. "This field further defines the patient's ancestry." - HL7 Version 2.8, PID-22 This property may contain more than one ethnicity for a given person, identified in no particular order.

7. Contains zero or one [0..1] **fathersName** with data type *String*

   - The name of the father of the veteran. Used primarily for identification purposes - ?

8. Contains zero or one [0..1] **legalName** with data type *Person Name*

   - The name by which a person is known or legally identified such as the name on a driver's license or passport. Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc. "This field contains one or more of the names of the patient." - HL7 Version 2.8, PID-5 Note that in HL7, the PersonName datatype contains a type code to indicate what kind of name is being referenced. The FHIM explicitly models the name type, so in this case the attribute name is "Legal Name", and the type code would be set to "legal name" when targeting an HL7 implementation.

9. Contains zero or one [0..1] **livingArrangement** with data type *Code*

   - 'The housing situation of a person. This attribute is used for discharge planning, social service assessment, and psychosocial evaluation.' HL7 RIM.

10. Contains zero or one [0..1] **maritalStatus** with data type *Code*

    - 'The domestic partnership status of a person.' HL7 V3 RIM. This property is a code, examples of which include 'Married', 'Divorced', and 'Single'. "This field contains the patient's marital (civil) status." - HL7 Version 2.8, PID-16

11. Contains zero or more [0..*] **mothersIdentifier** with data type *Id*

    - "This field is used, for example, as a link field for newborns. Typically a patient ID or account number may be used. This field can contain multiple identifiers for the same mother." - HL7 Version 2.8, PID-21

12. Contains zero or one [0..1] **mothersMaidenName** with data type *String*

    - "This field contains the family name under which the mother was born (i.e., before marriage). It is used to distinguish between patients with the same last name." - HL7 Version 2.8, PID-6. This property is typically used to distinguish two persons who may have similar or identical names, or to verify a person's identity.

13. Contains zero or more [0..*] **race** with data type *Code*

    - Race is classification of humans into large and distinct populations or groups by factors such as heritable phenotypic characteristics or geographic ancestry, but also often influenced by and correlated with traits such as appearance, culture, ethnicity, and socio-economic status. (Wikipedia). This property may contain more than one race for a given person, identified in no particular order. "This field refers to the patient's race." - HL7 Version 2.8, PID-10

14. Contains zero or one [0..1] **religiousAffiliation** with data type *Code*

    - 'The primary religious preference of a person (e.g. Hinduism, Islam, Roman Catholic).' HL7 V3 RIM. "This field contains the patient's religion." - HL7 Version 2.8, PID-17. This property is used primarily to accommodate the person's religious preferences in clinical settings.

15. Contains zero or one [0..1] **sexKaryotype** with data type *Code*

    - Classifies the sex of a person based upon karyotyping. Karyotype is the appearance of the chromosomes in a somatic cell of an individual or species, with reference to their number, size, shape, etc. Note that this property

cannot be determined by the outward appearance of the individual, rather, a laboratory test must be performed to determine the proper value. Note also that the original name proposed for this property was sexGenotype, but the values of the value set are more properly karyotypes, not genotypes. Possible values for this property include: XX Genotype: The normal genotype of a female human. XY Genotype: The normal genotype of a male human. Klinefelter s Syndrome: Genetic disease that produces sterile males with small testes lacking sperm due to XXY karyotype. XXX XXXY Syndrome XXYY Syndrome Mosaic including XXXXY Penta X syndrome: Presence of five X chromosomes (49,XXXXX) associated with short stature, delayed psychomotor development, characteristic facies with upslanting palpebral fissures, micromelia with radioulnar synostosis, and other abnormalities.

16. Contains zero or one [0..1] **ssn** with data type *Id*

   - A nine digit identification number assigned to a person by the US Social Security Administration. Used primarily for identification purposes. Note that HIPAA forbids the use of SSN as a primary identifier. Maps to HL7 Version 2.8, PID-18. Note that while Social Security Number is a type of Id, and could be modeled as simply one of the possible instances of the "id" property, it is explicitly modeled because it is a particular kind of identifier that is needed for various business processes.

17. Contains zero or one [0..1] **mobilePhone** with data type *Telecommunications*

   - A telecommunication device that moves and stays with its owner. Suitable for urgent matters, the mobile phone is not the first choice for routine business. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Mobile Phone", and the type code would be set to "mobile contact" when targeting an HL7 implementation.

18. Contains zero or one [0..1] **pager** with data type *Telecommunications*

   - A paging device suitable to solicit a callback or to leave a very short message. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Pager", and the type code would be set to "pager" when targeting an HL7 implementation.

19. Contains zero or one [0..1] **primaryHomeAddress** with data type *Address*

   - A communications address for the person's primary place of residence. "This field contains the address of the patient." - HL7 Version 2.8, PID-11. Note that in HL7, the Address datatype contains a type code to indicate what kind of address is being referenced. The FHIM explicitly models the address type, so in this case the attribute name is "Primary Home Address", and the type code would be set to "primary home" when targeting an HL7 implementation.

20. Contains zero or one [0..1] **primaryHomeEmail** with data type *Telecommunications*

   - The email address that a person uses while at their primary home, to reach a person after business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Primary Home Email", and the type code would be set to "primary home" when targeting an HL7 implementation.

21. Contains zero or one [0..1] **primaryHomePhone** with data type *Telecommunications*

   - The phone number of a person at their primary home, to reach a person after business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Primary Home Phone", and the type code would be set to "primary home" when targeting an HL7 implementation.

22. Contains zero or one [0..1] **temporaryAddress** with data type *Address*

   - An address at which a person may be contacted while away from their primary home residence. For example, the person may be staying at a hotel to be nearer to a treatment facility, or while on vacation. "This field contains the address of the patient." - HL7 Version 2.8, PID-11. Note that in HL7, the Address datatype

contains a type code to indicate what kind of address is being referenced. The FHIM explicitly models the address type, so in this case the attribute name is "Temporary Address", and the type code would be set to "temporary address" when targeting an HL7 implementation.

23. Contains zero or one [0..1] **temporaryPhone** with data type *Telecommunications*

   - An address at which a person may be contacted while away from their primary home residence. For example, the person may be staying at a hotel to be nearer to a treatment facility, or while on vacation. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Temporary Phone", and the type code would be set to "temporary address" when targeting an HL7 implementation.

24. Contains zero or one [0..1] **workAddress** with data type *Address*

   - The person's office address. First choice for business related contacts during business hours. "This field contains the address of the patient." - HL7 Version 2.8, PID-11. Note that in HL7, the Address datatype contains a type code to indicate what kind of address is being referenced. The FHIM explicitly models the address type, so in this case the attribute name is "Work Address", and the type code would be set to "workplace" when targeting an HL7 implementation.

25. Contains zero or one [0..1] **workEmail** with data type *Telecommunications*

   - The email address that a person uses while at their place of business. First choice for business related contacts during business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Work Email", and the type code would be set to "workplace" when targeting an HL7 implementation.

26. Contains zero or one [0..1] **workPhone** with data type *Telecommunications*

   - The phone number for a person at their office location. First choice for business related contacts during business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Work Email", and the type code would be set to "workplace" when targeting an HL7 implementation.

27. Contains zero or more [0..*] **asEmployee**, where its type is *Employee*

   - Represents information about a person while in the role of an employee of some organization.

28. Contains zero or one [0..1] **asMilitary**, where its type is *US Uniformed Services Person*

   - Represents information about a person while in the role of a member of the armed forces.

29. Contains zero or one [0..1] **asProvider**, where its type is *Individual Provider*

   - Represents information about a person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.

30. Contains zero or more [0..*] **asCitizen**, where its type is *Citizen*

   - 'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com. "This field contains the information related to a person's country citizenship." - HL7 Version 2.8, PID-26.

31. Contains zero or more [0..*] **languageCapability**, where its type is *Language Capability*

   - Represents the language communication capabilities for a Person. "This field contains the patient's primary language." - HL7 Version 2.8, PID-15

32. Contains zero or more [0..*] **powerOfAttorney**, where its type is *Power Of Attorney*

   - "A power of attorney (POA) ... is an authorization to act on someone else's behalf in a legal or business matter." - wikipedia

33. Contains zero or more [0..*] **advanceDirective**, where its type is *Advance Directive*

- "An advance health care directive, also known as living will, personal directive, advance directive, or advance decision, are instructions given by individuals specifying what actions should be taken for their health in the event that they are no longer able to make decisions due to illness or incapacity, and appoints a person to make such decisions on their behalf." - wikipedia

34. Contains zero or more [0..*] **asTribalCitizen**, where its type is *Tribal Citizen*

- "Contains the information related to a person's tribal citizenship. For tribal citizenship, in the United States, HL7 recommends using the Bureau of Indian Affairs (BIA) Tribal Identity List." - HL7 Version 2.8, PID-39 'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com

35. Contains zero or more [0..*] **deathCertificate**, where its type is *Death Certificate*

- A document issued by a medical practitioner certifying the deceased state of a person. In the United States, this is typically the U.S. Standard Certificate of Death (Rev. 11/2003).

36. Contains zero or more [0..*] **birthCertificate**, where its type is *Birth Certificate*

# Person

This class represents a human being of interest to the enterprise. The person may potentially play many different roles, including those of a patient, a provider, or an employee. It is noted that the same person may play different roles at different times. For example, an employee may also be a licensed healthcare provider and may also at times be a patient.

1. Extends *Biological Entity*
2. Contains exactly one [1..1] **administrativeGender** with data type *Code*

- 'Gender is used to refer to administrative sex rather than biological sex and therefore should easily be classified into female and male. It is included in the exchange for purposes of linking to insurance information and other patient identification linkages and the value chosen by the patient should reflect the information under which any insurance or financial information will be filed, as well as the same information given to other healthcare providers, institutions or health data exchange networks' HITSP C154 'The gender (i.e., the behavioral, cultural, or psychological traits typically associated with one sex) of a living subject as defined for administrative purposes. This attribute does not include terms related to clinical gender. Gender is a complex physiological, genetic, and sociological concept that requires multiple observations in order to be comprehensively described. The purpose of this attribute is to provide a high-level classification that can also be used for the appropriate allocation of inpatient bed assignment.' HL7 RIM. Note that the this concept is restricted to those societal roles as perceived in the U.S. "This field contains the patient's sex." - HL7 Version 2.8, PID-8

3. Contains zero or one [0..1] **birthAddress** with data type *Birth Address*

- "This field indicates the location of the patient's birth, for example 'St. Francis Community Hospital of Lower South Side'" - HL7 Version 2.8, PID-23. The city, state (or other designation such as province or region) and country where a person was born. Used for both identification and statistical purposes.

4. Contains zero or one [0..1] **birthName** with data type *Person Name*

- A name that a person had shortly after being born. Usually for family names but may be used to mark given names at birth that may have changed later. In western cultures, this name can be used for "maiden name." Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc. "This field contains one or more of the names of the patient." - HL7 Version 2.8, PID-5 Note that in HL7, the PersonName datatype contains a type code to indicate what kind of name is being referenced. The FHIM explicitly models the name type, so in this case the attribute name is "Birth Name", and the type code would be set to "birth name" when targeting an HL7 implementation.

5. Contains zero or one [0..1] **educationLevel** with data type *Code*

- 'The highest level of education a person achieved.' HL7 RIM. This property is a code, examples of which include: Elementary school; high school or secondary school degree complete; college or baccalaureate degree complete.

6.  Contains zero or more [0..*] `ethnicity` with data type *Code*

    - An ethnic group (or ethnicity) is a group of people whose members identify with each other, through a common heritage, often consisting of a common language, a common culture (often including a shared religion) and an ideology that stresses common ancestry or endogamy . In addition, an ethnic group often shares an interest in a homeland connected with a specific geographical area common traditions, including food preferences (Wikipedia). Note that unlike race, which concentrates on a person s physical heritage, ethnicity is concerned with the cultural heritage with which a person identifies themselves. Examples of Ethnicity include: German, Scandinavian, Italian, Irish, etc. These ethnic groups are of the same race (Caucasian, or white ). Note also that the set of Ethnicity values used may vary based on the purpose for collecting this information. The U.S. Office of Management and Budget (OMB) issues a set to be used for census purposes. See OMB publication 15. "This field further defines the patient's ancestry." - HL7 Version 2.8, PID-22 This property may contain more than one ethnicity for a given person, identified in no particular order.

7.  Contains zero or one [0..1] `fathersName` with data type *String*

    - The name of the father of the veteran. Used primarily for identification purposes - ?

8.  Contains zero or one [0..1] `legalName` with data type *Person Name*

    - The name by which a person is known or legally identified such as the name on a driver's license or passport. Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc. "This field contains one or more of the names of the patient." - HL7 Version 2.8, PID-5 Note that in HL7, the PersonName datatype contains a type code to indicate what kind of name is being referenced. The FHIM explicitly models the name type, so in this case the attribute name is "Legal Name", and the type code would be set to "legal name" when targeting an HL7 implementation.

9.  Contains zero or one [0..1] `livingArrangement` with data type *Code*

    - 'The housing situation of a person. This attribute is used for discharge planning, social service assessment, and psychosocial evaluation.' HL7 RIM.

10. Contains zero or one [0..1] `maritalStatus` with data type *Code*

    - 'The domestic partnership status of a person.' HL7 V3 RIM. This property is a code, examples of which include 'Married', 'Divorced', and 'Single'. "This field contains the patient's marital (civil) status." - HL7 Version 2.8, PID-16

11. Contains zero or more [0..*] `mothersIdentifier` with data type *Id*

    - "This field is used, for example, as a link field for newborns. Typically a patient ID or account number may be used. This field can contain multiple identifiers for the same mother." - HL7 Version 2.8, PID-21

12. Contains zero or one [0..1] `mothersMaidenName` with data type *String*

    - "This field contains the family name under which the mother was born (i.e., before marriage). It is used to distinguish between patients with the same last name." - HL7 Version 2.8, PID-6. This property is typically used to distinguish two persons who may have similar or identical names, or to verify a person's identity.

13. Contains zero or more [0..*] `race` with data type *Code*

    - Race is classification of humans into large and distinct populations or groups by factors such as heritable phenotypic characteristics or geographic ancestry, but also often influenced by and correlated with traits such as appearance, culture, ethnicity, and socio-economic status. (Wikipedia). This property may contain more than one race for a given person, identified in no particular order. "This field refers to the patient's race." - HL7 Version 2.8, PID-10

14. Contains zero or one [0..1] `religiousAffiliation` with data type *Code*

    - 'The primary religious preference of a person (e.g. Hinduism, Islam, Roman Catholic).' HL7 V3 RIM. "This field contains the patient's religion." - HL7 Version 2.8, PID-17. This property is used primarily to accommodate the person's religious preferences in clinical settings.

15. Contains zero or one [0..1] `sexKaryotype` with data type *Code*

    - Classifies the sex of a person based upon karyotyping. Karyotype is the appearance of the chromosomes in a somatic cell of an individual or species, with reference to their number, size, shape, etc. Note that this property

cannot be determined by the outward appearance of the individual, rather, a laboratory test must be performed to determine the proper value. Note also that the original name proposed for this property was sexGenotype, but the values of the value set are more properly karyotypes, not genotypes. Possible values for this property include: XX Genotype: The normal genotype of a female human. XY Genotype: The normal genotype of a male human. Klinefelter s Syndrome: Genetic disease that produces sterile males with small testes lacking sperm due to XXY karyotype. XXX XXXY Syndrome XXYY Syndrome Mosaic including XXXXY Penta X syndrome: Presence of five X chromosomes (49,XXXXX) associated with short stature, delayed psychomotor development, characteristic facies with upslanting palpebral fissures, micromelia with radioulnar synostosis, and other abnormalities.

16. Contains zero or one [0..1] **ssn** with data type *Id*

- A nine digit identification number assigned to a person by the US Social Security Administration. Used primarily for identification purposes. Note that HIPAA forbids the use of SSN as a primary identifier. Maps to HL7 Version 2.8, PID-18. Note that while Social Security Number is a type of Id, and could be modeled as simply one of the possible instances of the "id" property, it is explicitly modeled because it is a particular kind of identifier that is needed for various business processes.

17. Contains zero or one [0..1] **mobilePhone** with data type *Telecommunications*

- A telecommunication device that moves and stays with its owner. Suitable for urgent matters, the mobile phone is not the first choice for routine business. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Mobile Phone", and the type code would be set to "mobile contact" when targeting an HL7 implementation.

18. Contains zero or one [0..1] **pager** with data type *Telecommunications*

- A paging device suitable to solicit a callback or to leave a very short message. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Pager", and the type code would be set to "pager" when targeting an HL7 implementation.

19. Contains zero or one [0..1] **primaryHomeAddress** with data type *Address*

- A communications address for the person's primary place of residence. "This field contains the address of the patient." - HL7 Version 2.8, PID-11. Note that in HL7, the Address datatype contains a type code to indicate what kind of address is being referenced. The FHIM explicitly models the address type, so in this case the attribute name is "Primary Home Address", and the type code would be set to "primary home" when targeting an HL7 implementation.

20. Contains zero or one [0..1] **primaryHomeEmail** with data type *Telecommunications*

- The email address that a person uses while at their primary home, to reach a person after business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Primary Home Email", and the type code would be set to "primary home" when targeting an HL7 implementation.

21. Contains zero or one [0..1] **primaryHomePhone** with data type *Telecommunications*

- The phone number of a person at their primary home, to reach a person after business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Primary Home Phone", and the type code would be set to "primary home" when targeting an HL7 implementation.

22. Contains zero or one [0..1] **temporaryAddress** with data type *Address*

- An address at which a person may be contacted while away from their primary home residence. For example, the person may be staying at a hotel to be nearer to a treatment facility, or while on vacation. "This field contains the address of the patient." - HL7 Version 2.8, PID-11. Note that in HL7, the Address datatype

contains a type code to indicate what kind of address is being referenced. The FHIM explicitly models the address type, so in this case the attribute name is "Temporary Address", and the type code would be set to "temporary address" when targeting an HL7 implementation.

23. Contains zero or one [0..1] **temporaryPhone** with data type *Telecommunications*

   - An address at which a person may be contacted while away from their primary home residence. For example, the person may be staying at a hotel to be nearer to a treatment facility, or while on vacation. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Temporary Phone", and the type code would be set to "temporary address" when targeting an HL7 implementation.

24. Contains zero or one [0..1] **workAddress** with data type *Address*

   - The person's office address. First choice for business related contacts during business hours. "This field contains the address of the patient." - HL7 Version 2.8, PID-11. Note that in HL7, the Address datatype contains a type code to indicate what kind of address is being referenced. The FHIM explicitly models the address type, so in this case the attribute name is "Work Address", and the type code would be set to "workplace" when targeting an HL7 implementation.

25. Contains zero or one [0..1] **workEmail** with data type *Telecommunications*

   - The email address that a person uses while at their place of business. First choice for business related contacts during business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Work Email", and the type code would be set to "workplace" when targeting an HL7 implementation.

26. Contains zero or one [0..1] **workPhone** with data type *Telecommunications*

   - The phone number for a person at their office location. First choice for business related contacts during business hours. "Contains the patient's personal telecommunication contact information." - HL7 Version 2.8, PID-40. Note that in HL7, the Telecommunications datatype contains a type code to indicate what kind of telecommunications address that is being referenced. The FHIM explicitly models the telecommuncations type, so in this case the attribute name is "Work Email", and the type code would be set to "workplace" when targeting an HL7 implementation.

27. Contains zero or more [0..*] **asEmployee**, where its type is *Employee*

   - Represents information about a person while in the role of an employee of some organization.

28. Contains zero or one [0..1] **asMilitary**, where its type is *US Uniformed Services Person*

   - Represents information about a person while in the role of a member of the armed forces.

29. Contains zero or one [0..1] **asProvider**, where its type is *Individual Provider*

   - Represents information about a person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.

30. Contains zero or more [0..*] **asCitizen**, where its type is *Citizen*

   - 'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com. "This field contains the information related to a person's country citizenship." - HL7 Version 2.8, PID-26.

31. Contains zero or more [0..*] **languageCapability**, where its type is *Language Capability*

   - Represents the language communication capabilities for a Person. "This field contains the patient's primary language." - HL7 Version 2.8, PID-15

32. Contains zero or more [0..*] **powerOfAttorney**, where its type is *Power Of Attorney*

   - "A power of attorney (POA) ... is an authorization to act on someone else's behalf in a legal or business matter." - wikipedia

33. Contains zero or more [0..*] **advanceDirective**, where its type is *Advance Directive*

- "An advance health care directive, also known as living will, personal directive, advance directive, or advance decision, are instructions given by individuals specifying what actions should be taken for their health in the event that they are no longer able to make decisions due to illness or incapacity, and appoints a person to make such decisions on their behalf." - wikipedia

34. Contains zero or more [0..*] **asTribalCitizen**, where its type is *Tribal Citizen*

- "Contains the information related to a person's tribal citizenship. For tribal citizenship, in the United States, HL7 recommends using the Bureau of Indian Affairs (BIA) Tribal Identity List." - HL7 Version 2.8, PID-39 'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com

35. Contains zero or more [0..*] **deathCertificate**, where its type is *Death Certificate*

- A document issued by a medical practitioner certifying the deceased state of a person. In the United States, this is typically the U.S. Standard Certificate of Death (Rev. 11/2003).

36. Contains zero or more [0..*] **birthCertificate**, where its type is *Birth Certificate*

# Person Name

The name of the person. Uses the VHIM-constrained Person Name data type.

"A word or term by which a person or thing is commonly and distinctively known." - Collins English Dictionary. This datatype represents a person's name.

1. Contains zero or more [0..*] **prefix** with data type *String*

- 'A prefix has a strong association to the immediately following name part. A prefix has no implicit trailing white space (it has implicit leading white space though). Note that prefixes can be inverted' (HL7) A Person Name Prefix is usually an academic or nobility title. An Academic title includes a prefix like 'Dr.' There are still people with nobility titles (aristocrats). German 'von' is generally a nobility title, not a mere voorvoegsel. Others are 'Earl of' or 'His Majesty King of...' etc. Rarely used nowadays, but some systems do keep track of this.
- "Contains a set of honorific terms that typically appear before a person's name, for example Mr., Mrs., Dr., etc. Prefixes have a strong association to the immediately following name part." - HL7 V3

2. Contains zero or more [0..*] **given** with data type *String*

- 'Given name (don't call it 'first name' since this given names do not always come first)' (HL7)
- "A set of names given to a person at birth, but not including the family name. In western cultures, this property would contain the 'first' and 'middle' names. Note that in some cultures, the given name is placed after the family name. Note also that this property contains multiple elements, so it can handle those situations where a person has more than one 'middle' name." - HL7 V3

3. Contains zero or one [0..1] **nickname** with data type *String*

- 'A callme name is (usually a given name) that is preferred when a person is directly addressed.' (HL7)
- A name added to or substituted for the proper name of a person.

4. Contains exactly one [1..1] **family** with data type *String*

- 'Family name, this is the name that links to the genealogy' (HL7)
- "The portion of a person's name that reflects the genealogy of the person. In western cultures, this is the 'last' name. In eastern cultures, the family name appears before the person's given name(s). In some cultures (e.g. Eritrea) the family name of a son is the first name of his father." - HL7 V3

5. Contains zero or more [0..*] **suffix** with data type *String*

- 'A suffix has a strong association to the immediately preceding name part. A prefix has no implicit leading white space (it has implicit trailing white space though). Suffices can not be inverted' (HL7)
- "Contains a list of honorific terms that typically appear after a person's name, for example Jr., Sr., MD, RN, etc. Prefixes have a strong association to the immediately following name part." - HL7 V3

6. Contains zero or one [0..1] **initials** with data type *String*

- The first letter of each part of a proper name. This property stores the initials of a person's name, which is used in research studies to identify the patient without divulging the person's entire name.

## Pet Scan

Positron emission tomography: PET. A highly specialized imaging technique that uses short-lived radioactive substances to produce three-dimensional colored images of those substances functioning within the body. These images are called PET scans and the technique is termed PET scanning. [Source: Medical Dictionary - MedicineNet.com]

1. Contains exactly one [1..1] **petScan** with data type *Code*

   - Indicates the results of the diagnostic test PET SCAN. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.

2. Contains exactly one [1..1] **dateOfPetScan** with data type *Point In Time*

   - The date of the diagnostic test PET SCAN.

## Pharmacist

1. Extends *Individual Provider*

## Pharmacy

Identifies a pharmacy location for the purposes of maintaining the NCPDP Id, which is needed for filing pharmacy claims. This is equivalent to File 59 in Vista.

1. Extends *Ancillary Service*
2. Contains zero or one [0..1] **ncpdpId** with data type *Id*

   - Contains the National Council for Prescription Drug Programs (NCPDP) Id, which assigned to each dispensing location of an organization for the purposes of facilitating electronic billing.

## Pharmacy Generated Order Modification

1. Contains exactly one [1..1] **substitutionCode** with data type *Code*
2. Contains exactly one [1..1] **reason** with data type *Integer*
3. Contains zero or one [0..1] **revisedSig** with data type *String*

   - The complete textual representation of the signature, or "sig", for the prescription. Contains all relevant information about the dosage instructions for the medication prescribed. For example, the signature might say "take twice daily with food". From the Latin "signare" meaning "to sign or mark." Changes made June 2 2009 per CDS\Hdr order set issue. VHIM disagrees with approach needs be re-reviewed in the future. Changes are set attributes sig multipilicity to '*'.

4. Contains exactly one [1..1] **revisedAdministrationInstructions** with data type *String*

   - This is any special instructions (using abbreviations whenever possible) needed for this order. This would include the physician's reason for ordering a PRN. This field utilizes the abbreviations and expansions from the MEDICATION INSTRUCTIONS file.

5. Contains exactly one [1..1] **revisedPatientInstructions** with data type *String*

   - The complete textual representation of the signature, or "sig", for the prescription. Contains all relevant information about the dosage instructions for the medication prescribed. For example, the signature might say

"take twice daily with food". From the Latin "signare" meaning "to sign or mark." Changes made June 2 2009 per CDS\Hdr order set issue. VHIM disagrees with approach needs be re-reviewed in the future. Changes are set attribute patientInstructions multipilicity to '*'.

## Pharmacy Manufactured Product

1. Contains exactly one [1..1] **compoundType** with data type *Code*
2. Contains exactly one [1..1] **dispenseUnitType** with data type *Code*
3. Contains exactly one [1..1] **doseForm** with data type *Code*
4. Contains exactly one [1..1] **preparationTime** with data type *Time Quantity*
5. Contains at least one [1..*] **additive**, where its type is *Additive*
6. Contains zero or more [0..*] **vehicle**, where its type is *Vehicle*

## Pharmacy Promise

This class represents the clinician's medication order as recorded by the Pharmacy. The term "Promise" is used to indicate that this is the order as accepted (or possibly, rejected) by the Pharmacy and as the Pharmacy is now under an obligation to fulfill (unless the order was rejeted).

1. Contains zero or one [0..1] **appointmentTime** with data type *Point In Time*
   - Date and time of the appointment for this clinic location.
2. Contains exactly one [1..1] **discontinueDate** with data type *Point In Time*
   - This is the date the order was discontinued.
3. Contains exactly one [1..1] **expirationDate** with data type *Point In Time*
   - The date after which the order may no longer be filled.
4. Contains zero or one [0..1] **isHospitalSuppliedSelfAdministered** with data type *Boolean*
   - A flag indicating that the medication given to the patient is to be self administered and is to be supplied by the hospitals pharmacy while they are an inpatient.
5. Contains zero or one [0..1] **isSelfAdministered** with data type *Boolean*
   - A flag indicating that the medication given to the patient is to be self administered.
6. Contains zero or one [0..1] **lastDispenseDate** with data type *Point In Time*
   - The most recent date the order was filled.
7. Contains exactly one [1..1] **medicationType** with data type *Code*
   - This identifies the type of medication ordered: A=Admixture, C=Chemotherapy, P=Piggy Back, T=TPN, U=Unit Dose. Note: this might correspond to Administration Unit Code? Verify.
8. Contains zero or one [0..1] **numberOfRefillsRemaining** with data type *Integer*
   - Indicates the number of times the order may be filled without additional authorization.
9. Contains exactly one [1..1] **orderModality** with data type *Code*
   - This is the method the provider used to communicate to the user to enter (or take any other action) on the order. Examples include: Written, Telephoned, Verbal, Electronically Entered, Policy, Service Correction, Duplicate, etc.
10. Contains zero or one [0..1] **pharmacyPatientCategory** with data type *Code*
    - Categorizes the status of the patient at the time the medication was filled. Examples include Inpatient, Outpatient, etc.
11. Contains exactly one [1..1] **prescriptionId** with data type *Id*
    - Uniquely identifies the medication order, from the filler's (pharmacy) perspective.
12. Contains zero or more [0..*] **requestedAdministrationTime** with data type *Time Interval*

- Specifies when the service is to be performed and how frequently. Note that this is a complex data type that may indicate specific times or intervals (e.g., 10:00 AM, MWF, etc).

13. Contains zero or one [0..1] **requestedDuration** with data type *Time Quantity*

   - The duration of an order as requested by the ordering clinician. The duration would be expressed as a number of days, weeks, hours, etc. Note that this length of time might be determined by a business rule of the facilty. For example, most facilties will have a limit of 7 days for antibiotics, and 3 days for schedule 1 drugs.

14. Contains zero or one [0..1] **scheduleType** with data type *Code*

   - "This describes the type of schedule for the dispensing of the medication(s) that make up the order. PRE-OP orders are usually considered to be ON-CALL orders, and orders dispensed as MULTI-DOSE CONTAINERS are usually considered to be FILL ON REQUEST orders. C=Continuous, O=One Time, P=PRN, R=Fill On Request, OC=On Call." (VistA)

15. Contains zero or one [0..1] **cancel**, where its type is *Cancel Act*

   - The reason the order was canceled.

16. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

17. Contains exactly one [1..1] **dataEnterer**, where its type is *Data Enterer*

   - Captures participation information (who, when, comments) of the person performing data entry. "A person entering the data into the originating system. The data entry person is collected optionally for internal quality control purposes. This includes the transcriptionist for dictated text" (HL7)

18. Contains zero or more [0..*] **dispense**, where its type is *Medication Dispense*

   - Captures information about the REFILL dispense of a medication to an outpatient in fulfillment of this request.

19. Contains zero or more [0..*] **drugSubstitution**, where its type is *Drug Substitution*

20. Contains zero or one [0..1] **finisher**, where its type is *Individual Provider*

   - The party who completed the Outpatient Pharmacy order.

21. Contains zero or more [0..*] **patientReportedMedicationEvent**, where its type is *Patient Reported Medication*

   - Contains information about a medication which the patient has received or is receiving, as reported by the patient.

22. Contains exactly one [1..1] **pharmacyRequest**, where its type is *Pharmacy Request*

   - Contains generic order information for the pharmacy request.

23. Contains zero or more [0..*] **prnEffectivenessObservation**, where its type is *_ Prn Effectiveness Observation*

   - Indicates why the nurse determined to administer a medication that was ordered as "Pro re nata" (take as needed). Includes a narrative of the efficacy of the PRN medication.

24. Contains zero or more [0..*] **relatedPharmacyPromise**, where its type is *Related Medication Promise*

25. Contains zero or more [0..*] **renewAct**, where its type is *Renew Act*

   - Captures participation information (who, when, comments) of the person who renewed the prescription

26. Contains zero or more [0..*] **pharmacyInferredDiagnosis**, where its type is *Diagnosis List Entry*

27. Contains zero or more [0..*] **return**, where its type is *Return*

## Pharmacy Request

Contains generic order information for the pharmacy request.

1. Extends *Healthcare Order*
2. Contains exactly one [1..1] **administrationInstructions** with data type *String*

   - This is any special instructions (using abbreviations whenever possible) needed for this order. This would include the physician's reason for ordering a PRN. This field utilizes the abbreviations and expansions from the MEDICATION INSTRUCTIONS file.

3. Contains zero or one [0..1] **appointmentTime** with data type *Point In Time*

- This is the appointment date/time for an outpatient order. It is entered when an inpatient medication is ordered for an outpatient.

4. Contains exactly one [1..1] **dispensingInstructions** with data type *String*

- "Identifies the ordering provider's instructions to the pharmacy or the non-pharmacy treatment provider (e.g., respiratory therapy)...." - HL7 Version 2.8, RXO-6 The instructions to the pharmacy for the preparation of the requested medication.

5. Contains exactly one [1..1] **dosage** with data type *Physical Quantity Interval*

- "The measured quantity of a therapeutic agent to be taken at one time." (MedlinePlus/Merriam-Webster)

6. Contains exactly one [1..1] **doseForm** with data type *Code*

- "Indicates the manner in which the treatment is aggregated for dispensing, e.g., tablets, capsules suppositories...." - HL7 Version 2.8, RXO-5 Form: "The shape and structure of something as distinguished from its material" (Webster's Medical Dictionary). Indicates the form of the material making up a single dose (as opposed to how the dose is packaged). Possible values include Tablet, Drop, Lozenge, Cream, etc.

7. Contains exactly one [1..1] **doseQuantity** with data type *Physical Quantity Interval*

- The amount of the described medication to be administered to the patient in a single point in time.

8. Contains exactly one [1..1] **doseUnit** with data type *Code*

- "This field indicates the units for the give amount." - HL7 Version 2.8, RXO-4 "An amount of a biologically active agent (as a drug or antigen) required to produce a specific result under strictly controlled conditions." (Merriam-Webster)

9. Contains exactly one [1..1] **expirationDate** with data type *Point In Time*

- The date after which the order may no longer be filled.

10. Contains exactly one [1..1] **frequency** with data type *Time Interval*

- Specifies when the service is to be performed and how frequently. Note that this is a complex data type that may indicate specific times or intervals (e.g., 10:00 AM, MWF, etc).

11. Contains exactly one [1..1] **infusionRate** with data type *Rate Quantity*

- Infusion: "Introduction of a solution into the body through a vein for therapeutic purposes." (American Heritage Stedman's Medical Dictionary). This is the rate at which the solution is introduced into the body. Expressed as volume/time (e.g., 500 ml/hr)

12. Contains exactly one [1..1] **intendedDuration** with data type *Time Interval*

- The period of time over which a medication order should be given.

13. Contains exactly one [1..1] **numberOfRefillsAuthorized** with data type *Integer*

- Indicates the number of times the order may be filled without additional authorization.

14. Contains exactly one [1..1] **areRefillsAuthorizedAsNeeded** with data type *Boolean*

15. Contains exactly one [1..1] **patientInstructions** with data type *String*

- The complete textual representation of the signature, or "sig", for the prescription. Contains all relevant information about the dosage instructions for the medication prescribed. For example, the signature might say "take twice daily with food". From the Latin "signare" meaning "to sign or mark." Changes made June 2 2009 per CDS\Hdr order set issue. VHIM disagrees with approach needs be re-reviewed in the future. Changes are set attribute patientInstructions multipilicity to '*'.

16. Contains exactly one [1..1] **quanityOrdered** with data type *Physical Quantity Interval*

- "This field is the ordered amount. In a variable dose order, this is the minimum ordered amount. In a non-varying dose order, this is the exact amount of the order." - HL7 Version 2.8, RXO-2 "In a variable dose order, this is the maximum ordered amount. In a non-varying dose order, this field is not used." - HL7 Version 2.8, RXO-3 This property carries both the low (aka minimum), and high (aka maximum) amounts. For example, given the order "Acetaminophen 300 mg / codeine 30 mg (Tylenol 3). Take 2-3 tablets every 4-6 hours as needed for pain for 7 days", this property would contain 2 (low) and 3 (high).

17. Contains exactly one [1..1] **route** with data type *Code*

- "The method of introducing the therapeutic material into or onto the subject." (HL7 3.0)
18. Contains exactly one [1..1] **schedule** with data type *String*
    - This is the number of Units (tablets, capsules, etc.) to be dispensed as a dose for this order. String type used to handle VistA data with dose quantity and units in same field.
19. Contains exactly one [1..1] **sig** with data type *String*
    - "Signa -- used to introduce the signature in writing a prescription." (MedlinePlus/Merriam-Webster) Note: this attribute is a placeholder for a concept which will be modeled in a future iteration.
20. Contains exactly one [1..1] **startDate** with data type *Point In Time*
    - The date on which the patient is to begin (or began, if historical) consuming the ordered medication.
21. Contains exactly one [1..1] **stopDate** with data type *Point In Time*
    - The date on which the patient is to discontinue (or discontinued, if historical) consuming the ordered medication.
22. Contains zero or more [0..*] **drugCoverageStatus**, where its type is *Drug Coverage Status*
23. Contains zero or more [0..*] **drugUseEvaluation**, where its type is *Drug Use Evaluation*
24. Contains exactly one [1..1] **orderedItem**, where its type is *Orderable Pharmacy Item*
25. Contains exactly one [1..1] **deliverToLocation**, where its type is *Service Delivery Location*
    - The location where the prescription order originated.
26. Contains zero or one [0..1] **prescriberAgent**, where its type is *Agent*
27. Contains zero or one [0..1] **primaryCareProvider**, where its type is *Individual Provider*
    - A doctor selected by the patient to be the first physician contacted for any medical problem. The doctor acts as the patient's regular physician and coordinates any other care the patient needs, such as a visit to a specialist or hospitalization.
28. Contains zero or one [0..1] **priorAuthorization**, where its type is *Prior Authorization*
29. Contains zero or one [0..1] **supervisor**, where its type is *Individual Provider*

## Physical Health

This class is used to specify the non-mental health problems or diagnoses of the patient.
1. Extends *Behavioral Health Assessment Domain*
2. Contains zero or more [0..*] **diagnosis**, where its type is *Diagnosis*

## Physical Quantity

The amount that was or is to be supplied

"A dimensioned quantity expressing the result of measuring" - HL7 V3
1. Contains exactly one [1..1] **value** with data type *Real*
    - The magnitude of the quantity measured in terms of the unit.
    - "The magnitude of the quantity measured in terms of the unit" - HL7 V3
2. Contains exactly one [1..1] **unit** with data type *Code*
    - The unit of measure specified in the Unified Code for Units of Measure (UCUM) [].
    - "The unit of measure specified in the Unified Code for Units of Measure (UCUM). The default unit is 1." - HL7 V3

## Physical Quantity Interval

The amount of the therapeutic agent or other substance given at one administration event.

This data type represents an Interval, where the Low and High Limits are Physical Quantities. An Interval is a "set of consecutive values of an ordered base data type." - HL7 V3 A Physical Quantity is "a dimensioned quantity expressing the result of measuring" - HL7 V3

1. Contains zero or one [0..1] **lowValue** with data type *Real*

   - The magnitude of the quantity measured in terms of the unit.
   - "The low limit of the interval. The low limit SHALL NOT be positive infinity." - HL7 V3 This property contains the numeric portion (i.e., not including any units of measure) of the low limit.

2. Contains zero or one [0..1] **lowUnit** with data type *Code*

   - The unit of measure specified in the Unified Code for Units of Measure (UCUM) [].
   - "The low limit of the interval. The low limit SHALL NOT be positive infinity." - HL7 V3. This property containsthe Unit of Measure of the low limit.

3. Contains zero or one [0..1] **highValue** with data type *Real*

   - The magnitude of the quantity measured in terms of the unit.
   - "The high limit of the interval. The high limit SHALL NOT be negative infinity, and SHALL be higher than the low limit if one exists." - HL7 V3. This property contains the numeric portion (i.e., not including any units of measure) of the high limit.

4. Contains zero or one [0..1] **highUnit** with data type *Code*

   - The unit of measure specified in the Unified Code for Units of Measure (UCUM) [].
   - "The high limit of the interval. The high limit SHALL NOT be negative infinity, and SHALL be higher than the low limit if one exists." - HL7 V3. This property contains the Unit of Measure of the high limit.

## Physical Quantity Ratio

A ratio (numerator : denominator) specifying the relative quantities of the Entity playing the Role in the Entity scoping the Role, used for Roles that represent composition relationships between the scoping and playing Entities.

This data type represents a Ratio, where the Low and High Limits are Physical Quantities. A Ratio is " A quantity constructed as the quotient of a numerator quantity divided by a denominator quantity." - HL7 V3 A Physical Quantity is "a dimensioned quantity expressing the result of measuring" - HL7 V3

1. Contains exactly one [1..1] **numerator** with data type *Physical Quantity*

   - The quantity that is being divided in the ratio. The default is the integer number 1
   - "The quantity that is being divided in the ratio. The default is the integer number 1 (one)." - HL7 V3

2. Contains exactly one [1..1] **denominator** with data type *Physical Quantity*

   - The quantity that divides the numerator in the ratio. The default is the integer number 1 (one.) The denominator must not be zero.
   - "The quantity that devides the numerator in the ratio. The default is the integer number 1 (one). The denominator SHALL not be zero." - HL7 V3

## Physiologic Monitoring Event

Monitor the differing in, involving, or affecting physiological factors.

1. Contains exactly one [1..1] **timeInstalled** with data type *Point In Time*

   - Contains the date\ time that the monitor was applied to the patient.

2. Contains exactly one [1..1] **timeRemoved** with data type *Point In Time*

   - Contains the date\ time that the monitor was removed from the patient.

3. Contains exactly one [1..1] **monitoringDevice**, where its type is *Surgery Device*

   - Monitoring device that denotes the differing in, involving, or affecting physiological factors.

## Pilot

This class is used to specify the role of pilot in relation to an scheduled flight.

1. Contains zero or one [0..1] **player**, where its type is *Person*

   • This directed association describes role that the entity Person plays (as a Pilot). An Entity participates in an Act in the guise of a particular Role. Each role is 'played' by one Entity, called the 'player' and is 'scoped' by another Entity, called the 'scoper'. Thus the Role of 'Pilot' may be played by a person and scoped by the Airline for which the pilot works. Similarly, the Airline scopes the 'Pilot' role. > The identifier of the Role identifies the Entity playing the role in that role. This identifier is assigned by the scoper to the player. The scoper NEED NOT have issued the identifier, but MAY have re-used an existing identifier. > Most attributes of Role are attributes of the playing entity while in the particular role.

   • The association to the entity (Person) that plays the role specified by the 'Pilot' role class is identified by the association end. This notation indicates that the entity Person is played by the Role Pilot.

2. Contains zero or one [0..1] **scoper**, where its type is *Airline*

   • Each role is 'played' by one Entity, called the 'player' and is 'scoped' by another Entity, called the 'scoper'. Each role is 'played' by one Entity, called the 'player' and is 'scoped' by another Entity, called the 'scoper'. Thus the Role of 'Pilot' is played by a Person and scoped by the Airline for which the pilot works. This directed association describes this relationship between the Role of Pilot and the Entity Airline which is the organization for which the pilot works. The identifier of the Role identifies the Entity playing the role in that role. This identifier is assigned by the scoper to the player. The scoper NEED NOT have issued the identifier, but MAY have re-used an existing identifier.

   • The association to the entity (Airline) that defines the role specified by the 'Pilot' role class is identified by the association end. This notation indicates that the entity Airline scopes the role of the entity Person played by the Role Pilot.

## Place Of Service

'This designates where the actual health services are being performed, whether it be home, hospital, office, clinic, etc. ' -eHealthInsurance.org

1. Contains exactly one [1..1] **code** with data type *Code*

## Plan Network Affiliation

1. Contains zero or more [0..*] **id** with data type *Id*

   • A unique identifier that the payer or information source can use to identify the person as a Policy Holder.
2. Contains exactly one [1..1] **healthPlan**, where its type is *Health Plan*
3. Contains exactly one [1..1] **network**, where its type is *Network*

## Plan Sponsor

The company or organization that assumes financial responsibility for an insured group 'An entity that sponsors a health plan. Employer, Union' - Medicare

1. Contains zero or more [0..*] **group**, where its type is *Group Coverage*

## Plaque Observation

Indicates drgree of plaque buildup during treatment planning.

1. Contains exactly one [1..1] **plaqueIndex** with data type *Code*

   - Indicates the degree of plaque buildup.
2. Contains exactly one [1..1] **psrScore**, where its type is *Psr Score Observation*

   - PSR Score Observation.

## Point In Time

A quantity specifying a point on the axis of natural time. A point in time is most often represented as a calendar expression. Semantically, however, time is independent from calendars and best described by its relationship to elapsed time (measured as a physical quantity in the dimension of time.) A point in time plus an elapsed time yields another point in time. Inversely, a point in time minus another point in time yields an elapsed time. As nobody knows when time began, a point in time is conceptualized as the amount of time that has elapsed from some arbitrary zero-point, called an epoch. Because there is no absolute zero-point on the time axis natural time is a difference-scale quantity, where only differences are defined but no ratios. (For example, no point in time is - absolutely speaking - 'twice as late' as another point in time.) Given some arbitrary zero-point, one can express any point in time as an elapsed time measured from that offset. Such an arbitrary zero-point is called an epoch. This epoch-offset form is used as a semantic representation here, without implying that any system would have to implement the TS data type in that way. Systems that do not need to compute distances between points in time will not need any other representation than a calendar expression literal

A datatype containing date/time information. This datatype is a placeholder, as various platforms have differing built-in date/time datatypes. It is anticipated that this datatype will be replaced by a different datatype when transforming to a particular implementation platform.

1. Contains exactly one [1..1] **literal** with data type *String*

   - For the default Gregorian calendar the calendar expression literals of this specification conform to the constrained ISO 8601 that is defined in ISO 8824 (ASN.1) under clause 32 (generalized time) and to the HL7 version 2 TS data format.
   - "TS literals are simple calendar expressions... [which] conform to the constrained ISO 8601... western calendar expressions begin with the 4-digit year; followed by the 2-digit month of the year; followed by the 2-digit day of the month; followed by the 2-digit hour of the day (beginning with zero); and so forth. For example, '200004010315' is a valid expression for April 1, 2000, 3:15 am. A calendar expression can be of variable precision, omitting parts from the right. For example, '20000401' is precise only to the day of the month. The least defined calendar period (i.e. the second) may be written as a REAL, with the number of integer digits specified, followed by the decimal point and any number of fractional digits. For example, '20000401031520.34' means April 1, 2000, 3:15 and 20.34 seconds. When other calendars are used in the future, a prefix 'GREG:' can be placed before the western (Gregorian) calendar expression to disambiguate from other calendars. Each calendar shall have its own prefix. However, the western calendar is the default if no prefix is present. In the modern Gregorian calendar (and all calendars where time of day is based on UTC), the calendar expression may contain a time zone suffix. The time zone suffix begins with a plus (+) or minus (-) followed by digits for the hour and, for non UTC times, minute cycles. UTC is designated as offset '+00' or '-00'; the ISO 8601 and ISO 8824 suffix 'Z' for UTC is not permitted." - HL7 V3

## Policy

This is the abstract class from which all concrete policy classes in this model are derived and instantiated. Because this class is abstract, it cannot be instantiated as a security policy for healthcare, however, it specifies the properties

reused by all policies. ISO 22600-2 specifies a policy as 'set of legal, political, organizational, functional and technical obligations for communication and cooperation'.

1. Contains exactly one [1..1] **description** with data type *String*
    - This attribute specifies the narrative description of the policy.
2. Contains exactly one [1..1] **effectiveTime** with data type *Time Interval*
    - This attribute specifies the period of time (e.g., start date, end date) during which the privacy policy described by ePolicy is in effect.
3. Contains exactly one [1..1] **id** with data type *Id*
    - Uniquely identifies the policy
4. Contains exactly one [1..1] **name** with data type *String*
    - A human discernible name for the policy
5. Contains exactly one [1..1] **status** with data type *Code*
    - This attribute indicates whether the policy is active or not
6. Contains exactly one [1..1] **uri** with data type *String*
    - The location of published policy.
7. Contains zero or more [0..*] **authority**, where its type is *Authority*
    - This is an association to the Authority that issued the policy.
8. Contains zero or more [0..*] **securityRole**, where its type is *Security Role*
    - ISO-22600 specifies a role as 'set of competences and/or performances which is associated with a task'. A role is a specialization of CompositePolicy that define a group of policies (authorization, obligation, delegation and refrain policies).

## Policy Program Source

Specifies the source of payment for the healthcare services documented by electronic health records. In order to meet specific privacy policy needs, it is necessary to specify if the information protected by the rule was produced through public healthcare or other type of insurance.

1. Contains exactly one [1..1] **policyCategory** with data type *Code*
    - The HL7 DAM contains two subclasses to illustrate the type of security/privacy policies that are inherent from the healthcare payment source. Those two subclasses are examples of many potential kinds of policies, and would be 'fleshed out' in the terminology referenced by this code.

## Population

'2.a) a body of persons or individuals having a quality or characteristic in common. 3) a group of individual persons, objects, or items from which samples are taken for statistical measurement' - Merriam-Webster's Medical Dictionary

1. Contains exactly one [1..1] **category** with data type *Code*
    - A categorization of the population
2. Contains exactly one [1..1] **description** with data type *String*
    - A textual description of the population
3. Contains exactly one [1..1] **id** with data type *Id*
    - Uniquely identifies the population.
4. Contains zero or more [0..*] **biologicalEntity**, where its type is *Biological Entity*
    - The entities which make up the Population. Populations may be made up of persons, non-person living subjects, or both.

## Position

1. Contains exactly one [1..1] **privilegeAndResponsibility**, where its type is *Privilege Or Responsibility*

## Power Of Attorney

"A power of attorney (POA) ... is an authorization to act on someone else's behalf in a legal or business matter." - wikipedia

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*

   • The time period over which the Power of Attorney is effective. Note that the end date is typically blank for active Power of Attorneys.

2. Contains exactly one [1..1] **purpose** with data type *Code*

   • Categorizes the Power of Attorney

3. Contains zero or one [0..1] **attorney**, where its type is *Contact Party*

   • "The person authorizing the other to act is the principal, granter, or donor (of the power), and the one authorized to act is the agent or attorney-in-fact or, in many common law jurisdictions, simply the attorney." - wikipedia. This role identifies the person who has been granted the power.

4. Contains exactly one [1..1] **status** with data type *Code*

   • Indicates the state of the Power of Attorney, as defined in the state-transition model in the HL7 RIM. Examples include Active, Pending, Terminated, etc.

## Practice Affiliation

1. Extends *Provider Affiliation*
2. Contains exactly one [1..1] **groupPractice**, where its type is *Group Practice*
3. Contains zero or more [0..*] **providerNormalSchedule**, where its type is *Provider Normal Schedule*

## Practicum

'A school or college course, especially one in a specialized field of study, that is designed to give students supervised practical application of previously studied theory' - American Heritage Dictionary. This class represents information about the practical educational experience of an Individual Healthcare Provider, such as an internship.

1. Extends *Provider Education*
2. Contains exactly one [1..1] **practicumCategory** with data type *Code*

   • Categorizes the type of practical experience the Individual Healthcare Provider has undergone. Example values include Internship, Residency, etc.

## Practitioner Lite

<deprecated>

1. Contains zero or one [0..1] **identifier** with data type *Id*

   • <deprecated>

2. Contains zero or one [0..1] **idSourceTable** with data type *String*

- <deprecated>
3. Contains zero or one [0..1] **name** with data type *Person Name*
   - <deprecated>
4. Contains zero or one [0..1] **vpid** with data type *Id*
   - <deprecated>
5. Contains zero or one [0..1] **telephone** with data type *String*
   - <deprecated>

## Practitioner Only Event

An action taken by a practitioner on the patient's behalf in which the patient is not present. For example, a radiologist reading an x-ray.

1. Extends *Abstract Encounter*

## Practitioner Participation

"An association between an Act and a Role with an Entity playing that Role. Each Entity (in a Role) involved in an Act in a certain way is linked to the act by one Participation-instance." - HL7 V3. This class speficially points to IndividualProvider to handle participations in which the participation is by a clinician and contains those HL7 attributes most commonly used.

1. Contains zero or one [0..1] **comment** with data type *String*
   - "Contains any comments or notes made by the practitioner in reference to the action in which they participated." - HL7 V3.
2. Contains zero or one [0..1] **modeCode** with data type *Code*
   - "The modality by which the Entity playing the Role is participating in the Act. UsageNotes: For author (originator) participants, this is used to specify whether the information represented by the act was initially provided verbally, (hand-)written, or electronically. Examples: Physically present, over the telephone, written communication." - HL7 V3
3. Contains exactly one [1..1] **practitioner**, where its type is *Individual Provider*
   - Represents information about a person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.
4. Contains zero or one [0..1] **signatureCode** with data type *Code*
   - "Whether the participant has attested participation through a signature, or whether such a signature is needed." - HL7 V3
5. Contains zero or one [0..1] **signatureText** with data type *String*
   - "A textual or multimedia depiction of the signature by which the participant endorses and accepts responsibility for his or her participation in the Act as specified in the Participation.typeCode." - HL7 V3
6. Contains zero or one [0..1] **time** with data type *Point In Time*
   - "An interval of time specifying the time during which the participant is involved in the act through this Participation." - HL7 V3.

## Practitioner Participation Lite

"An association between an Act and a Role with an Entity playing that Role. Each Entity (in a Role) involved in an Act in a certain way is linked to the act by one Participation-instance." - HL7 V3. This class contains the minimal

data (date/time, comments, and a pointer to IndividualProvider) that is most commonly needed for participations that involve and entity playing the role of Practitioner.

1. Contains zero or one [0..1] **comment** with data type *String*
   - "Contains any comments or notes made by the practitioner in reference to the action in which they participated." - HL7 V3.
2. Contains zero or one [0..1] **time** with data type *Point In Time*
   - "An interval of time specifying the time during which the participant is involved in the act through this Participation." - HL7 V3.
3. Contains exactly one [1..1] **practitioner**, where its type is *Individual Provider*
   - Represents information about a person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.

## Pre Verifier

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Prescibing Provider

Contains information specific to practitioners who are licensed to prescribe medications, especially controlled substances.

1. Contains exactly one [1..1] **controlledSubstanceLicenseId** with data type *Id*
   - Identifies the license under which the practitioner is authorized to prescribe controlled medications.
2. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
   - An interval of time specifying the period during which the practitioner is authorized to prescribe medications under the associated DEA Id, if such time limit is applicable and known.
3. Contains exactly one [1..1] **licenseCategory** with data type *Code*
   - A classification of the provider's license.
4. Contains exactly one [1..1] **status** with data type *Code*
   - Indicates the current state of the providers license to prescribe medications. The possible values are defined in the HL7 Role state-transition model.
5. Contains exactly one [1..1] **licensingJurisdiction**, where its type is *Jurisdiction*
   - Identifies the state or jurisdiction which authorized the Healthcare Provider to prescribe medications Note that a state or jurisdiction is an Organization.

## Prescriber

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Previous Cesarean Delivery

US Standard Certificate Of Birth Field 41 If the RiskFactor encountered during this pregnancy is "Mother had a previous cesarean delivery" this subclass of RiskFactor is used to contain the number of previous cesarean deliveries.

1. Extends *Risk Factor*
2. Contains exactly one [1..1] **quantity** with data type *Integer*
   - US Standard Certificate Of Birth Field 41 The number of previous cesarean deliveries experienced by the infant's mother prior to this pregnancy.

## Previous Patient Responsibility

1. Contains exactly one [1..1] **amount** with data type *Monetary Amount*
2. Contains exactly one [1..1] **patientResponsibilityType** with data type *Code*

## Previous Payment

1. Contains exactly one [1..1] **amount** with data type *Monetary Amount*
2. Contains exactly one [1..1] **paymentType** with data type *Code*

## Previous Payment Event

1. Contains exactly one [1..1] **dateAdjudicated** with data type *Point In Time*
2. Contains exactly one [1..1] **internalControlId** with data type *String*
3. Contains exactly one [1..1] **otherPayerId** with data type *Id*
4. Contains zero or more [0..*] **benefitStage**, where its type is *Benefit Stage*
5. Contains zero or more [0..*] **billingSequence**, where its type is *Billing Sequence*
6. Contains zero or more [0..*] **previousPatientResponsibility**, where its type is *Previous Patient Responsibility*
7. Contains zero or more [0..*] **previousPayment**, where its type is *Previous Payment*
8. Contains zero or more [0..*] **previousRejection**, where its type is *Previous Rejection*

## Previous Rejection

1. Contains exactly one [1..1] **rejectCode** with data type *Code*

## Primary Care Provider

A doctor selected by the patient to be the first physician contacted for any medical problem. The doctor acts as the patient's regular physician and coordinates any other care the patient needs, such as a visit to a specialist or hospitalization.

1. Extends *Practitioner Participation Lite*

## Primary Performer

"The principal or primary performer of the act." - HL7 V3

1. Extends *Practitioner Participation Lite*

## Primary Provider

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Primary Resident Interpreter

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Primary Staff Interpeter

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Principal Anesthesiologist

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Prior Authorization

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
2. Contains exactly one [1..1] **id** with data type *Id*
3. Contains zero or one [0..1] **maximumQuantity** with data type *Physical Quantity*
4. Contains exactly one [1..1] **status** with data type *Code*
5. Contains zero or one [0..1] **orderablePharmacyItem**, where its type is *Orderable Pharmacy Item*

# Prior Authorization

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
2. Contains exactly one [1..1] **id** with data type *Id*
3. Contains zero or one [0..1] **maximumQuantity** with data type *Physical Quantity*
4. Contains exactly one [1..1] **status** with data type *Code*
5. Contains zero or one [0..1] **orderablePharmacyItem**, where its type is *Orderable Pharmacy Item*

# Prior Authorization Request

1. Contains exactly one [1..1] **authorizationId** with data type *Id*
2. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
3. Contains exactly one [1..1] **priorAuthorizationIdAssigned** with data type *Id*
4. Contains exactly one [1..1] **requestBasis** with data type *Code*
5. Contains exactly one [1..1] **requestType** with data type *Code*
6. Contains exactly one [1..1] **supportingDocumentation** with data type *String*
7. Contains zero or one [0..1] **authorizedRepresentative**, where its type is *Agent*

## Prisoner Of War

Indicates the Veteran was a prisoner of war.

1. Contains exactly one [1..1] **dateRange** with data type *Time Interval*

   • The timeframe in which the Vet was a prisoner of war.

## Privacy Policy

This is the main/focal class for electronic privacy policies. It contains a set of rules that are intended to be enforced by security systems and are used as the basis for client consent directives.

1. Contains exactly one [1..1] **policyId** with data type *Id*

   • This attribute specifies the unique identifier of for a privacy policy.

2. Contains zero or one [0..1] **description** with data type *String*

   • This attribute is a narrative description of the privacy policy.

3. Contains zero or more [0..*] **privacyRuleList**, where its type is *Privacy Rule List*

   • A list of zero or more privacy rules applicable to this consent directive. A privacy rule specifies the permission allowed to a user type by the consenter for a specific type of information. The person consenting may be either the subject of the record or a designated Substitute Decision Maker. One or more consent rules comprise a consent directive or privacy policy.

4. Contains zero or more [0..*] **grantee**, where its type is *Grantee*

   • Designates who/what has been delegated a specific right.

5. Contains zero or more [0..*] **authority**, where its type is *Authority*

   • This is an association to the Authority that issued the policy.

## Privacy Rule

A privacy or consent rule specifies the permission allowed to a user type by the consenter for a specific type of information. The person consenting may be either the subject of the record or a designated Substitute Decision Maker. One or more consent rules comprise a consent directive or privacy policy.

1. Contains zero or one [0..1] **obligationCode** with data type *Code*

   • This coded attribute specifies a pre-defined obligation associated with a policy or consent. The Obligation Code is an Act.Code

2. Contains zero or one [0..1] **purpose** with data type *Code*

   • This attribute is used to specify the purpose to permit a specific type of action/operation according to the policy. Example: TREATMENT The PurposeCode is an Act.ReasonCode

3. Contains exactly one [1..1] **effectiveTime** with data type *Point In Time*

   • This attribute specifies the date/time when the Privacy Policy comes into effect.

4. Contains exactly one [1..1] **enablesOperation** with data type *Boolean*

   • Enables the operation (e.g., disclosure) or disables it depending on its value.

5. Contains zero or more [0..*] **includedRole**, where its type is *User Role*

   • Identifies a particular the role of a user of a computer system that is referenced by the Privacy Rule.

6. Contains zero or more [0..*] **informationType**, where its type is *Information Reference*

   • Identifies the type of protected information referenced by the Privacy Rule.

**7.** Contains at least one [1..*] **operation**, where its type is *Operation*

- Identifies the type of operation (i.e., collection, access, use, or disclosure) of a specific type of protected information referenced by the Privacy Rule.

## Privacy Rule List

An Act Relationship which describes the sequence in which Privacy Rules are to be processed as part of a Privacy Policy or a Consent Directive.

**1.** Contains exactly one [1..1] **privacyRule**, where its type is *Privacy Rule*

- A privacy or consent rule specifies the permission allowed to a user type by the consenter for a specific type of information. The person consenting may be either the subject of the record or a designated Substitute Decision Maker. One or more consent rules comprise a consent directive or privacy policy.

**2.** Contains exactly one [1..1] **sequenceNumber** with data type *Integer*

- This attribute specifies the sequence of a specific consent directive in the Consent Directive set.

## Privilege Or Responsibility

**1.** Contains exactly one [1..1] **position**, where its type is *Position*

## Prn Medication Administration

**1.** Contains exactly one [1..1] **isPrnActivity** with data type *Boolean*

- I'm guessing that this is a boolean. Vista definition is: The PRN REASON FLAG field is to indicate whether the BCMA Med Log file entry is PRN activity and has an associated PRN REASON which has been set to require BCMA user attention or action.

## Problem Management Classification

**1.** Contains exactly one [1..1] **code** with data type *Code*

- 

## Problem Section

**1.** Contains zero or more [0..*] **diagnosis**, where its type is *Psychiatric Diagnosis*

## Problems Encountered

Contains information about problems encountered for the patients case.

**1.** Contains exactly one [1..1] **outcomeCategory** with data type *Code*

- Unique Identifier for the problem resolution for each problem.

**2.** Contains exactly one [1..1] **problemCategory** with data type *Code*

- Contains a unique identifier for each problem encountered for the case. The problem describes issues encountered.

# Procedure

"An Act whose immediate and primary outcome (post-condition) is the alteration of the physical condition of the subject." - HL7 V3.

1. Contains exactly one [1..1] **procedureCode** with data type *Code*
   - Contains a code indicating a procedure or a non-procedural event involving the patient. This code could come from various coding systems; typically the Common Procedure Terminology (CPT) is used, but other coding systems might be employed, especially to capture workload-related data.
2. Contains zero or more [0..*] **procedureModifier** with data type *Code*
   - Contains an optional modifier to further describe the procedure. Some coding systems employ combinations of procedure codes and modifiers, while others do not. This property accomodates those systems which do permit the use of a modifier.
3. Contains exactly one [1..1] **timesPerformed** with data type *Integer*
   - Indicates the number of times this procedure was performed for the patient at one setting. Most procedures are only performed (and recorded) once; this property allows for the recording of multiple procedures in order to remove the necessity to record the same procedure multiple times.

# Procedure List Entry

This class provides a mechanism to associate a record with multiple procedures. Rather than have the traditional "primary procedure", "secondary procedure", etc. in a record, the record will contain a zero-to-many pointer to this class, which then has a one-to-one pointer to a procedure, with a precedence property to indicate primary, secondary, tertiary, etc.

1. Contains exactly one [1..1] **precedence** with data type *Integer*
   - Provides an indication of whether the procedure is primary, secondary, tertiary, etc.
2. Contains exactly one [1..1] **procedure**, where its type is *Procedure*
   - Indicates the procedure associated with this entry in the list.

# Procedure Summary

This class contains attributes pertaining to the clinical procedure peformed indentified in this document.

1. Contains exactly one [1..1] **procedureSummaryCode** with data type *Code*
   - It contains the summary code for this procedure once it is complete. Possible Values include: '1' for Normal, '2' for Abnormal, '3' for Borderline, '4' for Incomplete etc.
2. Contains zero or one [0..1] **procedureDate** with data type *Point In Time*
   - The Date/Time when the procedure was performed.

# Process Activities

action activities for consultProcedurePromise, it is used for tracking/auditing

1. Contains exactly one [1..1] **activity** with data type *Code*
   - The activity being taken and updated.

2. Contains zero or one [0..1] **comment** with data type *String*

   - comment about the activity

3. Contains exactly one [1..1] **time** with data type *Point In Time*

   - The actual date and time the activity tracking update was added to the process activities multiple.

4. Contains zero or one [0..1] **lastActivity**, where its type is *Process Activities*

   - the prior action activity for consultProcedurePromise.

5. Contains zero or one [0..1] **forwardedFrom**, where its type is *Service Delivery Location*

   - "The location to which the patient is assigned. It is a role played by a place at which services may be provided. Note that a single physical place can play multiple service delivery location roles each with its own attributes. For example, a Podiatry clinic and Research clinic may meet on alternate days in the same physical location; each clinic uses its own mailing address and telephone number." (HL7) Service location which forwarded the Consult to the new service location.(VISTA)

6. Contains zero or one [0..1] **priorService**, where its type is *Service Department*

   - An organizational unit defined by the type of service that it provides to patients. Examples include Surgery, Dentistry, Mental Health. the name of the service that the inter-facility consult was directed to at the remote site prior to being forwarded.

## Processed Specimen

might include information on the specimen viability

1. Extends *Specimen*

## Processor

Note that a Processor might be a Third Party Administrator or a PBM. For the purposes of claims processing, we do not need to distinguish these.

1. Contains exactly one [1..1] **bankIdNumber** with data type *String*
2. Contains exactly one [1..1] **planId** with data type *String*
3. Contains exactly one [1..1] **processorControlNumber** with data type *String*
4. Contains zero or one [0..1] **payer**, where its type is *Payer*

## Product

"The product, e.g., a medicine or device or food item, that is the primary unit which is manufactured and the object of an intended administration. It represents an entity, either in its real or actual form as something made, or described specifically, or more conceptually, generically, or "virtually". <br /> A product must be distinguished from one that is just packaging. Examples for products are tablet, capsule, solution for injection, powder, and device. Conversely, vial, bottle, pouch, and carton are containers, which though sometimes necessary for handling of the product, are not themselves administered, but emptied into some other container, or used with an injection or inhalation device. Even though a capsule can be considered a container holding granules, a capsule is still considered primary Product not PackagedProduct, because the capsule is the unit normally intended for administration, and so the capsule is the Product. In this way, a solution packaged in an administration unit, such as a dragee or a prefilled syringe may be considered primary Product rather than PackagedProduct, if it is intended to be applied completely as one unit, and not subdivided. This requires that the ingredients of such products are specified as a total amount per complete application rather than as a concentration. <br /> Examples for devices are chest tube, wound dressing, dental chair, and ventilator machine. Devices are any kind of product used for medical purposes or in conjunction with medical services, including, but not limited to, direct use for therapeutic purposes (e.g., orthopedic screw), diagnostic purposes (e.g. EKG machine), usage as applicator devices for the administration of medicines (e.g., syringes), or as tools (e.g.,

dental chair). (Note, while it may seem unusual to classify a wound dressing as a device, this is the practice in the regulatory context, in other contexts, these items are sometimes called "supplies".) <br /> A kit is a product that contains multiple parts administered together or used together in some intricate way. Some of the parts of a kit may be medicinal substances (medicines), and others may be devices, e.g., applicator devices. Kits are described as a primary product of form code meaning "kit" with parts." - HL7 V3

1. Contains zero or one [0..1] **code** with data type *Code*

   - "The code given to this kind of product, i.e., NDC code to medicines in the U.S., EAN or UPC codes to food items or devices. A code given to a device may also be known as "unique device identifier". Unlike a device instance identifier, however, this is a code for the specific kind of device analogously to the NDC code or UPC code that is a code of a manufactured kind of product respectively. The words "product code" "unique device identifiers" may have certain specific connotations in different regulatory contexts, to side-step such unwanted connotations, one may call this code the "Item Code", for it is the code for the item (product, medicine, thing, or class thereof) that is so described." - HL7 V3

2. Contains exactly one [1..1] **description** with data type *String*

   - "A text description of the product. While the data type ED would allow for a full product monograph to be carried in this attribute, this practice is to be avoided, because product monograph document structures (Structured Product Labeling) should be used instead for such documents. The description attribute is mainly to be used for brief descriptions which users of product catalogs can use to quickly distinguish this product from other similar products in a list of products." - HL7 V3

3. Contains zero or one [0..1] **formCode** with data type *Code*

   - <p> "The principle form of a product, such as dosage form of a medicine. Values may be drawn from the MaterialForm HL7 vocabulary table or from other external code value sources. Notice the difference between an (Administered) Medicine and a PackagedMedicine. Both have formCodes. A box or vial is usually not a medicine Product.formCode but a PackageProduct.formCode, unless the entire box or the entire vial is meant for direct administration as a single unit. In principle, the formCode is a very coarsely-grained (high level) product class that focuses on physical appearance. At the top, it usually distinguishes between physical state of matter (solid, liquid, gaseous), and, because solids may be amorphous (e.g., powders), would allow distinguishing solid shaped from amorphous masses. The former can be individually handled and counted, whereas the latter (amorphous masses) can only be measured and require primary containers for handling. Thus the formCode has implications for how the product is quantified (counted vs. measured) and whether a primary container (e.g., vial) may be expected." - HL7 V3 </p>

4. Contains zero or one [0..1] **handlingCode** with data type *Code*

   - <p> "An indicator of special handling requirements for the product. E.g., keep at room temperature, store upright." - HL7 V3 </p>

5. Contains zero or more [0..*] **name** with data type *String*

   - <p> "The name of the product kind described. If this is a specific manufactured (brand) product, this would be the proprietary name. For general product class descriptions this would be a non-proprietary name. This attribute may sometimes be used instead of a code and descriptive data elements when no suitable coding system is available.<br /> The data type for the name has been allow for suffixes and also other name parts, which might hold proprietary dose form (e.g., "capsil", "discus", "injection system") or other name parts which may be required for recognition of the product among health professionals. Note that these name parts are never to be used instead of proper descriptive data elements (formCode, ingredients and their quantities, etc.)" - HL7 V3 </p>

6. Contains zero or one [0..1] **riskCode** with data type *Code*

   - <p> "Indicates a type of hazard or threat associated with the product." - HL7 V3 </p>

7. Contains exactly one [1..1] **shelfLife** with data type *Time Quantity*

   - "The amount of time after date of manufacture that the manufacturer no longer ensures the safety, quality, and/or proper functioning of the material. Only the interval width is valued." - HL7 V3

8. Contains zero or more [0..*] **storageCondition** with data type *String*

9. Contains zero or more [0..*] **equivalentTo**, where its type is *Material Category*

10. Contains zero or more [0..*] **specializationOf**, where its type is *Material Category*

# Product Activation

Placeholder for some act that causes the "countdown" to start where a product must be used within a certain time (e.g., use within 30 days of opening the package).

1. Contains exactly one [1..1] **dateActivated** with data type *Point In Time*
2. Contains zero or one [0..1] **productInstance**, where its type is *Medicinal Product Instance*

# Professional Service Provision

1. Extends *Billable Service*

# Pronouncement Of Death

The opinion or determination, based on a physical assessment, that life has ceased. A series of steps that need to occur to determine that a death has occurred. Involves examining patients to determine death, notifying families and in recording proper documentation of a death. Death pronouncements are generally conducted by a physician.

1. Contains exactly one [1..1] **dateTimeOfActualOrPresumedDeath** with data type *Point In Time*

   • Contains the actual or presumed date and time of death as completed by person who pronounced or certified the decedent's death.
2. Contains exactly one [1..1] **dateTimePronouncedDead** with data type *Point In Time*

   • Date and time that the decedent was pronounced dead.
3. Contains exactly one [1..1] **dateTimeSigned** with data type *Point In Time*

   • Date that the person who pronounced or certified the decedent's death signed the Certificate of Death.
4. Contains exactly one [1..1] **wasMedicalExaminerOrCoronerContacted** with data type *Boolean*

   • Indicates whether the medical examiner or coroner was contacted.
5. Contains exactly one [1..1] **author**, where its type is *Author*

   • The person who pronounced or certified the decedent's death.

# Prosthetics Appliance

Record of the product information of an issued item.

1. Contains exactly one [1..1] **description** with data type *String*

   • A textual representation of the nature and characteristics of a product
2. Contains exactly one [1..1] **lotId** with data type *String*

   • The "Lot Number Text" provides the facility to communicate the lot number or batch number information, as an alphanumeric string, for the specific item being described. [HL7 3.0]
3. Contains exactly one [1..1] **manufacturerModelName** with data type *Code*

   • An alphanumeric code that is used to identify the model of a product
4. Contains exactly one [1..1] **serialNumber** with data type *Id*

   • An alphanumaric text that is one of a series and is used for identification of a device

## Prosthetics Promise

The act of accepting the role of fulfiller. This is the act of accepting a prosthetic request. The ProthetictPromise act identifies a fulfiller promise for a prosteitic transaction.

1. Contains exactly one [1..1] **accessionDate** with data type *Point In Time*
   - The date that a transaction was entered to a system. It may be the date the transaction was initiated.
2. Contains exactly one [1..1] **deliveryDate** with data type *Point In Time*
   - The date that the order was closed.
3. Contains exactly one [1..1] **description** with data type *String*
   - A textual representation of the nature and characteristics of the item.
4. Contains exactly one [1..1] **id** with data type *Id*
   - A unique identifier for the Act (HL7 3.0)
5. Contains exactly one [1..1] **transactionForm** with data type *Code*
   - Identifies the paper form on which the transaction is tracked. Possible values include: PSC, 2237, 2421, 2431, 2474, 2520, 2529-3, 2529-7, 2914, Inventory Issue, Lab Issue-3, Stock Issue, Visa, Other.
6. Contains zero or one [0..1] **visit**, where its type is *Encounter Event*
   - An interaction between a patient and a practitioner under the auspices of a given organization for the purpose of providing healthcare-related service(s).
7. Contains at least one [1..*] **issuedItem**, where its type is *Issued Item*
   - Information pertinent to the issued for the patient.
8. Contains zero or one [0..1] **request**, where its type is *Prosthetics Request*
   - requested information about the prosthetic.
9. Contains exactly one [1..1] **issuingLocation**, where its type is *Service Delivery Location*
   - The station to which the prosthetic transaction is assigned. The station is responsible for the issue and payment for the prosthetic device.
10. Contains zero or more [0..*] **hcpcsProcedureList**, where its type is *Procedure List Entry*
11. Contains zero or more [0..*] **relatedProstheticsPromise**, where its type is *Related Prosthetics Promise*

## Prosthetics Request

A record of a prothetic appliance or repair request. It contains both manual and CPRS requests.

1. Extends *Healthcare Order*
2. Contains zero or more [0..*] **provisionalDiagnosis**, where its type is *Diagnosis List Entry*

## Provider

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Provider Affiliation

Represents information about the association between an Individual Healthcare Provider and an Organizational Healthcare Provider.

1. Contains exactly one [1..1] **description** with data type *String*

2. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
   - The date range during which the license is valid.
3. Contains exactly one [1..1] **status** with data type *Code*
4. Contains zero or more [0..*] **position**, where its type is *Position*
5. Contains zero or more [0..*] **privilegeAndResponsibility**, where its type is *Privilege Or Responsibility*

## Provider Education

Represents information about the educational experience of an Individual Healthcare Provider. This includes both formal training resulting in some sort of degree or certification, as well as practical experience such as an internship.

1. Contains exactly one [1..1] **educationalInstitution**, where its type is *Educational Institution*
   - An organization created to provide educational instruction. Specifically, a school or institution of higher learning.
2. Contains exactly one [1..1] **dateRange** with data type *Time Interval*
   - Contains the dates (start and end) during which the provider's education took place.

## Provider Normal Schedule

1. Contains exactly one [1..1] **scheuleCategory** with data type *Code*
2. Contains exactly one [1..1] **timeBlockSize** with data type *Time Quantity*
3. Contains exactly one [1..1] **validTimeRange** with data type *Time Interval*

## Provider Plan Participation

Represents the participation of a Healthcare Provider (either an Individual or an Organizational Provider) with a Health Plan for the purpose of providing healthcare services to members (i.e., patients) of that plan.

1. Contains exactly one [1..1] **effectiveDateRange** with data type *Time Interval*
   - The date range during which the license is valid.
2. Contains exactly one [1..1] **status** with data type *Code*
3. Contains exactly one [1..1] **healthPlan**, where its type is *Health Plan*
4. Contains exactly one [1..1] **healthcareProvider**, where its type is *Healthcare Provider*

## Psr Score Observation

This class includes the data element for PSR Score.

1. Contains exactly one [1..1] **psrScore** with data type *Code*
   - This is score of each sextant (a sextant is one sixth of the teeth) concatenated into single string.

## Psychiatric Diagnosis

This class is intended to specialize a generic diagnosis class by adding support for Diagnostic and Statistical Manual of Mental Disorders (DSM) codes and supports any extensions required to communicate information about Behavioral Health diagnoses between organizations and providers.

1. Extends *Diagnosis*
2. Contains exactly one [1..1] **diagnosisCode**

- This attribute is intended to store the code for the diagnosis in SNOMED-CT. Since both the DSM IV and the ICD codes corresponding to the psychiatric diagnosis are mapped to SNOMED-CT should be sufficient to represent psychiatric diagnoses.
3. Contains zero or one [0..1] **confidentialityCode** with data type *Code*
   - This code may be used to specify whether the diagnosis is sensitive (e.g. carries a social stigma). This attribute relies on the sensitivity value set specified by HL7 Confidentiality coding system.

# Psychiatric Problem

This section of the assessment is used to identify the psychiatric problems of a patient.
1. Extends *Behavioral Health Assessment Domain*
2. Contains zero or more [0..*] **psychiatricDiagnosis**, where its type is *Psychiatric Diagnosis*

# Psycho Social Stressor

Contains information about a psycho-social stressor that is affecting the patient. The stressor may be playing a role in a disorder, or it may be a consequence of the person's psychopathology.
1. Contains exactly one [1..1] **psychoSocialStressor** with data type *String*
   - Short, descriptive narrative of stressor. A stressor frequently plays a precipitating role in a disorder or it may also be a consequence of the person's psychopathology.
2. Contains zero or one [0..1] **severityCode** with data type *Code*
   - This field contains the overall rating indicating severity of psychosocial stressor. Suggested Values 0=Inadequate Info or no change, 1=None, 2=Mild, 3=Moderate, 4=Severe, 5=Extreme, 6=Catastrophic, etc.
3. Contains zero or one [0..1] **highLevelPsychClass** with data type *String*
   - Highest level of stress in the past year. SRDT modeled for this PsychiatryClassSeverityCode.

# Public Health Report

1. Contains exactly one [1..1] **reportableCondition**, where its type is *Reportable Condition*
2. Contains exactly one [1..1] **reportDate** with data type *Point In Time*

# Published Consent

This specialization of the ConsentDirective class is used to describe a consent directive published to a registry. If a client s consent directive is published, a URL/URI is made available for reference. The client may use this URI to allow providers access to the consent directive created by the consenter.
1. Extends *Consent Directive*
2. Contains exactly one [1..1] **uri** with data type *String*
   - If a specific consent directive (for a client) is published, this attribute provides the means to locate and download the consent directive from a registry.

# Published Privacy Policy

This class encapsulates the location of a human-readable version of the Electronic Privacy Policy. The human-readable version is accessible to any authorized system and user via the supplied URI.
1. Extends *Privacy Policy*

2. Contains zero or one [0..1] **uri** with data type *String*

   • The location of published policy.

## Qualifying Coverage Factor

The qualifying coverage factor.

1. Contains exactly one [1..1] **factorCode** with data type *Code*

   • Indicates the specific qualifying coverage factor.
2. Contains exactly one [1..1] **id** with data type *Id*

   • The unique identifier for this factor.
3. Contains exactly one [1..1] **status** with data type *Code*

   • The status of the qualifying coverage factor.

## Qualifying Reason

Conditions qualifying the Veteran for health care benefits.

1. Contains exactly one [1..1] **id** with data type *Id*

   • The unique identifier for this qualifying reason.
2. Contains exactly one [1..1] **status** with data type *Code*

   • The status of this qualifying reason.
3. Contains zero or more [0..*] **militaryServiceEpisode**, where its type is *Military Service Episode*

   • militaryServiceEpisode.
4. Contains exactly one [1..1] **qualifyingCoverageFactor**, where its type is *Qualifying Coverage Factor*

   • qualifyingCoverageFactor.

## Qualifying Service Boolean Detail

Military service information or condition obtained from the enrollment application in the form of a yes/no answer to a question.

1. Extends *Qualifying Service Detail*
2. Contains exactly one [1..1] **value** with data type *Boolean*

   • The answer to a yes/no question.

## Qualifying Service Date Detail

Military service information or condition obtained from the enrollment application in the form of a calendar date.

1. Extends *Qualifying Service Detail*
2. Contains exactly one [1..1] **value** with data type *Point In Time*

   • The answer to a question requiring a calendar date.

## Qualifying Service Detail

Military service information or condition classified from the enrollment application as a date, yes/no answer to a question, or numeric value.

1. Contains exactly one [1..1] **detailCode** with data type *Code*

   • A specific military service question from the enrollment application.
2. Contains exactly one [1..1] **status** with data type *Code*

   • The status of this act.
3. Contains exactly one [1..1] **id** with data type *Id*

   • The unique identifier for this question.

## Qualifying Service Numeric Detail

Military service information or condition obtained from the enrollment application in the form of a numeric value.

1. Extends *Qualifying Service Detail*
2. Contains exactly one [1..1] **value** with data type *Physical Quantity*

   • The answer to a question requiring a numeric value.

## Quantity Question

This class is used to specify the response to questions that are expressed by a quantity (e.g., years of use).

1. Contains exactly one [1..1] **question** with data type *Code*

   • The coded value of the question that requires the quantity amount specification.
2. Contains exactly one [1..1] **answer** with data type *Physical Quantity*

   • If a response requires a quantity (e.g. years), this attribute specifies its coded value. If a response is not provided, the null value may be qualified by an ASKU (asked but unknown) null flavor.

## Question

This class represents the abstract base class for all the questions contained in the assessment questionnaire.

1. Contains exactly one [1..1] **question** with data type *Code*

   • The question in a questionnaire (e.g. Assessment instrument) may be based on a common value set. Therefore, the question may be a coded attribute.

## Rad Nuc Report

Represents the radiology/nuclear medicine report as known by the originating VistA system. Equivalent to File 74.

1. Contains exactly one [1..1] **id** with data type *Id*

   • A unique identifier for the Radiology Reportt (File 74).
2. Contains exactly one [1..1] **status** with data type *Code*

   • Iindicate the status of this report. Possible values are Verified; Released/Not Verified; Problem Draft; Draft.

3. Contains exactly one [1..1] **dateEntered** with data type *Point In Time*

   - The date and time that the report was entered into the system by the transcriptionist.

4. Contains exactly one [1..1] **dateReported** with data type *Point In Time*

   - The date that the interpreting physician dictated this report. The transcriptionist enters this date from the dictation tape. If the physician is using a voice recognition system for dictation, this date is entered at the time the report is transmitted to DHCP.

5. Contains exactly one [1..1] **reportText** with data type *String*

   - Contains the report text for the imaging exam. The report text is written by the interpreting physician and may be entered into the system by a transcriptionist.

6. Contains exactly one [1..1] **impressionText** with data type *String*

   - 'Impression text' of the rad/nuc med exam associated with this report. The 'impression text' gives a quick summary of the 'report text'.

7. Contains exactly one [1..1] **additionalClinicalHistory** with data type *String*

   - Contain a patient's clinical history as well as instructions to the interpreting physician. For example, the instructions might be for the physician to interpret the exam images to rule out the possibility of the patient having a certain disease. The 'additional clinical history' is written by the interpreting physician and is entered into the system by the transcriptionist. Voice Recognition systems allow the interpreting physician to directly enter this information into the 'additional clinical history' field.

8. Contains zero or more [0..*] **activityLog**, where its type is *Activity Log*

   - A log of actions that have been taken on this report. Equivalent to File 70.07.

9. Contains zero or one [0..1] **Image**, where its type is *Image*

   - Image associated with this Report

10. Contains exactly one [1..1] **relatedCase**, where its type is *Radiologic Examination*

    - Related case to this report

11. Contains zero or more [0..*] **relatedReport**, where its type is *Related Report*

# Radiation Therapy

The treatment of cancer with radiation, especially by selective irradiation with x-rays or other ionizing radiation and by ingestion of radioisotopes. [Source <http://dictionary.reference.com/search?q=00-database-info&db=ahsmd>: The American Heritage Stedman's Medical Dictionary ]

1. Extends *Cancer Treatment*
2. Contains exactly one [1..1] **radiation** with data type *Code*

   - Indicates the type of radiation administered to the primary site or any metastatic site. Include all procedures that are part of the first course of treatment, whether delivered at the reporting institution or at other institutions. Possible values are None; Beam radiation; Radioactive implants; Radioisotopes; Beam rad w implants/radioisotopes; Radiation therapy, NOS; Refused radiation therapy; Recommended, unk if given; Unk if administered; etc.

# Radiation Treatment Evaluation

Contains information pertinent to the followup of the radiation treatment.

1. Contains exactly one [1..1] **boostDosage** with data type *Real*

   - Additional boost dosage delivered to that part of the treatment volume encompassed by the boost fields or devices. The unit of measure is centiGray (cGy). Possible values are 00000 thru (5 9 s) 99999. (Manually entered)

2. Contains exactly one [1..1] **boostTreatmentModality** with data type *Code*

   - Identifies the dominant modality of radiation therapy used to deliver the most clinically significant boost dose to the primary volume of interest during the first course of treatment. This is accomplished with external beam fields of reduced size (relative to the regional treatment fields), implants, stereotactic radiosurgery, conformal therapy, or IMRT. External beam boosts may consist of two or more successive phases with progressively smaller fields generally coded as a single entry. Posible values are Neutrons (w or w/o X-Ray/electrons); Megavoltage, NOS; Brachytherapy, High-Dose-Rate (HDR); Photons (2-5 MV); etc.

3. Contains exactly one [1..1] **dateRadiationTherapyEnded** with data type *Point In Time*

   - The date on which the patient completes or receives the last radiation treatment at any facility.

4. Contains exactly one [1..1] **locationOfRadiationTx** with data type *Code*

   - Identifies the location of the facility where radiation therapy was administered during the first course of treatment. Possible values are No radiation tx; All radiation tx at this fac; Regional tx at this fac, boost elsewhere; Boost at this fac, regional elsewhere; All radiation tx elsewhere; Other; Unknown; etc.

5. Contains exactly one [1..1] **numberOfTxsToThisVolume** with data type *Real*

   - Indicates the total number of treatment sessions (fractions) administered during the first course of treatment. Number between 0 and 99.

6. Contains exactly one [1..1] **radiationSurgerySequence** with data type *Code*

   - Indicates the sequencing of radiation and surgical procedures given as part of the first course of treatment. Possible values are No rad and/or surgery; Rad before surgery; Rad after surgery; Rad both before/after surgery; Intraoperative rad; Intraoperative rad w rad before/after surgery; Sequence unknown; etc.

7. Contains exactly one [1..1] **radiationTreatmentVolume** with data type *Code*

   - Identifies the volume or anatomic target of the most clinically significant regional radiation therapy delivered to the patient during the first course of treatment. Possible values are Eye/orbit; Chest/lung (NOS); Lung (limited); Esophagus; Breast/lymph nodes; Chest Wall; Lower extended field; etc.

8. Contains exactly one [1..1] **regionalDoseCgy** with data type *Real*

   - The dominant or most clinically significant total dose of regional radiation therapy delivered to the patient during the first course of treatment. The unit of measure is centiGray (cGy). Possible values are 0000 thru 9999 (Manually entered)

9. Contains exactly one [1..1] **regionalTreatmentModality** with data type *Code*

   - Iidentifies the dominant modality of radiation therapy used to deliver the most clinically significant regional dose to the primary volume of interest during the first course of treatment. Posible values are Neutrons (w or w/o X-Ray/electrons); Megavoltage, NOS; Brachytherapy, High-Dose-Rate (HDR); Photons (2-5 MV); etc.

## Radio Pharmaceutical Administration

Represents the radiopharmaceutical administration. Equivalent to File 70.2.

1. Contains exactly one [1..1] **activityDrawn** with data type *Physical Quantity*

   - This is the radiopharmaceutical activity drawn to be administered to the patient. The unit of measure is mCi.

2. Contains exactly one [1..1] **bodySite** with data type *Code*

   - Indicates the body site of administration . This should be a code from File 71.7.

3. Contains exactly one [1..1] **dateAdministered** with data type *Point In Time*

   - The date and time this dosage was administered.

4. Contains exactly one [1..1] **dateDrawn** with data type *Point In Time*

   - The date and time the radiopharmaceutical was drawn.

5. Contains exactly one [1..1] **doseAdministered** with data type *Physical Quantity*

   - The radiopharmaceutical dosage actually administered to the patient.

6.  Contains exactly one [1..1] **doseForm** with data type *Code*

    - Form: "The shape and structure of something as distinguished from its material" (Webster's Medical Dictionary). Indicates the form of the material making up a single dose (as opposed to how the dose is packaged). Possible values include Tablet, Drop, Lozenge, Cream, etc. [Maintained by Pharmacy Domain]

7.  Contains exactly one [1..1] **dosePrescibed** with data type *Physical Quantity*

    - This is the dosage (in mCi) of this radiopharmaceutical as prescribed by an MD.

8.  Contains exactly one [1..1] **lotNumber** with data type *String*

    - Indicates the radiopharmaceutical lot number . This should be a code from File 71.9.

9.  Contains exactly one [1..1] **route** with data type *Code*

    - Indicates the route of administration . This should be a code from File 71.6.

10. Contains exactly one [1..1] **volume** with data type *Physical Quantity*

    - Indicates the volume of the radiopharmaceutical administered. The units of measure will either be 'c' for caplets or 'm' for milliliters.

11. Contains exactly one [1..1] **performer**, where its type is *Primary Performer*

12. Contains at least one [1..*] **radiopharmaceutical**, where its type is *Orderable Pharmacy Item*

    - A radiopharmaceutical associated with this examination should be entered here. Equivalent to a pointer to File 71.

## Radiologic Examination

This class contains attributes related to Radiology \ Nuclear Medicine imaging examinations.

1.  Contains exactly one [1..1] **cancellationReason** with data type *Code*

    - Indicates the reason why the exam was canceled. Possible values are HOLD; CANCELLED: DUPLICATE EXAM; etc. File 75.2.

2.  Contains exactly one [1..1] **caseId** with data type *Id*

    - Uniquely identifies the order from within the filler's system. Traditionally also called an "accession number".

3.  Contains exactly one [1..1] **_clinicalHistory** with data type *String*

    - Clinical history of the patient that might be relevant to this case as well as instructions to the interpreting physician

4.  Contains exactly one [1..1] **status** with data type *Code*

    - Indicates the status of this exam. This should be a code from File 72.

5.  Contains exactly one [1..1] **examCategory** with data type *Code*

    - This field contains the exam category associated with this case number. Possible values are INPATIENT, OUTPATIENT, CONTRACT, SHARING, EMPLOYEE, RESEARCH; etc.

6.  Contains exactly one [1..1] **researchSource** with data type *String*

    - The name of the research source that referred the patient to Radiology/Nuclear Medicine for the exam. This field is used for exams with a 'category of exam' of 'research'.

7.  Contains exactly one [1..1] **wasContrastMediaUsed** with data type *Boolean*

    - Indicate if an intravascular contrast was used during this Rad/Nuc Med exam. Possible values are Yes, No; etc.

8.  Contains exactly one [1..1] **complicationType** with data type *Code*

    - Iindicate if this patient experienced any complication during the exam procedure. Codes from file 78.1. Possible values are.... No Complication; etc.

9.  Contains exactly one [1..1] **complicationText** with data type *String*

    - A brief explanation of the exam complication.

10. Contains exactly one [1..1] **isCombinedReport** with data type *Boolean*

- • Is it a Radiology and Nuclear Medicine comined Report? Possible values are Yes; No; etc.
11. Contains exactly one [1..1] **ward**, where its type is *Ward*

- • Represents the hospital ward as known by the originating VistA system. Equivalent to a pointer to File 42.
12. Contains exactly one [1..1] **report**, where its type is *Rad Nuc Report*

- • Represents the radiology/nuclear medicine report as known by the originating VistA system. Equivalent to a pointer to File 74.
13. Contains zero or one [0..1] **contrastMediaAdministration**, where its type is *Contrast Media Administration*

- • Identifies Constrat Media associated with the Examination
14. Contains exactly one [1..1] **cameraEquipmentRoom**, where its type is *Camera Equipment Room*

- • The primary camera/equipment/room where the imaging exam was performed. Equivalent to a pointer to File 78.6
15. Contains zero or more [0..*] **activityLog**, where its type is *Activity Log*

- • A log of actions that have been taken on this outside film record. Equivalent to File 70.07.
16. Contains exactly one [1..1] **requestingLocation**, where its type is *Hospital Location*

- • Th name of the requesting hospital / clinic that that is requesting the exam.. Equivalent to File 44.
17. Contains exactly one [1..1] **principalClinic**, where its type is *Hospital Location*

- • Th name of the principal clinic that referred the patient to Radiology/Nuclear Medicine for the exam. Equivalent to File 44.
18. Contains exactly one [1..1] **service**, where its type is *Service Department*

- • Represents the service as known by the originating VistA system. Equivalent to a pointer to File 49.
19. Contains exactly one [1..1] **bedSection**, where its type is *_ Specialty*
20. Contains zero or more [0..*] **diagnosis**, where its type is *Diagnosis List Entry*
21. Contains zero or one [0..1] **radioPharmaceuticalAdministration**, where its type is *Radio Pharmaceutical Administration*

- • A radiopharmaceutical associated with this examination should be entered here. Equivalent to a pointer to File 71.
22. Contains zero or more [0..*] **procedure**, where its type is *Procedure List Entry*
23. Contains exactly one [1..1] **encounter**, where its type is *Encounter Event*

- • The encounter during which the Radiologic Examination took place.

## Radiology Nuclear Medicine Request

The class contains attributes associated with the Radiology / Nuclear Medicine Examination Request. Equivalent to File 75.1.

1. Extends *Healthcare Order*
2. Contains exactly one [1..1] **isPatientPregnant** with data type *Boolean*

- • Indicates whether the patient is known to be pregnant at the time of the exam.
3. Contains exactly one [1..1] **needIsolationProcedures** with data type *Boolean*

- • Indicates whether the patient is subject to isolation procedures.
4. Contains exactly one [1..1] **orderedImage** with data type *Code*

- • Identifies a kind of image that can be, is, or has been requested as part of an order.
5. Contains exactly one [1..1] **preOpAppointmentTime** with data type *Point In Time*

- • The date/time this patient is scheduled for pre-operative image
6. Contains exactly one [1..1] **resourceSource** with data type *String*

- Contains name of the research source for exams with a 'category of exam' of 'research' that referred this patient to the imaging service for this exam.
7. Contains exactly one [1..1] **transportationMode** with data type *Code*
   - The transportation mode of the patient for the requested procedure.

# Radiology Promise

This class contain attributes associated with Radiology Promise Event. File 70.
1. Contains exactly one [1..1] **accessionId** with data type *Id*
   - A unique identifier for the Radiology Event (File 70).
2. Contains exactly one [1..1] **patientDescription** with data type *String*
   - Contains a brief note about this Radiology/Nuclear Medicine patient. It may describe the personality or any unusual characteristic to identify this Radiology/Nuclear Medicine patient.
3. Contains exactly one [1..1] **accessionDate** with data type *Point In Time*
   - The date and time of this Imaging exam.
4. Contains exactly one [1..1] **imagingType** with data type *Code*
   - Indicates the type of imaging used for this exam. (Coded value from File 79.2.) Possible values are General Radiology; Nuclear Medicine; Nuclear Magnetic Resonance; Ultrasound; etc.
5. Contains exactly one [1..1] **isPartOfSet** with data type *Boolean*
   - Whether this exams under this date/time are part of the same set of exams. Possible values are Yes; etc
6. Contains exactly one [1..1] **imagingLocation**, where its type is *Imaging Location*
7. Contains exactly one [1..1] **division**, where its type is *Division*
8. Contains exactly one [1..1] **radiologyNuclearMedicineOrder**, where its type is *Radiology Nuclear Medicine Request*
9. Contains zero or more [0..*] **radiologicExamination**, where its type is *Radiologic Examination*

# Rate Quantity

Identifies the speed with which the substance is introduced into the subject. Expressed as a physical (extensive) quantity over elapsed time (e.g., examples are 100 mL/h, 1 g/d, 40 mmol/h, etc.)

Rate: "A certain quantity or amount of one thing considered in relation to a unit of another thing and used as a standard or measure: at the rate of 60 miles an hour." - Dictionary.com This class represents a ratio of some Physical Quantity over a period of time. This class is structurally similar to other Ratio classes (e.g., IntegerRatio), except the denominator is by definition a TimeQuantity.
1. Contains exactly one [1..1] **numerator** with data type *Physical Quantity*
   - The quantity that is being divided in the ratio. The default is the integer number 1
   - "The quantity that is being divided in the ratio. The default is the integer number 1 (one)." - HL7 V3
2. Contains exactly one [1..1] **denominator** with data type *Time Quantity*
   - The quantity that divides the numerator in the ratio. The default is the integer number 1 (one.) The denominator must not be zero.
   - "The quantity that divides the numerator in the ratio. The denominator SHALL not be zero." - HL7 V3 This property is by definition a period of time, with the unit almost always one. For example, one hour, one minute, etc.

# Reaction

1. Contains exactly one [1..1] **dateRecorded** with data type *Point In Time*

   - Date/time this allergy/adverse reaction was entered into the system.
2. Contains exactly one [1..1] **description** with data type *String*

   - Provides a textual narrative of the Reaction observed for the intolerance event of the patient.
3. Contains exactly one [1..1] **reaction** with data type *Code*

   - Indicates the symptom observed that is suspected to have been caused by adverse reaction.
4. Contains exactly one [1..1] **severity** with data type *Code*

## Reactivate Act

Contains information about the cancellation of an Action or record. This class is especially used for Orders.

1. Contains exactly one [1..1] **comment** with data type *String*

   - Any comments or remarks regarding the cancelation of the Activity or Order.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   - The date/time the Activity (e.g., Order) was cancelled.
3. Contains exactly one [1..1] **reason** with data type *Code*

   - The reason the Activity (e.g., Order) was cancelled.
4. Contains exactly one [1..1] **author**, where its type is *Individual Provider*

   - Indicates the practitioner who created the cancellation. In other words, the practitioner who canceled the action.

## Real

"A scalar magnitude. Typically used whenever quantities are measured, estimated, or computed from other real numbers. The typical representation is decimal, where the number of significant decimal digits is known as the precision." - HL7 V3 A datatype containing non-whole numbers. This datatype is a placeholder, as various platforms have differing built-in floating-point datatypes. It is anticipated that this datatype will be replaced by a different datatype when transforming to a particular implementation platform.

1. Contains exactly one [1..1] **literal** with data type *String*

   - This is a placeholder for an actual datatype that will be substituted via transformation to a platform-specific datatype.

## Recipient For Alert

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Recurrence

The reappearance, of the patient's cancer, after previous removal or remission of the cancer.

1. Contains exactly one [1..1] **distantSite1** with data type *Code*

   - Identifies the first site of distant recurrence. Possible values are None; Peritoneum; Lung; Pleura; Liver; Bone; Central Nervous System; Skin; Lymph Nodes (Distant); Other/Generalized/NOS; etc.
2. Contains exactly one [1..1] **distantSite2** with data type *Code*

- Identifies the first site of distant recurrence. Possible values are None; Peritoneum; Lung; Pleura; Liver; Bone; Central Nervous System; Skin; Lymph Nodes (Distant); Other/Generalized/NOS; etc.

3. Contains exactly one [1..1] **distantSite3** with data type *Code*

- Identifies the first site of distant recurrence. Possible values are None; Peritoneum; Lung; Pleura; Liver; Bone; Central Nervous System; Skin; Lymph Nodes (Distant); Other/Generalized/NOS; etc.

4. Contains exactly one [1..1] **otherTypeOfFirstRecurrence** with data type *Code*

- Identifies the OTHER TYPE OF FIRST RECURRENCE. The term "recurrence" means the return or reappearance of the cancer after a disease-free intermission or remission. The patient may have more than one site of recurrence (i.e., both regional and distant metastases). Code regional in the data field TYPE OF FIRST RECURRENCE, and distant in this field. If the patient has only one site of recurrence or has been disease-free since treatment, code 00. Possible values are Local recurrence, NOS; Trocar site; Local recurrence of invasive tumor; Regional recurrence, NOS; Regional recurrence of in situ tumor, NOS; Distant recurrence in lung; None, disease-free; In situ recurrence of invasive tumor; etc.

5. Contains exactly one [1..1] **recurrenceCategory** with data type *Code*

- Identifies the type of first recurrence after a period of documented disease-free intermission or remission. Possible values are Local recurrence, NOS; Trocar site; Local recurrence of invasive tumor; Regional recurrence, NOS; Regional recurrence of in situ tumor, NOS; Distant recurrence in lung; None, disease-free; In situ recurrence of invasive tumor; etc.

6. Contains exactly one [1..1] **recurrenceDate** with data type *Point In Time*

- The date of the first recurrence.

# Recurrence List Entry

1. Contains exactly one [1..1] **recurrence**, where its type is *Recurrence*
2. Contains exactly one [1..1] **precedence** with data type *Integer*

- Provides an indication of whether the recurrence is the first, second, third, etc.

# Recurring Meals

A record of a request for recurring meals for a patient.

1. Extends *Dietetics Request*
2. Contains exactly one [1..1] **meals** with data type *Code*

- A code indicating the meals to which this order applies.

# Reference Range

1.

# Reference Range Criterion

1. Contains exactly one [1..1] **criterion** with data type *Code*

- "This field contains the nature of the abnormal test. Refer to HL7 Table 0080 - Nature of abnormal testing for valid values. As many of the codes as apply may be included, separated by repeat delimiters. For example, normal values based on age, sex, and race would be codes as A~S~R. The constraints on the use of the codes in this table must be consistent with those defined in the PID segment, specifically PID-35-Species Code,

PID-36-Breed Code and PID-37-Strain." - HL7 V2 This is the criteron by which the reference range is valid. Different reference ranges may be defined based on the subject's age, race, sex, etc.

2. Contains exactly one [1..1] **effectiveDate** with data type *Point In Time*

   • "When this field is present, it facilitates comparison between identical results with different reference ranges. Reference range values may vary because of changes in laboratory practice over time. Such variances could reflect updated practice in laboratory medicine, or the use of updated instrumentation." - HL7 V2 Note that we may wish change this to a date range in the future.

3. Contains exactly one [1..1] **value** with data type *Any*

## Referer

"A person having referred the subject of the service to the performer (referring physician). Typically, a referring physician will receive a report." - HL7 V3

1. Extends *Practitioner Participation Lite*

## Referral Event

This class contains the information for the veteran's spinal cord services referrals.

This class contains the information for the veteran's spinal cord services referrals.

1. Contains exactly one [1..1] **referralSource** with data type *Code*

   • Contains the code set identifies the facility referring veteran for care.
   • Contains the code set identifies the facility referring veteran for care.

2. Contains exactly one [1..1] **referralVa** with data type *Code*

   • Contains code set that identifies the VA referring veteran for care
   • Contains code set that identifies the VA referring veteran for care

## Refrain Policy

A refrain policy is used to indicate that a specific action is prohibited based on specific access control attributes (e.g., purpose, information type, user role, etc.). It is a specialization of BasicPolicy class. It does not have any additional attributes but implies a different behavior. ISO 22600-2 species that a RefrainPolicy 'defines actions the subjects must refrain from performing'.

1. Extends *Basic Policy*

## Rejection Or Withdrawl Event

This class has nonAdmission (rejection/withdrawal) reason and disposition if the patient was rejected/not admitted to the Home Based Primary Care (HBPC) Program.

1. Contains exactly one [1..1] **nonAdmissionDisposition** with data type *Code*

   • This represents the patient's reject/withdraw disposition. Possible Values are Referred Back to Referral Source, Disposition Made by HBPC etc.

2. Contains exactly one [1..1] **nonAdmissionReason** with data type *Code*

   • Reason patient was rejected/wothdrawn from the HBPC Program. Possible Values are Referral Withdrawn Due to Death, Not Located in Service Area, Program Slot Not Available, Patient or Caregiver Refused HBHC, Suitable Caregiver Not Available, Home Environment Unsuitable, Referral Withdrawn (excludes death), Patient's Condition Necessitates Institutional Care, Patient Can Be Effectively Treated as Outpatient, Other etc.

## Related Care Plan

1. Contains exactly one [1..1] **relatedPlanCategory** with data type *Code*
   - Indicates how the "target Order" is related to the "source Order". Examples include Parent, Child, Replaces, Replaced By, etc.
2. Contains exactly one [1..1] **carePlan**, where its type is *Care Plan*

## Related Concern

This class links Health Concern (aka "Problem") entries. The relatedConcernCategory code provides an indication of how the entries are related.

1. Contains exactly one [1..1] **healthConcernEntry**, where its type is *Health Concern*
   - Identifies the Health Concern (aka "Problem") entry to which the original entry (i.e., the entry that points to this class) is related.
2. Contains exactly one [1..1] **relatedConcernCategory** with data type *Code*
   - This property provides an indication of how the entries are related. Possible values include: Replaces, Replaced By, Parent, Child, etc.

## Related Document

1. Contains exactly one [1..1] **documentRelationType** with data type *Code*
2. Contains exactly one [1..1] **document**, where its type is *Clinical Document Event*

## Related Encounter

1. Contains exactly one [1..1] **relatedEncounterCategory** with data type *Code*
2. Contains exactly one [1..1] **encounter**, where its type is *Abstract Encounter*

## Related Examination

1. Contains exactly one [1..1] **relatedExaminiationCategory** with data type *Code*
2. Contains exactly one [1..1] **examinationEvent**, where its type is *Examination Event*

## Related Goal

1. Contains exactly one [1..1] **relatedGoalCategory** with data type *Code*
   - Indicates how the "target Order" is related to the "source Order". Examples include Parent, Child, Replaces, Replaced By, etc.
2. Contains exactly one [1..1] **goal**, where its type is *Goal*

## Related Image

1. Contains exactly one [1..1] **relatedImageCategory** with data type *Code*
2. Contains exactly one [1..1] **imagingEvent**, where its type is *Imaging Event*

## Related Intolerance Condition

1. Contains exactly one [1..1] **intoleranceConditionEntry**, where its type is *Intolerance Condition Entry*
2. Contains exactly one [1..1] **relatedIntoleranceCategory** with data type *Code*
   - Indicates how the "Related Intolerance Condition" is related to the original "Intolerance Condition". Examples include "replaces", "replaced by", "parent", "child", etc.

## Related Lab Promise

1. Contains exactly one [1..1] **labTestPromise**, where its type is *Lab Test Promise*
2. Contains exactly one [1..1] **relatedPromiseCategory** with data type *Code*
   - Note that this includes "Reflex Test", which is a test that is performed and is made necessary based on results from another test, such as results that need confirmation or tests that are indicated by standards of care, so that it is necessary to perform even though the clinician hasn't ordered. Examples include when a CBC indicates a high white blood cell count, a differential is automatically performed. These tests are usually defined within the laboratory's established procedures.

## Related Medication Promise

This class identifies Inpatient Medication Promises (Orders) that are related to each other. There are primarily two reasons why an order is related to another: a) if one is replacing the other, or b) if one is the "child" of another. The relationCategory indicates how the referenced order is related to the "owning" order. For example, say that Order1 and Order2 are instances of InpatientMedicationPromise, and that Order2 is replacing Order1. Then: Order1.relatedInpatientPromise.relationCategory = (a code that means "replaced by") Order1.relatedInpatientPromise.inpatientMedicationPromise = Order2 and: Order2.relatedInpatientPromise.relationCategory = (a code that means "replaces") Order2.relatedInpatientPromise.inpatientMedicationPromise = Order1

1. Contains exactly one [1..1] **relationCategory** with data type *Code*
   - Indicates how the referenced order is related to the "owning" order. There are primarily four reasons why an order is related to another: a) if one is replacing the other, b) if one is the "child" of another, c) one is a renewal of a previous order, or d) one is an update or an edit of another
2. Contains exactly one [1..1] **pharmacyPromise**, where its type is *Pharmacy Promise*

## Related Order

This class relates an Order to another Order to which it is related in some way. The relatedOrderCategory code indicates how the orders are related.

1. Contains exactly one [1..1] **relatedOrderCategory** with data type *Code*
   - Indicates how the "target Order" is related to the "source Order". Examples include Parent, Child, Replaces, Replaced By, etc.
2. Contains exactly one [1..1] **order**, where its type is *Healthcare Order*
   - Points to the Order (i.e., the "target Order") to which the "source Order" (i.e., the Order that points to this class) is somehow related.

# Related Order Action

This class relates an OrderAction to another OrderAction to which it is related in some way. The relatedOrderCategory code indicates how the OrderActions are related.

1. Contains exactly one [1..1] **relatedActionCategory** with data type *Code*
   - Indicates how the "target OrderAction" is related to the "source OrderAction". Examples include Parent, Child, Replaces, Replaced By, etc.
2. Contains exactly one [1..1] **orderAction**, where its type is *Order Action*
   - Points to the OrderAction (i.e., the "target OrderAction") to which the "source OrderAction" (i.e., the OrderAction that points to this class) is somehow related.

# Related Procedure

1. Contains exactly one [1..1] **relatedProcedureCategory** with data type *Code*
2. Contains exactly one [1..1] **womensHealthProcedure**, where its type is *Womens Health Procedure*

# Related Procedure

1. Contains exactly one [1..1] **relatedProcedureCategory** with data type *Code*
2. Contains exactly one [1..1] **womensHealthProcedure**, where its type is *Womens Health Procedure*

# Related Prosthetics Promise

1. Contains exactly one [1..1] **relatedEventCategory** with data type *Code*
2. Contains exactly one [1..1] **prostheticsPromise**, where its type is *Prosthetics Promise*

# Related Report

1. Contains exactly one [1..1] **radNucReport**, where its type is *Rad Nuc Report*
2. Contains exactly one [1..1] **relatedReportCategory** with data type *Code*

# Related Specimen

This class relates an Specimen to another Specimen to which it is related in some way. The relatedSpecimenCategory code indicates how the Specimens are related.

1. Contains exactly one [1..1] **relatedSpecimenCategory** with data type *Code*
   - Indicates how the "target Specimen" is related to the "source Specimen". Examples include Aliquot, etc.
2. Contains exactly one [1..1] **groupedSpecimenCount** with data type *Integer*
   - "This field refers to the number of individual specimens of a particular type represented by this instance of a specimen. The use of this field is restricted to specimens upon which all specimen related attributes are identical. This field would only be valued if the specimen role attribute has the value "G"." - HL7 Version 2.8, SPM.13

3. Contains exactly one [1..1] **specimen**, where its type is *Specimen*
   - Points to the Specimen (i.e., the "target Specimen") to which the "source Specimen" (i.e., the Specimen that points to this class) is somehow related.

## Related Subject

1. Contains exactly one [1..1] **subject**, where its type is *Subject*
2. Contains exactly one [1..1] **relatedSubjectCategory** with data type *Code*

## Release Act

"To allow to be known, issued, done, or exhibited: to release an article for publication." - Dictionary.com. Represents the release of an Order Action such that it is now visible to and actionable by other persons.

1. Contains exactly one [1..1] **author**, where its type is *Individual Provider*
   - Identifies the provider who released the Order Action for further action by other persons.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
   - The date/time that the Order Action was released for further action by other providers.

## Releaser

1. Extends *Practitioner Participation Lite*

## Releif Anesthetist

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Relevant Lab Data

1. Contains exactly one [1..1] **collectionDate** with data type *Point In Time*
2. Contains exactly one [1..1] **results** with data type *String*
3. Contains exactly one [1..1] **test** with data type *String*

## Renew Act

Contains information about the cancelation of the pharmacy order.

1. Contains exactly one [1..1] **comment** with data type *String*
   - Any comments added to document why the order was cancelled. Note changes made June 2 2009 per CDS \Hdr order set issue. VHIM disagrees with approach needs be re-reviewed in the future. Changes are set attribute comments multipilicity to '*'.
2. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
   - The date/time the order was cancelled.
3. Contains exactly one [1..1] **reason** with data type *Code*

- The reason the order was cancelled.

**4.** Contains exactly one [1..1] **author**, where its type is *Individual Provider*

## Replaces

This association class represents an example ActRelationship that used to associate two FlightSchedule instances.

**1.** Contains exactly one [1..1] **type** with data type *Code*

## Reportable Condition

**1.** Contains exactly one [1..1] **encounterEvent**, where its type is *Encounter Event*
**2.** Contains exactly one [1..1] **publicHealthReport**, where its type is *Public Health Report*

## Reportable Malignancy

The reportable malignancy of the patient's cancer.

**1.** Contains exactly one [1..1] **CancerNumber** with data type *Code*

- Indicates the reportable malignancy associated with this patient's PREVIOUS HISTORY OF CANCER.ICDO. Possible values are ICDO-3 TOPOGRAPHY CODES

## Reportable Malignancy List Entry

An order, arrangement, or significance in which the reportable Malignancy takes place.

**1.** Contains exactly one [1..1] **reportableMalignancy**, where its type is *Reportable Malignancy*

- An order, arrangement, or significance in which the reportable Malignancy takes place.

**2.** Contains exactly one [1..1] **precedence** with data type *Integer*

- Provides an indication of whether the cancer treatment is primary, secondary, tertiary, etc.

## Reportable Result

**1.** Contains exactly one [1..1] **dateDeemedReportable** with data type *Point In Time*
**2.** Contains exactly one [1..1] **dateObserved** with data type *Point In Time*

- Contains the Date and Time the observation of the results were made.

**3.** Contains exactly one [1..1] **isAmended** with data type *Boolean*

- Identifies whether the Microbiology test performed was amended. 0 = no and 1 = yes.

**4.** Contains zero or one [0..1] **probability** with data type *Real*

- "This field contains the probability of a result being true for results with categorical values. It mainly applies to discrete coded results. It is a decimal number represented as an ASCII string that must be between 0 and 1, inclusive. " - HL7 V2

**5.** Contains exactly one [1..1] **reportDate** with data type *Point In Time*
**6.** Contains exactly one [1..1] **reportId** with data type *Id*

- Contains the unique identifier for the microbiology result.

**7.** Contains exactly one [1..1] **reportStatus** with data type *Code*

8. Contains exactly one [1..1] **testCode** with data type *Code*

   • An identifier code for the observation or ordered test. This can be based on local and/or universal codes. The WKLD CODE file (#64) is used to identify the observed test. It contains the VA National Laboratory Test code. Future versions may utilize LOINC codes as an additional coding system.

9. Contains exactly one [1..1] **author**, where its type is *Author*

10. Contains zero or one [0..1] **autopsyEvent**, where its type is *_ Autopsy Event*

11. Contains zero or more [0..*] **commentEvent**, where its type is *Comment Event*

   • An association linking a comment pertinent to the result of the lab test promise.

12. Contains zero or one [0..1] **medicalDirector**, where its type is *Responsible Party*

13. Contains exactly one [1..1] **performer**, where its type is *Individual Provider*

   • "This field identifies the performing technician." - HL7 Version 2.8, OBR-34

14. Contains zero or more [0..*] **interpretation**, where its type is *Interpretation Event*

15. Contains zero or one [0..1] **laboratoryDirector**, where its type is *Individual Provider*

   • This is the director of the laboratory that is reporting the result to the Orderer. This person may or may not be the director of the organization that actually performed the analysis, rather of the reporting organization.

16. Contains zero or more [0..*] **transcription**, where its type is *Transcription Event*

17. Contains zero or one [0..1] **userDefinedAccessCheck** with data type *Code*

## Reported Reaction

1. Extends *Reaction*

## Requester

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Research Subject

A physical entity which is the primary unit of operational and/or administrative interest in a study. For example, a person who is registered in a study as a recipient of an investigational product or as a control. May also include individuals who are being screened for studies, or individuals participating in observational or other studies. Other examples may include a pacemaker, a fuse that can be used in medical devices, a cow, a farm, a pen of pigs, a tissue sample from a tissue bank, etc. NOTE: StudySubjects within a study are all of the same type. An entity registered in a study is not part of another entity registered in the same study.

1.

## Residential Care Home

1.

## ResidentialCareHomePlacement

Contains information used to show and determine what the monthly rate is being paid for residential care home stay.

1. Contains exactly one [1..1] **datePlacedInHome** with data type *Point In Time*

- Contains the date in which the patient was placed in the home.
2. Contains exactly one [1..1] **dateRemovedFromHome** with data type *Point In Time*
   - Contains the date in which the patient was removed from the home.
3. Contains exactly one [1..1] **id** with data type *Integer*
   - Unique identifier for residential care home placement record
4. Contains exactly one [1..1] **wasPatientRemovedFromHome** with data type *Boolean*
   - Contains information to determine if the patient was removed from home. '1' FOR YES; '0' FOR NO;
5. Contains exactly one [1..1] **wasTransferedUnderCurrentCase** with data type *Boolean*
   - Contains information to show that the patient was transferred from home without opening a new case. '1' FOR YES; '0' FOR NO;
6. Contains zero or one [0..1] **rchRate**, where its type is *Residential Care Home Rate*
   - Rate paid while in home.
   - This is the association to the the monthly rate being paid for residential care home stay based on the effective date.
7. Contains exactly one [1..1] **residentialCareHome**, where its type is *Residential Care Home*

## Residential Care Home Rate

Contains the monthly rate being paid for residential care home stay based on the effective date.
1. Contains exactly one [1..1] **duration** with data type *Time Interval*
   - Effective date range during which the particular montly rate for the Residential Care Home is used.
2. Contains exactly one [1..1] **monthlyRatePaid** with data type *Monetary Amount*
   - Monthly rate paid while in home.

## Resource Or Referral

Contains information about the resources or referrals that were made for this case.
1. Contains exactly one [1..1] **category** with data type *Code*
   - Contains the unique id for the resource and or referral for the case.
2. Contains exactly one [1..1] **nbrOfReferrals** with data type *Integer*
   - Contains the number of referrals.
3. Contains exactly one [1..1] **wereAbleToAccess** with data type *Boolean*

## Responsible Party

1. Contains exactly one [1..1] **address** with data type *Us Mailing Address*
2. Contains exactly one [1..1] **name** with data type *Person Name*
3. Contains exactly one [1..1] **telephone** with data type *Telecommunications*

## Responsible Party

1. Contains exactly one [1..1] **address** with data type *Us Mailing Address*
2. Contains exactly one [1..1] **name** with data type *Person Name*

3. Contains exactly one [1..1] `telephone` with data type *Telecommunications*

## Restraint Position Event

An instrument or a means of restraint to prevent the infliction of harm to self or others, such as a straightjacket.
Source: The American Heritage Stedman's Medical Dictionary

1. Contains exactly one [1..1] `comments` with data type *String*

   • Contains desrciptive information of the patient's restraint position.
2. Contains exactly one [1..1] `restraintPositionType` with data type *Code*

   • Contains the code that identifies the position of the restraint used for the patient
3. Contains exactly one [1..1] `positionIid` with data type *Id*

   • Contains unique identifer for the position of the restraint used for the patient
4. Contains at least one [1..*] `restrainingAid`, where its type is *Surgery Device*

   • An instrument or a means of restraint to prevent the infliction of harm to self or others, such as a straightjacket.

## Results Section

This is a results document section intended to hold the values of behavioral health assessment scores and subscores. This is part of a summary report that may be exchanged across specialties to support continuity of care. Other related results may be included in this section.

1. Contains exactly one [1..1] `sensitivityCode` with data type *Code*

   • This attribute is used to specify that the content of this clinical document is sensitive because it contains Behavioral Health information.
2. Contains zero or one [0..1] `assessment`, where its type is *Assessment*

## Return

1. Contains exactly one [1..1] `dateReturned` with data type *Point In Time*
2. Contains exactly one [1..1] `quantityReturned` with data type *Physical Quantity*

## Reviewer

1.

## Risk Factor

US Standard Certificate Of Birth Field 41 Contains a list of risk factors that were encountered during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Diabetes, Pre-pregnancy (diagnosis prior to this pregnancy); Diabetes, Gestational (diagnosis in this pregnancy); Hypertension, Prepregnancy (chronic); Hypertension, Gestational (PIH, preclampsia); Hypertension, Eclampsia; Previous preterm birth; Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age / intrauterine growth restricted birth); Pregnancy resulted from infertility treatment, Fertility-enhancing drugs, Artificial insemination or intrauterine insemination; Pregnancy resulted from infertility treatment, Assisted reproductive technology (e.g., in vitro fertilization (IVF) gamete intrafallopian transfer (GIFT)); Mother had a previous cesarean

delivery - if yes, how many**; None of the above. **=if "Mother had a previous cesarean delivery" is chosen, a subclass of RiskFactor is used to contain the number of previous cesarean deliveries.

1. Contains exactly one [1..1] **category** with data type *Code*

- US Standard Certificate Of Birth Field 41 Contains a list of risk factors that were encountered during this pregnancy. On the form, this is a multiple-choice question (i.e., "check all that apply"), although one of the choices is "None of the above", so if that one is chosen, there should not be any others chosen. Possible values include: Diabetes, Pre-pregnancy (diagnosis prior to this pregnancy); Diabetes, Gestational (diagnosis in this pregnancy); Hypertension, Prepregnancy (chronic); Hypertension, Gestational (PIH, preclampsia); Hypertension, Eclampsia; Previous preterm birth; Other previous poor pregnancy outcome (includes perinatal death, small-for-gestational age / intrauterine growth restricted birth); Pregnancy resulted from infertility treatment, Fertility-enhancing drugs, Artificial insemination or intrauterine insemination; Pregnancy resulted from infertility treatment, Assisted reproductive technology (e.g., in vitro fertilization (IVF) gamete intrafallopian transfer (GIFT)); Mother had a previous cesarean delivery - if yes, how many**; None of the above. **=if "Mother had a previous cesarean delivery" is chosen, a subclass of RiskFactor is used to contain the number of previous cesarean deliveries.

# Room Location

Identifies a room in which services may be provided to a patient. This is equivalent to file 405.4 in VistA.

1. Extends *Location*
2. Contains exactly one [1..1] **description** with data type *String*

- A description or comment concerning the room in which services may be provided to a patient.

3. Contains exactly one [1..1] **isInService** with data type *Boolean*

- Indicates whether the room is in a condition to accomodate a patient.

# Ruled Incompetent

In cases where the patient has been ruled to be incompetent to make decisions about their own care, this class identifies the organization which made such ruling, and the date upon which it occurred.

1. Contains exactly one [1..1] **date** with data type *Point In Time*

- Contains the actually date and time stamp that the patient was ruled incompetent.

2. Contains exactly one [1..1] **id** with data type *Id*

- An identification for the record of the event in which a patient has been ruled to be incompetent to make decisions regarding their own care.

3. Contains exactly one [1..1] **organization**, where its type is *Organization*

- This is the association to the Entity representing a formalized group of entities with a common purpose (e.g. administrative, legal, political) for the person.
- Identifies the organization which ruled the patient to be incompetent to make decisions about their own care.

# Rx History

1. Contains exactly one [1..1] **patientConsent** with data type *Code*

# Rx History Request

1.

## Rx History Response

1.

## Sci Administration

Contains all the Coordinator SCI that provoded services for the veteran

Identifies the SCI Coordinators who are providing or have provided Spinal Cord Injury - related services to the Veteran

1. Contains zero or more [0..*] **sciCoordinator** with data type *Code*
   - Identifies the current and historic SCI Coordinator/s providing services for the veteran
   - Identifies the SCI Coordinators who are providing or have provided Spinal Cord Injury - related services to the Veteran
2. Contains exactly one [1..1] **isInSciNetwork** with data type *Boolean*
   - Indicates whether the veteran is within an SCI Network (SCI networks across the country 22 currently )
   - Indicates whether the veteran is within an SCI Network (SCI networks across the country 22 currently )

## Screening Tool

Screening tools are used establish the presence, absence or the severity of a behavioral health problem and indicates the need for more comprehensive evaluation (e.g. CAGE /T-ACE, MAST / DAST, and AUDIT). The output of these tools is not in scope for this analysis model but may relevant for future modeling activities.

1.

## Script Due

1. Extends *Drug Use Evaluation*
2. Contains exactly one [1..1] **acknowledgementReason** with data type *Code*
3. Contains exactly one [1..1] **clinicalSignifanceCode** with data type *Code*

## Secondary Performer

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Secondary Provider

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Secondary Resident Interpreter

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Secondary Staff Interpreter

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Security Role

ISO-22600 specifies a role as 'set of competences and/or performances which is associated with a task'. A role is a specialization of CompositePolicy that define a group of policies (authorization, obligation, delegation and refrain policies).

1. Contains exactly one [1..1] **instanceIdentifier** with data type *Id*
   - This is the role_identifier property in the security DAM. The definition of that property is 'This attribute is defined by ISO 22600-2 as 'Set of InstanceIndentifier'.' WE RENAMED THIS. WAS THIS OK TO DO????
2. Contains exactly one [1..1] **authorityIdentifierName** with data type *String*
   - This attribute is defined by ISO 22600-2 as 'String'.
3. Contains exactly one [1..1] **objectIdentifier** with data type *Id*
   - This is the role_identifier_ID property in the Security DAM. The definition of that property is 'This attribute is defined by ISO 22600-2 as 'ISO ObjectIdentifier'.' WE RENAMED THIS. WAS THIS OK TO DO????
4. Contains exactly one [1..1] **name** with data type *Code*
   - This attribute is defined by ISO 22600-2 as 'CodedSimpleValue'.
5. Contains exactly one [1..1] **description** with data type *String*
   - This attribute is defined by ISO 22600-2 as 'CodedSimpleValue'.
6. Contains exactly one [1..1] **userIdentity**, where its type is *User Identity*
   - Specifies the user identification attributes.

## Service Delivery Location

"The location to which the patient is assigned. It is a role played by a place at which services may be provided. Note that a single physical place can play multiple service delivery location roles each with its own attributes. For example, a Podiatry clinic and Research clinic may meet on alternate days in the same physical location; each clinic uses its own mailing address and telephone number." - HL7 V3.

1. Contains exactly one [1..1] **organization**, where its type is *Organization*
   - Points to the Organization operating at the Location.
2. Contains exactly one [1..1] **location**, where its type is *Location*
   - Points to the Location at which the Organization is operating.
3. Contains exactly one [1..1] **id** with data type *Id*
   - A unique string or token used to identify the Organization - Location combination.
4. Contains exactly one [1..1] **name** with data type *String*
   - The name of the Organization-Location.
5. Contains exactly one [1..1] **address** with data type *Address*
   - The business address of the Organization-Location.
6. Contains exactly one [1..1] **phone** with data type *Telecommunications*

- The business phone number of the Organization-Location.

## Service Department

An organizational unit defined by the type of service that it provides to patients. Examples include Surgery, Dentistry, Mental Health. This is equivalent to File 49 in Vista.
1. Extends *Organization*

## Service Episode

"...a Service Episode is the context in which the treatment or management of an arbitrary subset of a Patient s medical conditions occurs. The definition of the start time, stop time, and included events of a Service Episode is entirely arbitrary; it may include a single outpatient visit or a hospitalization, or extend over significant period of time, e.g., the duration of a pregnancy, or an oncology treatment regimen, or a cardiac episode from infarction through rehabilitation. A Service Episode may involve one or more Healthcare Organizations." - HL7 Version 2.8, PV1-53
A collection of encounters that can be clustered based on a common clinically relevant factor such as the provider, diagnosis, health factor, or long-term problem.
1. Contains exactly one [1..1] **description** with data type *String*
   - "A brief user-defined description of a Service Episode in or for which the visit occurs. A Service Episode is the context in which the treatment or management of an arbitrary subset of a Patient s medical conditions occurs. The definition of the start time, stop time, and included events of a Service Episode is entirely arbitrary; it may include a single outpatient visit or a hospitalization, or extend over significant period of time, e.g., the duration of a pregnancy, or an oncology treatment regimen, or a cardiac episode from infarction through rehabilitation. A Service Episode may involve one or more Healthcare Organizations." - HL7 Version 2.8, PV1-53
2. Contains exactly one [1..1] **duration** with data type *Time Interval*
   - "The time interval starting with the administrative onset of the encounter (e.g. admission, registration, patient arrival) and ending with the patient's departure (e.g. discharge)." - HL7 V3 This is the start and end date/times of the Service Episode.
3. Contains zero or one [0..1] **careProtocol**, where its type is *Care Protocol*
   - TA proposed or tentative course of action for the maintenance and restoration of health by the treatment and prevention of disease by trained and licensed professionals.
4. Contains zero or more [0..*] **diagnosisRelatedGroup**, where its type is *Diagnosis Grouping Event*
   - Provides the diagnosis grouping for the diagnosis/s provide for the patients visit
5. Contains exactly one [1..1] **serviceEpisodeId** with data type *Id*
   - "Contains the identifier of a Service Episode in or for which the visit occurs." - HL7 Version 2.8, PV1-54 This field contains the unique identification number for this episode of care. This field associates the current encounter with a parent encounter.
6. Contains zero or more [0..*] **abstractEncounter**, where its type is *Abstract Encounter*

## Service History

The type of services to determine if frequent inpatient detox vs. on-going treatment is more prevalent. This section is used to determine the effectiveness of the various services.
1. Extends *Behavioral Health Assessment Domain*
2. Contains exactly one [1..1] **serviceCode** with data type *Code*
   - This is a coded attribute describing the type of service that has been rendered to the client/patient that appears in this area of the behavioral health assessment,

## Service Provision

Contains information of the various directed professional services, activities, or methods concretely concerned with the support, treatment, and material designed to aid and to increase the welfare of the patient.

1. Contains exactly one [1..1] **category** with data type *Code*
   - Contains the unique identifier for direct service category provided.
2. Contains exactly one [1..1] **nbrOfHours** with data type *Integer*
   - Contains the number of hours for the directed services provided

## Set Of Orders

An aggregation of Orders that are assembled so that they might be managed as a group. The member Orders will generally be for a single Patient, and commonly issued by a single Provider, but otherwise these orders will have no other inherent relationships between themselves. This concept is different from an Order Set, Panel, or Battery, in that the SetOfOrders is composed after the orders have been created; wheras the latter concepts are defined before the order is created.

1. Extends *Healthcare Order*
2. Contains exactly one [1..1] **id** with data type *Id*
   - "Contains a unique identifier for the Placer Group as referenced by the Placer application, the Filler application, or both." - HL7 Version 2.8, ORC-4
3. Contains zero or more [0..*] **healthcareOrder**, where its type is *Healthcare Order*
   - An Order that is a member of a Set of Orders.
4. Contains exactly one [1..1] **status**
   - A code specifying the status of the SetOfOrders. Valid status codes should reflect the HL7 state machine, e.g., Active, Held, Canceled, Aborted, New, Nullified, Obsolete). Note that operationally, this status will likely represent the aggregate statuses of the member Orders. For example, in a set of five Orders, if four orders are "Completed" and one is "Active", this status would likely be "Active". When all five Orders are "Completed", this status might change to "Completed". Note that the model does not dictate how this status should be computed.
5. Contains exactly one [1..1] **priority**
   - A code (e.g., routine, emergency), specifying the urgency under which the SetOfOrders is requested to happen.

## Short Stay

An encounter that is similar to outpatient but the patient is admitted to a bed.

1. Extends *Abstract Durable Encounter*
2. Contains exactly one [1..1] **lengthOfStay** with data type *Physical Quantity*
   - Will contain the actual, calculated quantity (the actual days quantity cannot be simply calculated from the admission and discharge dates because of possible leaves of absence) instead of the expected length of stay.

## Sigmoidoscopy

The process of using a sigmoidoscope called also proctosigmoidoscopy sig moid o scop ic /-d&-'sk p-ik/ adjective [Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.]

1. Contains exactly one [1..1] **sigmoidoscopy** with data type *Code*

- Indicates the results of the diagnostic test SIGMOIDOSCOPY. Possoble values are Not done; Positive; Negative; Unknown/not documented; etc.

2. Contains exactly one [1..1] **dateOfSigmoidoscopy** with data type *Point In Time*

- The date of the diagnostic test SIGMOIDOSCOPY.

## Skin Prep Event

Tha act of preparing the patient's operative site by applying the agent and wash the site.

1. Contains exactly one [1..1] **agentId** with data type *Id*

- Unique identifier for each of the skin prep agents.

## Skin Test Observation

Contains the the recording results of of the skintest performed.

1. Contains exactly one [1..1] **date** with data type *Point In Time*

- The date the test was evaluated.

2. Contains exactly one [1..1] **reading** with data type *Code*

- the value of the result

3. Contains exactly one [1..1] **testResult** with data type *Code*

- This is where the clinician assigns the observation of the reading of the test. i.e the test reading is possitive, negative, doubtful, or no take.

4. Contains exactly one [1..1] **author**, where its type is *Author*

## Skin Test Procedure

The act of performing a procedure to test (as a scratch test or a tuberculin test) for an allergic or immune response to a substance that is performed by administering the substance to or through the skin and that is used especially in detecting allergic hypersensitivity

1. Contains exactly one [1..1] **date** with data type *Point In Time*

- The date time the skin test procedure

2. Contains exactly one [1..1] **id** with data type *Id*

- A unique id given to the procedure

3. Contains exactly one [1..1] **testCode** with data type *Code*

- What type of test will be given

4. Contains exactly one [1..1] **skinTestObservation**, where its type is *Skin Test Observation*

- The results of the Skin Test

- The results of the Skin Test.

5. Contains exactly one [1..1] **subject**, where its type is *Patient*

6. Contains exactly one [1..1] **visit**, where its type is *Outpatient Visit*

- An encounter for the patient at one site within a specifie length of time.

7. Contains exactly one [1..1] **author**, where its type is *Author*

## Social History

1.

## Social History Section

1. Contains zero or one [0..1] **socialHistory**, where its type is *Social History*

## Social Network

This class identifies whether a person is in environment where others are abusing alcohol or other substances. The National Outcomes Measures (NOMs) set performance targets for State and Federally funded initiatives and programs for substance abuse prevention and mental health promotion, early intervention, and treatment services. Social network risk factors are one component of these measures.

1.

## Social Work Case

Various professional services, activities, or methods concretely concerned with the support, treatment, and material designed to aid and to increase the welfare of the patient.

1. Contains exactly one [1..1] **costCenter** with data type *Code*

    • Contains information that is used for the Cost Distribution Center section of the patient.

2. Contains exactly one [1..1] **dateCaseClosed** with data type *Point In Time*

    • Contains the date closed to a particular social worker.

3. Contains exactly one [1..1] **dateCaseOpened** with data type *Point In Time*

    • Contains the date the case was opened to the Social Work service.

4. Contains exactly one [1..1] **diagnosticCategory** with data type *Code*

    • A categorization of the patient's diagnosis, typically used for Residential Care Homes. Possible values include: Medical/Surgical, Psychosis, Organic and Senile Brain Disease, Substance Abuse, etc.

5. Contains exactly one [1..1] **dispositionFromRch** with data type *Code*

    • Contains the codes that identify the patient's disposition from the residential care home. '1' FOR INDIVIDUAL; '2' FOR HOSPITAL; '3' FOR OTHER INSTITUTIONAL; '4' FOR DEATH; '5' FOR TRANSFER;

6. Contains exactly one [1..1] **id** with data type *Id*

    • This is the unique Id number to identify each case that is opened.

7. Contains exactly one [1..1] **isConsultationOnly** with data type *Boolean*

    • This field is used to indicate if the case is for consultation purposes only. '1' FOR YES; '0' FOR NO;

8. Contains exactly one [1..1] **isPatientCompetent** with data type *Boolean*

    • Indicates the competency status of the residential care home patient. 'I' FOR INCOMPETENT; '0' FOR COMPETENT;

9. Contains exactly one [1..1] **levelOfCare** with data type *Code*

    • Contains information used to show the level of care that a patient receives while in the residential care home program. '1' FOR LIGHT; '2' FOR MODERATE; '3' FOR HEAVY;

10. Contains exactly one [1..1] **priorLivingArrangement** with data type *Code*

- Contains information that identifies the location of the patient prior to being placed in a residential care home. (RCH only). '1' FOR OWN HOME; '2' FOR VA NHCU; '3' FOR VA HOSPITAL- EXCESS OF 60 DAYS; '4' FOR NON-VA HOSPITAL; '5' FOR VA DOMICILIARY; '6' FOR VA CONTRACT NH; '7' FOR NON-VA NH; '8' FOR NON-VA RESIDENTIAL RESOURCE; '9' FOR VA CONTRACT CARE (NON NH); '10' FOR OTHER;"

11. Contains exactly one [1..1] **reasonCaseOpened** with data type *Code*

- Contains a short textual description of why the case was opened.

12. Contains exactly one [1..1] **remarks** with data type *String*

- Contains information that allows workers to enter identifying information on certain cases. For instance, if a patient is placed in a contract nursing home, the worker can use this field to abbreviate the name of the nursing home - Civic Center would be Civic. This field can be used as a ready reference to where their cases are. It can be used to identify special categories on wards such as POW, Agent Orange, etc.

13. Contains exactly one [1..1] **specialPopulationCategory** with data type *Code*

- Contains information that is used to show what special population the patient may be a member of, for example, HIV, Homeless, RCH, etc.

14. Contains exactly one [1..1] **wereResourcesOrReferralsAssigned** with data type *Boolean*

- Indicates if any resources/referrals are being assigned. '1' FOR YES; '0' FOR NO;

15. Contains zero or one [0..1] **accomondationArrangement**, where its type is *Social Work Placement*

- This is the association to the social workers placement of the patient.

16. Contains zero or more [0..*] **directServiceProvided**, where its type is *Service Provision*

- Identifies the various professional services, activities, or methods concretely concerned with the support, treatment, and material designed to aid and to increase the welfare of the patient.

- Contains information of the various directed professional services, activities, or methods concretely concerned with the support, treatment, and material designed to aid and to increase the welfare of the patient.

17. Contains zero or one [0..1] **problemsEncountered**, where its type is *Problems Encountered*

- Identifies information about problems encountered for the patients case.

- This the association to the information about problems encountered for the patients case.

18. Contains zero or more [0..*] **resourceOrReferral**, where its type is *Resource Or Referral*

- Contains the information for the resources and referrals for the case.

- This is the association to the information about the resources or referrals that were made for this case.

19. Contains exactly one [1..1] **socialWorker**, where its type is *Individual Provider*

20. Contains exactly one [1..1] **socialWorkPatient**, where its type is *Social Work Patient*

## Social Work Patient

Patient that is receiving various professional services, activities, or methods concretely concerned with the support, treatment, and material designed to aid and to increase their welfare as recommended by a Social Worker.

1. Contains exactly one [1..1] **datePlacedInRchProgram** with data type *Point In Time*

- Contains the date patient was placed in RCH.

2. Contains exactly one [1..1] **dateRemovedFromRchProgram** with data type *Point In Time*

- Contains the date in which the patient was removed from the home.

3. Contains exactly one [1..1] **isFalseHighRisk** with data type *Boolean*

- This contains information used to indicate that the patient was not a high-risk case.

4. Contains exactly one [1..1] **isPatientHighRisk** with data type *Boolean*

- Contains textual informaion that when patients should they be found to be a possible high-risk case.

5. Contains exactly one [1..1] **wasSeenBySocialWorkService** with data type *Boolean*

- Contains information to indicate if the patient was seen by the Social Work Service after being identified as a possible high-risk patient.

6. Contains exactly one [1..1] **wasPatientRemoved** with data type *Boolean*

- Identifies whether the patient was removed from the RCH placement.

7. Contains exactly one [1..1] **patient**, where its type is *Patient*

8. Contains zero or one [0..1] **rchPlacement** , where its type is *ResidentialCareHomePlacement*

- Contains information used to show and determine what the monthly rate is being paid for residential care home stay.

- This is the association to the information used to show and determine what the monthly rate is being paid for residential care home stay

## Social Work Placement

This class contains the social workers placement of the patient.

1. Contains exactly one [1..1] **placementCategory** with data type *Code*

- Contains the codes that identify the placement made based on Problem Discharge/Planning. 'I' FOR INPATIENT; 'O' FOR OTHER; 'N' FOR NO PLACEMENT MADE;

2. Contains exactly one [1..1] **placementDisposition** with data type *Code*

- Contains the codes that identify the disposition of the patient if placement was made. '1' FOR CNHC; '2' FOR CNH-Non VA; '3' FOR Domiciliary; '4' FOR NHCU; '5' FOR Own Home; '6' FOR RCH; '7' FOR Other;

## Soft Tissue Exam

This class identifies observations outcome related to Soft Tissue (Head & Neck) Exam.

1. Contains exactly one [1..1] **id** with data type *Id*

- This is the unique identifier of the dental encounter record.

2. Contains exactly one [1..1] **comments** with data type *String*

- Remarks by the Provider on HeadNeck findings.

3. Contains exactly one [1..1] **headNeckDescription** with data type *String*

- Remarks by the Provider on HeadNeck findings.

4. Contains exactly one [1..1] **isResolved** with data type *Boolean*

- Indicates whether or not this head & neck transaction has been resolved. Possible values are TRUE; FALSE

5. Contains exactly one [1..1] **markerColor** with data type *Real*

- The color of the marker used to indicate the lesion used in treatment planning

6. Contains exactly one [1..1] **markerShape** with data type *Code*

- The shape of the marker used to indicate the lesion used in treatment planning. Possible values are rectangle; square; oval; circle; rounded rectangle; rounded square.

7. Contains exactly one [1..1] **markerSize** with data type *Code*

- The size of the marker used to indicate the lesion used in treatment planning

8. Contains exactly one [1..1] **xCoordinate** with data type *Integer*

- This is the X coordinate for the lesion. DRM Plus Program Specific.

9.  Contains exactly one [1..1] **yCoordinate** with data type *Integer*

   • This is the Y coordinate for the lesion. DRM Plus Program Specific.

10. Contains zero or one [0..1] **dentalProcedure**, where its type is *Dental Procedure*

   • Dental Procedure provided.

11. Contains zero or one [0..1] **masterLesionRecord**, where its type is *Soft Tissue Exam*

## Special Meals

A record of a request for special or one-time meals for a patient.

1.  Extends *Dietetics Request*

2.  Contains exactly one [1..1] **meals** with data type *Code*

   • A code indicating the meals to which this order applies.

## Specialty

A specialty in medicine is a branch of medical science. After completing medical school, physicians or surgeons usually further their medical education in a specific specialty of medicine by completing a multiple year residency. Medical practitioners who engage in a medical specialty are known as medical specialists. Specialists may be Board Eligible or Board Certified. Board certified in medicine means a physician has taken and passed a medical specialty examination. Board eligible, by contrast, means that a physician has completed the requirements for admission to a medical specialty board examination but has not taken and passed the examination. For example, a physician must perform 3 years of training in an approved pediatric residency to be board eligible and then successfully complete a comprehensive written examination to be certified by the American Board of Pediatrics.

1.  Contains exactly one [1..1] **specialty** with data type *Code*

   • A code identifying the branch of medical science in which the provider has chosen to specialize. This code should be from the National Uniform Claims Committee (NUCC) codeset.

## Specimen

"A physical entity that is an individual, a group, an item, or a part representative of a larger group, class or whole that is the target of an observation or analysis for the purpose of drawing conclusions about the group, class, or whole. This can be used to code a component of the specimen that the observation diagnosis relates to. Note that any physical entity in the universe has the potential to become a specimen." - HL7 V3 This model attempts to distinguish between that which is collected from the patient (or other entity), and that portion of such material that may have been further divided or modified in some way before testing. For example, (whole) blood is taken from the patient, but the object of the test may be only the plasma or redblood cells taken (spun down) from the blood. The specimen that undergoes testing may be the unaltered speciment that was collected, or may have undergone some sort of processing.

1.  Contains exactly one [1..1] **description** with data type *String*

   • Contains a general description of the specimen

2.  Contains exactly one [1..1] **handlingCode** with data type *Code*

   • "Describes how the specimen and/or container need to be handled from the time of collection through the initiation of testing." - HL7 Version 2.8, SPM.15. Examples include "keep frozen".

3.  Contains zero or one [0..1] **id** with data type *Id*

   • "This field contains a unique identifier for the specimen as referenced by the Placer application, the Filler application, or both." - HL7 Version 2.8, SPM.2

4.  Contains exactly one [1..1] **dangerCode** with data type *Code*

- Describes "any known or suspected specimen hazards, e.g., exceptionally infectious agent or blood from a hepatitis patient." - HL7 Version 2.8, SPM.16

5. Contains exactly one [1..1] **specimenExpirationDateTime** with data type *Point In Time*

- "The date and time the specimen can no longer be used for the purpose implied by the order." - HL7 Version 2.8, SPM.19

6. Contains exactly one [1..1] **specimenRole** with data type *Code*

- "This field indicates the role of the sample. Refer to User-defined Table 0369 Specimen role for suggested values...." - HL7 Version 2.8, SPM.11 Provides an indication of how this sample relates to other aspects of the overall workflow and/or to other specimens gathered or processed during the workflow. This property is populated from HL7 V2 user-defined Table 0369, which contains a mish-mash of concepts including "group" and "pool" which relate to aliquotting, "calibrator", "verifying calibrator", "operator testing", etc. which relate to laboratory quality assurance, etc.

7. Contains exactly one [1..1] **specimenSource** with data type *Code*

- "Source from which the specimen was obtained. For environmental samples, this may describe the location of the source of the specimen. For biological samples it may represent the anatomical site from which the specimen was collected." - HL7 V2.

8. Contains exactly one [1..1] **specimenType** with data type *Code*

- "This field describes the precise nature of the entity that will be the source material for the observation. Any physical entity that may have observations made about it may qualify as a specimen. The entry in this attribute describes the specific entity as precisely as possible, whether that is a complex organism (e.g., an ostrich) or a specific cellular mass (e.g., a specific muscle biopsy)." - HL7 Version 2.8, SPM.4

9. Contains zero or one [0..1] **specimenTypeModifier** with data type *Code*

- "This field contains modifying or qualifying description(s) about the specimen type. The use of this attribute is to modify, qualify or further specify, the entity described by SPM-4 -Specimen Type. This is particularly useful when the code set used in SPM-4-Specimen Type does not provide the precision required to fully describe the specimen. For example, if the specimen was precisely described as capillary venous blood but the code set employed only provided venous blood, this attribute could be employed to add the modifier capillary." - HL7 Version 2.8, SPM.5

10. Contains zero or more [0..*] **specimenContainer**, where its type is *Specimen Container*

- Identifes the container in which the specimen was placed.

11. Contains zero or more [0..*] **relatedSpecimen**, where its type is *Related Specimen*

- Contains other Specimens to which this Specimen is related in some manner.

12. Contains zero or more [0..*] **specimenHandling**, where its type is *Specimen Handling*

## Specimen Assessment

1. Contains exactly one [1..1] **appropriateness** with data type *Code*

- "The suitability of the specimen for the particular planned use as determined by the filler." - HL7 Version 2.8, SPM.23

2. Contains exactly one [1..1] **containerCondition** with data type *Code*

- "In chain of custody cases where specimens are moved from lab to lab, the status of the container that the specimen is shipped in must be recorded at each receipt. If the container is compromised in any way (seal broken, container cracked or leaking, etc) then this needs to be recorded for legal reasons." - HL7 Version 2.8, SPM.28

3. Contains exactly one [1..1] **currentQuantity** with data type *Physical Quantity*

- "Contains the amount of specimen that currently exists or is available for use in further testing." - HL7 Version 2.8, SPM.25

4. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   • The date/time that the Specimen Assessment was performed

5. Contains exactly one [1..1] **isSpecimenAvailable** with data type *Boolean*

   • "This describes whether the specimen, as it exists, is currently available to use in an analysis." - HL7 Version 2.8, SPM.20

6. Contains exactly one [1..1] **numberOfContainers** with data type *Integer*

   • "Identifies the number of containers for a given sample. For sample receipt verification purposes; may be different from the total number of samples that accompany the order." - HL7 Version 2.8, SPM.26

7. Contains exactly one [1..1] **rejectReason** with data type *Code*

   • "Describes one or more reasons the specimen is rejected for the specified observation/result/analysis." - HL7 Version 2.8, SPM.21

8. Contains zero or more [0..*] **specimenCondition** with data type *Code*

   • "A mode or state of being that describes the nature of the specimen." - HL7 Version 2.8, SPM.24

9. Contains exactly one [1..1] **specimenQuality** with data type *Code*

   • "The degree or grade of excellence of the specimen at receipt. The filler populates this attribute." - HL7 Version 2.8, SPM.22

10. Contains zero or one [0..1] **specimen**, where its type is *Specimen*

11. Contains zero or more [0..*] **specimenHandling**, where its type is *Specimen Handling*

## Specimen Collection Event

The actual gathering of portions or quantities of material for use in testing, examination, or study based upon the request (order).

1. Contains exactly one [1..1] **collectionAmount** with data type *Physical Quantity*

   • "This field specifies the volume or mass of the collected specimen. For laboratory tests, the collection volume is the volume of a specimen.... This is a results-only field except when the placer or a party has already drawn the specimen." - HL7 Version 2.8, SPM.12

2. Contains exactly one [1..1] **collectionDate** with data type *Time Interval*

   • "The date and time when the specimen was acquired from the source. The use of the Date Range data type allows for description of specimens collected over a period of time, for example, 24-hour urine collection. For specimens collected at a point in time, only the first component (start date/time) will be populated." - HL7 Version 2.8, SPM.17 "The clinically relevant date/time of the observation. In the case of observations taken directly from a subject, it is the actual date and time the observation was obtained. In the case of a specimen associated study, this field shall represent the date and time the specimen was collected or obtained. (This is a results-only field except when the placer or a third party has already drawn the specimen.) This field is conditionally required. When the OBR is transmitted as part of a report message, the field must be filled in. If it is transmitted as part of a request and a sample has been sent along as part of the request, this field must be filled in because this specimen time is the physiologically relevant date/time of the observation." - HL7 Version 2.8, OBR.7 "This field contains the end date and time of a study or timed specimen collection. If an observation takes place over a substantial period of time, it will indicate when the observation period ended. For observations made at a point in time, it will be null. This is a results field except when the placer or a party other than the filler has already drawn the specimen." - HL7 Version 2.8, OBR.8 Note that this property is a Time Interval.

3. Contains exactly one [1..1] **collectionMethod** with data type *Code*

   • "Describes the procedure or process by which the specimen was collected." - HL7 Version 2.8, SPM.7

4. Contains exactly one [1..1] **comment** with data type *String*

   • "This field is for reporting additional comments related to the sample." - HL7 Version 2.8, OBR-39

5. Contains zero or one [0..1] **collectingLocation**, where its type is *Institution*

- Contains the Instituion name for the site where the specimen was collected.
- The anatomic location from which the specimen was obtained. The collection site would be the point of entry of the needle.

6. Contains exactly one [1..1] **performer**, where its type is *Primary Performer*

- "Identifies the person, department, or facility that collected the specimen." - HL7 Version 2.8, OBR-10

7. Contains at least one [1..*] **specimen**, where its type is *Collected Specimen*

- A collection of samples or speciments collected and potentially processed for eventual testing.

8. Contains exactly one [1..1] **specimenCollectionPromise**, where its type is *Specimen Collection Promise*

9. Contains zero or one [0..1] **accession**, where its type is *Accession*

## Specimen Collection Promise

Acceptance to perform test requested on the specimen submitted , such as of tissue, blood, or urine, used for analysis and diagnosis.

1. Contains exactly one [1..1] **status** with data type *Code*

- Identifies the status of the coded value.

2. Contains zero or one [0..1] **specimenCollectionRequest**, where its type is *Specimen Collection Request*

- The gathering of specimens for use in testing, examination, or study based upon a request (order).<a urine specimen>.
- An association from SpecimentCollectionPromise to SpecimenCollectionRequest identifying the specimen collection request.

## Specimen Collection Request

The gathering of portions or quantities of material for use in testing, examination, or study based upon a request (order).<a urine specimen>

1. Extends *Healthcare Order*

2. Contains exactly one [1..1] **bodySite** with data type *Code*

- The location on the patient's body from which the specimen was obtained.

3. Contains exactly one [1..1] **collectionMethod** with data type *Code*

- This attribute captures the method by which the specimen was obtained from the patient's body; e.g., needle stick, thin needle aspirate.

## Specimen Container

1. Contains zero or more [0..*] **additiveType** with data type *Code*

- "This field identifies any additives introduced to the specimen before or at the time of collection. These additives may be introduced in order to preserve, maintain or enhance the particular nature or component of the specimen. Refer to HL7 Table 0371 Additive/Preservative for valid values. When multiple additives are introduced and valid individual additive codes exist but a valid value for the combination does not exist, repeating the field with individual values is most appropriate." - HL7 Version 2.8, SPM.6

2. Contains exactly one [1..1] **containerSize** with data type *Physical Quantity*

3. Contains exactly one [1..1] **containerType** with data type *Code*

- "The container in or on which a specimen is transported." - HL7 Version 2.8, SPM.27

## Specimen Handling

1. Contains exactly one [1..1] **lowTemperature** with data type *Physical Quantity*
2. Contains exactly one [1..1] **highTemperature** with data type *Physical Quantity*

## Specimen Storage

1. Extends *Specimen Handling*
2. Contains exactly one [1..1] **location** with data type *Id*

## Specimen Transportation

1. Extends *Specimen Handling*
2. Contains exactly one [1..1] **dateTimeSent** with data type *Point In Time*
3. Contains exactly one [1..1] **dateTimeReceived** with data type *Point In Time*
   - "The specimen received date/time is the time that the specimen is received at the diagnostic service. The actual time that is recorded is based on how specimen receipt is managed and may correspond to the time the sample is logged in." - HL7 Version 2.8, SPM.18
4. Contains exactly one [1..1] **shipmentId** with data type *Id*
   - "The identifier assigned by the shipment transportation provider that uniquely identifies this shipment from all other shipments by the same provider. The addressee for the shipment should be able to use this identifier to match a physical shipment with the electronic manifest for the shipment." - HL7 Version 2.8, SPM.32
5. Contains exactly one [1..1] **transportationMethod** with data type *String*
   - Indicates "the means by which a sample reaches the diagnostic service provider. This information is to aid the lab in scheduling or interpretation of results. Possible answers: routine transport van, public postal service, etc." - HL7 Version 2.8, OBR-38

## Spinal Cord Assessment

Contains the Code Set that identifies the tyepe of score for the Assessment tool.

Contains the Code Set that identifies the type of score for the Assessment tool. ASIA, FIM, FAM CHARTSF etc.

1. Extends *Spinal Cord Event*
2. Contains exactly one [1..1] **affectivePainRatingIndex** with data type *Integer*
   - Contains the rating value for the patient s subjective measurement of affective pain.
   - Contains the calculated value for the Affected Pain Rating Index for the patient.
3. Contains exactly one [1..1] **assessmentFormType** with data type *Code*
   - Contains the code set that identifies the Assessment Instrument ( form) ie. SWLS, FIM, ASIA, CHART-SF, FAM, DUSOI-A etc.
   - Contains the codes that identify the type Assessment Form the Patient informations is being gathered for. ie. ASIA, FIN FAM CHARTSFetc
4. Contains exactly one [1..1] **bodyMassIndex** with data type *Physical Quantity*
   - Contains the calculated value for the BMI or Body Mass Index
   - Contains the BMI dcore for the veteran.
5. Contains exactly one [1..1] **cognitiveSubTotal** with data type *Integer*

- Contains Cognitive Assessment value for veteran
- Contains Cognitive Assessment value for veteran

6. Contains exactly one [1..1] **diagnosticHealthProblemScore** with data type *Integer*

- Contains the diagnostic health problem assessment value for the veteran
- Contains the diagnostic health problem assessment value for the veteran

7. Contains exactly one [1..1] **height** with data type *Physical Quantity*

8. Contains exactly one [1..1] **highestNeurologicalLevel** with data type *Integer*

- Contains the highest Nreuorlogical Level score for the veteran.

9. Contains exactly one [1..1] **id**

- Contains the unique identifier for the Assessment Tool
- Unique identifier for the SpinalCordAssessment

10. Contains exactly one [1..1] **impairmentScale** with data type *Integer*

- Contains the Impairment Scale value for the veteran.

11. Contains exactly one [1..1] **mentalComponentScore** with data type *Integer*

- Contains the mental component assessment value for the veteran
- Contains the mental component assessment value for the veteran

12. Contains exactly one [1..1] **motorSubTotal** with data type *Integer*

- Contains Motor Assessment value for veteran
- Contains Motor Assessment value for veteran

13. Contains exactly one [1..1] **overallCYHDepression** with data type *Integer*

- Contains the subscore for the veteran overall Depression
- Contains the subscore for the veteran overall Depression

14. Contains exactly one [1..1] **overallCYHHealth** with data type *Integer*

- Contains the subscore for the veteran overall Health.
- Contains the subscore for the veteran overall Health

15. Contains exactly one [1..1] **overallCYHIndependance** with data type *Integer*

- Contains the subscore for the veteran overall Independance
- Contains the subscore for the veteran overall Independance

16. Contains exactly one [1..1] **painScale** with data type *Integer*

- Contains the scale value for the patient s overall pain.
- Contains the calculated value for the pain scale.

17. Contains exactly one [1..1] **physicalComponentScore** with data type *Integer*

- Contains the physical component assessment value for the veteran
- Contains the physical component assessment value for the veteran

18. Contains exactly one [1..1] **score** with data type *Integer*

- Contains the total score for the Assessment tool
- Contains the total score for the Assessment tool

19. Contains exactly one [1..1] **sensoryPainRatingIndex** with data type *Integer*

- Contains the rating value for the patient s subjective measurement of sensory pain.
- Contains the calculated value for the Sensory Pain Rating Index for the patient.

20. Contains exactly one [1..1] **totalPainRatingIndex** with data type *Integer*

- Contains the patient s total rating value for subjective measurement of pain.
- Contains the calculated value for the Total Pain Rating Index for the patient.

21. Contains exactly one [1..1] **weight** with data type *Physical Quantity*

22. Contains exactly one [1..1] **visualAnalogScale** with data type *Integer*

- Contains the scale value for the patient s visual analogue.
- Contains the calculated value for the Visual Anaolog Scale for the patient.
23. Contains at least one [1..*] **assessmentSection**, where its type is *Assessment Section*
    - Contains information that is pertinent to Assessment grouping or Section on the Assessment tool
    - Association to the class that identifies the Assessment section or grouping on the assessment tool.
    - Contains information that is pertinent to Assessment grouping or Section on the Assessment to
24. Contains zero or one [0..1] **assessmentPatient**, where its type is *Patient Lite*
25. Contains zero or one [0..1] **transcriber**, where its type is *Transcriber*
    - "An entity entering the data into the originating system. The data entry entity is collected optionally for internal quality control purposes. This includes the transcriptionist for dictated text transcribed into electronic form." - HL7 V3.
26. Contains zero or more [0..*] **diagnosisList**, where its type is *Diagnosis List Entry*
27. Contains zero or more [0..*] **attendantCare**, where its type is *Attendant Care*
    - Contains information regarding attendant care for the spinal cord injury patient
28. Contains zero or one [0..1] **attender**, where its type is *Attender*
29. Contains zero or more [0..*] **comments**, where its type is *Comment Event*
30. Contains zero or more [0..*] **spinalCordAssessmentGoal** , where its type is *SpinalCordAssessmentGoal*
    - Association to the class that identifies the value which indicates numeric goal for spinal Cord injury patient's rehabilitation.
31. Contains exactly one [1..1] **author**, where its type is *Author*

## SpinalCordAssessmentGoal

This Class contains a value which indicates numeric goal for spinal Cord injury patient's rehabilitation.

This Class contains a value which indicates numeric goal for spinal Cord injury patient's rehabilitation.

1. Contains exactly one [1..1] **overallGoal** with data type *Integer*
   - Contains the value which indicates numeric goal for spinal Cord injury patient's rehabilitation.
   - Contains the value which indicates numeric goal for spinal Cord injury patient's rehabilitation
2. Contains exactly one [1..1] **cognitiveGoal** with data type *Integer*
   - Contains a value which indicates numeric goal for the cognitive rehabilitation.
   - Contains the value which indicates the cognitive goal for spinal Cord injury patient's rehabilitation
3. Contains exactly one [1..1] **economicGoal** with data type *Integer*
   - Contains a value which indicates numeric goal for the economic rehabilitation.
   - Contains the value which indicates the economic goal for spinal Cord injury patient's rehabilitation
4. Contains exactly one [1..1] **mobilityGoal** with data type *Integer*
   - Contains a value which indicates numeric goal for the mobility rehabilitation.
   - Contains the value which indicates the mobility goal for spinal Cord injury patient's rehabilitation
5. Contains exactly one [1..1] **occupationGoal** with data type *Integer*
   - Contains a value which indicates numeric goal for the occupational rehabilitation.
   - Contains the value which indicates the occupational goal for spinal Cord injury patient's rehabilitation
6. Contains exactly one [1..1] **physicalGoal** with data type *Integer*
   - Contains a value which indicates numeric goal for the physical rehabilitation.
   - Contains the value which indicates the physical goal for spinal Cord injury patient's rehabilitation.
7. Contains exactly one [1..1] **socialGoal** with data type *Integer*
   - Contains a value which indicates numeric goal for the social rehabilitation.

- Contains the value which indicates the social goal for spinal Cord injury patient's rehabilitation
8. Contains zero or more [0..*] **comments**, where its type is *Comment Event*

## Spinal Cord Assessment Question

This class contains assessments regarding the health and associated information regarding the spinal cord Injury for the veteran.

This class contains assessments regarding the health and associated information regarding the spinal cord Injury for the veteran.

1. Extends *Assessment Section*
2. Contains exactly one [1..1] **assessmentDate** with data type *Point In Time*

   - Contains date that the veteran supplied the assessment information.
   - Contains date that the veteran supplied the assessment information.
3. Contains exactly one [1..1] **assessmentQuestion** with data type *Code*

   - Contains the codeset that identifies the Assessment Question for the section and Form. ie, SWLS is the form, Education and Occupation is the section and the Assessment question Is Student Y or N.
   - Contains the codeset that identifies the Assessment Question for the section and Form. ie, SWLS is the form, Education and Occupation is the section and the Assessment question Is Student Y or N.
4. Contains exactly one [1..1] **assessmentResponse** with data type *Any*

   - Contains the response to the assessment question supplied by the veteran which helps identify the functional level of impairment and or education provided
5. Contains exactly one [1..1] **count** with data type *Integer*

   - Contains the count for the assessment question
   - Contains the count for the assessment question
6. Contains exactly one [1..1] **id** with data type *Id*

   - Unique identifier assign to the assessment question
   - Unique identifier assign to the assessment question
7. Contains exactly one [1..1] **score**

   - Contains the value for the assessment question.
   - Contains the value for the assessment question.

## Spinal Cord Episode Of Care

This Class contains the process by which the Veterans Affairs documents information to enroll the veteran in the spinal cord domain for the episode of care.

This Class contains the process by which the Veterans Affairs documents information to enroll the veteran in the spinal cord domain for the episode of care.

1. Contains exactly one [1..1] **id** with data type *Id*

   - Unique identifier that associates the registration with associated Episode of care.
   - Unique identifier that associates the registration with associated Episode of care.
2. Contains exactly one [1..1] **eocStartDate** with data type *Point In Time*

   - Contains the Date the Episode of Care (EOC) began for the veteran.
   - Contains the Date the Episode of Care (EOC) began for the veteran.
3. Contains exactly one [1..1] **eocClosedDate** with data type *Point In Time*

   - Contains the Date the Episode of Care (EOC) closed for the veteran.

- • Contains the Date the Episode of Care (EOC) closed for the veteran
4. Contains exactly one [1..1] **eocFollowUpDate** with data type *Point In Time*
    - • Contains the Episode of Care (EOC) followup date for the veteran.
    - • Contains the Episode of Care (EOC) followup date for the veteran.
5. Contains at least one [1..*] **aeVamcLocation**, where its type is *Service Delivery Location*
    - • Association to the class that identifies the VAMC location where Annual Evaluation (AE) took place.
    - • Association to the class that identifies the VAMC location where Annual Evaluation (AE) took place.
6. Contains zero or one [0..1] **bcr**, where its type is *BCR Event*
    - • Association to the class that identifies information about BCR treatment and support for the spinal cord injury of the veteran.
    - • Association to the class that contains information about BCR treatment and support for the spinal cord injury of the veteran.
7. Contains exactly one [1..1] **primaryPerformer**, where its type is *Primary Performer*
8. Contains zero or more [0..*] **spinalCordEvent**, where its type is *Spinal Cord Event*
    - • Summary information about the Spinal Injury of the patient.
9. Contains exactly one [1..1] **spinalCordImpairment**, where its type is *Spinal Cord Impairment*
    - • Association to the class that identifies the information regarding the spinal cord injury impairment for the patient.
    - • Association to the class that identifies the information regarding the spinal cord injury impairment for the patient.

## Spinal Cord Event

This class contains summary information about the Spinal Injury of the patient.

This class contains summary information about the Spinal Injury of the patient.

1. Contains exactly one [1..1] **careType** with data type *Code*
    - • Contains the codes to identify the tyeps of Epsiode of Care for the veteran i,e inpatient, rehab etc.
    - • Contains the codes to identify the tyeps of Epsiode of Care for the veteran i,e inpatient, rehab etc.
2. Contains exactly one [1..1] **id** with data type *Id*
    - • Unique identifier for the Spinal Cord event.
    - • Unique identifier for the Spinal Cord event.
3. Contains exactly one [1..1] **recordDate** with data type *Point In Time*
    - • Contains the date the veteran received Patient Education
    - • Contains the date the veteran received Patient Education
4. Contains exactly one [1..1] **scoreType** with data type *Code*
    - • Contains the Code Set that identifies the tyepe of score for the Assessment tool.
    - • Contains the Code Set that identifies the tyepe of score for the Assessment tool.
5. Contains zero or more [0..*] **division**, where its type is *Division*
    - • Contains the Division with in the VA which provided the patient Education.
    - • Division the patient is currently assigned.
6. Contains at least one [1..*] **medicalComplication**, where its type is *Medical Complication*
    - • Association to the class that identifies the information regarding the spinal cord injury medical complications for the patient.
    - • Association to the class that contains information regarding the spinal cord injury medical complications for the patient.
7. Contains at least one [1..*] **serviceDeliveryLocation**, where its type is *Service Delivery Location*

- Association to the class that identifies the physical location of the services being provided for the spinal cord injury patient.
- Association to the location to which the patient is assigned.

# Spinal Cord Impairment

This class contains information regarding the spinal cord injury impairment for the patient.

Contains the date of the etiology injury for the veteran.

1. Contains exactly one [1..1] **cerebralInjury** with data type *Boolean*
   - Indicates whether or not the veterans has suffered a brain injury
   - Indicates whether or not the veterans has suffered a brain injury
2. Contains exactly one [1..1] **otherInjury** with data type *Boolean*
   - Indicates whether or not an other injuries are present
   - Indicates whether or not an other injuries are present
3. Contains exactly one [1..1] **otherInjuryDescription** with data type *String*
   - Contains textual description of any other injuries present
   - Contains textual description of any other injuries present

# Spinal Cord Medical Centers Visted

This is the class that contains the current and historic medical centers that provided services for the veteran

This is the class that contains the current and historic medical centers that provided services for the veteran

1. Contains at least one [1..*] **medicalCentersVisted** with data type *Code*
   - Contains code set that provides a list of the VAMC visted by the veteran.
   - Contains code set that provides a list of the VAMC visted by the veteran.

# Spinal Cord Registration

This Class contains the process by which the Veterans Affairs documents information to enroll the veteran in the spinal cord domain for the episode of care.

This Class contains the process by which the Veterans Affairs documents information to enroll the veteran in the spinal cord domain for the episode of care.

1. Contains exactly one [1..1] **dateFirstSeen** with data type *Point In Time*
   - Contains the first date the veteran was seen for SCI care
   - Contains the first date the veteran was seen for SCI care
2. Contains exactly one [1..1] **dateLastReviewed** with data type *Point In Time*
   - Contains the last date the veterans registration record was reviewed .
   - Contains the last date the veterans registration record was reviewed .
3. Contains zero or one [0..1] **dateOfDeath** with data type *Point In Time*
   - Contains the veterans date of death.
   - Contains the veterans date of death.
4. Contains at least one [1..*] **dateRevised** with data type *Point In Time*
   - Contains the current and historical change dates for the veteran
   - Contains the current and historical change dates for the veteran

5. Contains exactly one [1..1] **id** with data type *Id*

   - Unique identifier that identifies this Episode of care for the veteran.
   - Unique identifier that identifies this Episode of care for the veteran.

6. Contains exactly one [1..1] **percentProvidedByVa** with data type *Integer*

   - Contains the portion of care provided by VA.
   - Contains the portion of care provided by VA.

7. Contains exactly one [1..1] **registrationStatus** with data type *Code*

   - Contains the code set that identifies the Registration status of the veteran
   - Contains the code set that identifies the Registration status of the veteran

8. Contains zero or more [0..*] **ancillaryRegistrationEvent**, where its type is *Ancillary Registration Event*

9. Contains zero or more [0..*] **etiology**, where its type is *Etiology Observation*

   - Association to the class that identifies the
   - Association to the class that identifies the cause or origin of a spinal cord injury as determined by medical diagnosis.
   - Association to the class that identifies the cause or origin of a spinal cord injury as determined by medical diagnosis.

10. Contains at least one [1..*] **evaluation** , where its type is *Evaluation Event*

    - Association to the class that identifies the information for the Veterans evaluation session.
    - Association to the class that identifies the information for the Veterans evaluation session.

11. Contains at least one [1..*] **medicalCentersVisted**, where its type is *Spinal Cord Medical Centers Visted*

    - Association to the class that identifies the current and historic medical centers that provided services for the veteran
    - Association to the class that identifies the current and historic medical centers that provided services for the veteran

12. Contains zero or more [0..*] **militaryServiceEpisode**, where its type is *Military Service Episode*

13. Contains exactly one [1..1] **patient**, where its type is *Patient*

14. Contains at least one [1..*] **referral**, where its type is *Referral Event*

    - Association to the class that identifies the information for the Veterans referrals.
    - Association to the class that identifies the information for the Veterans referrals.

15. Contains at least one [1..*] **sciCoordinator**, where its type is *Sci Administration*

    - Identifies the SCI Coordinators who are providing or have provided Spinal Cord Injury - related services to the Veteran

16. Contains zero or more [0..*] **spinalCordEpisodeOfCare**, where its type is *Spinal Cord Episode Of Care*

    - Association to the process by which the Veterans Affairs documents information to enroll the veteran in the spinal cord domain for the episode of care.

## Stain Result

This class is a generalization of various kinds of stain tests, including Gram Stain, and Acid Fast Stain. Of interest at the FHIM level is that a relatively quick general observation might be made and reported about a cultured sample before more detailed observations are possible, giving the treating physician a general indication of the type of treatment that might be appropriate. Independent Variables: Source, condition (aerobic/anaerobic), present/absence of growth, slow growth vs. fast growth, length of time, gram positive/negative, morphology1 (cocci, bacilli), morphology2 (chains, clusters), morphology3 (intercellular, extracellular)

1. Extends *Reportable Result*

2. Contains exactly one [1..1] **cultureCondition** with data type *Code*

   - aerobic / nonaerobic condition

3. Contains exactly one [1..1] **quantityObserved** with data type *Physical Quantity*
4. Contains exactly one [1..1] **stainType** with data type *Code*
   - Contains the value results of the Smear/Prep test.
5. Contains exactly one [1..1] **value** with data type *Code*
   - Contains the results of the Gram Stain Test in textual format.

## Standing Order

An order that is created by policy, and which is not tied to a single patient, but which is generated for a patient when certain conditions are met. For example, a policy might exist that persons deploying to a particular region must have a particular vaccination administered beforehand. Note that this class is a placeholder for such Standing Orders. It exists so that a Healthcare Order might be able to reference the Standing Order that caused the Healthcare Order to be created. However, details regarding what information makes up a well-formed Standing Order, or the circumstances under which a Standing Order is created, managed, invoked, or retired are not in scope for this iteration and will be fleshed out in a future interation.

1. Contains exactly one [1..1] **id** with data type *Id*
   - A unique identifier for the Standing Order.
2. Contains exactly one [1..1] **text** with data type *String*
   - Contains a textual representation of the Standing Order. Note that this will be fleshed out in a future iteration.

## Standing Order

An order that is created by policy, and which is not tied to a single patient, but which is generated for a patient when certain conditions are met. For example, a policy might exist that persons deploying to a particular region must have a particular vaccination administered beforehand. Note that this class is a placeholder for such Standing Orders. It exists so that a Healthcare Order might be able to reference the Standing Order that caused the Healthcare Order to be created. However, details regarding what information makes up a well-formed Standing Order, or the circumstances under which a Standing Order is created, managed, invoked, or retired are not in scope for this iteration and will be fleshed out in a future interation.

1. Contains exactly one [1..1] **id** with data type *Id*
   - A unique identifier for the Standing Order.
2. Contains exactly one [1..1] **text** with data type *String*
   - Contains a textual representation of the Standing Order. Note that this will be fleshed out in a future iteration.

## Standing Order Food Item

A record of a standing order food item and the quantity in which it is ordered.

1. Contains exactly one [1..1] **standingOrderFoodItem** with data type *Code*
   - A food item that is requested as part of a standing order.
2. Contains exactly one [1..1] **quanity** with data type *Integer Ratio*
   - The ordered quantity of the requested food item.

## State

1. Contains exactly one [1..1] **code** with data type *Code*

- Identifies the state. This would ordinarily be an Id, but because there are a finite number of tribes, nations are normally represented as codes.

# Student

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Subject

1. Contains zero or more [0..*] **relatedSubject**, where its type is *Related Subject*
2. Contains exactly one [1..1] **entity**, where its type is *Entity*

# Subject Of Record

This class represents the type of subject of record: patient or population.

1. Contains exactly one [1..1] **patient**, where its type is *Person*
   - Captures the properties of a Consenter/Client or 'Patient'. See 'Actors' specified in the Use Case Analysis for additional detail. A consenter may be the person whose preferences it represents or their designated Substitute Decision Maker (SDM).
2. Contains exactly one [1..1] **population**, where its type is *Population*
   - Specifies that the target of a policy may be an entire population. This class may be used to specify a privacy policy that applies to a specific group or population.

# Subscore

This class is used to describe the context of an assessment subscore. A subscore may be associated with a specific domain or concept that is evaluated through the assessment (e.g. depression may receive a subscore in an overall mental health assessment).

1. Contains exactly one [1..1] **subConceptCode** with data type *Code*
2. Contains zero or more [0..*] **value** with data type *Integer*
   - This attribute holds the numeric value of the subscore. The type of this attribute is 'NullableInteger' because the value may be null.

# Subscriber

A person who is named as a beneficiary of a plan, such as an insurance plan. Enrollee: 'An eligible individual who is enrolled in a health plan - does not include an eligible dependent.' -eHealthInsurance.org Subscriber: 'This term has two meanings _ first, it refers to a person or organization who pays the premiums, and second, the person whose employment makes him or her eligible for membership in the plan.' -eHealthInsurance.org DOD: if the person is active duty, he is automatically enrolled into the 'direct care' program as a subscriber. If he is a retiree, he is eligible to enroll in several programs such as Tricare for life. If he does, he's still considered a subscriber. 'sponsor' and 'subscriber' are sometimes used interchangeably.

1. Contains exactly one [1..1] **asPerson**, where its type is *Person*
2. Contains exactly one [1..1] **id** with data type *Id*
   - A unique identifier that the payer or information source can use to identify the person as a Policy Holder.

3. Contains zero or more [0..*] **group**, where its type is *Group Coverage*
4. Contains at least one [1..*] **healthcarePolicy**, where its type is *Healthcare Policy*
5. Contains zero or more [0..*] **otherPolicyInfo**, where its type is *Other Policy Info*

# Subsequent Therapy Comment

This class contains subsequent therapy related comments.
1. Contains exactly one [1..1] **chemoTherapyPlannedGiven** with data type *Code*
   - Indicates whether the patient received chemotherapy. Possible values Yes; No, not recommended; Patient refused chemotherapy; Chemotherapy planned, but not given; Unknown; etc.
2. Contains exactly one [1..1] **hormoneTherapyPlannedGiven** with data type *Code*
   - Indicates whether the patient received hormonal therapy. Possible values are Yes; No, not recommended; Patient refused hormone therapy; Hormone therapy planned, but not given; Unknown; etc.

# Substance

This class is used to specify the type of substance (e.g. alcohol, controlled substances) that is abused by a patient.
1. Contains exactly one [1..1] **code** with data type *Code*
   - This coded attribute is used to specify the specific substance abused by patient (e.g. cocaine, oxycodone, etc.,) rather than a code for the type of substance (e.g. narcotics, alcohol, pharmaceutical drugs).

# Substance Abuse Assessment

This class represents any type of assessment used to identify the substance abuse problems of a patient. This class is a specialization/restriction of the BehavioralHealthAssessment class.
1. Extends *Behavioral Health Assessment*

# Substance Administration Criteron

1.

# Substance Of Choice

This role class is used to identify the properties of a substance that is identified as a substance of choice based on the answers provided by the patient to the questions in Drug Use History section of a Behavioral Health or Substance Abuse assessment.
1. Contains exactly one [1..1] **substance**, where its type is *Substance*
2. Contains exactly one [1..1] **code** with data type *Integer*
   - This coded attribute is used to specify the type of substance used by patient (e.g. alcohol, narcotics, pharmaceutical drugs) rather than a code for the specific substance.

# Suicidal Ideation Observation

This class is used to record 'thoughts of harming or killing oneself' (IOM 2002) and is a specialization of HealthConcern. The severity of suicidal ideation can be determined by assessing the frequency, intensity, and

duration of these thoughts. The CDC is in the process of developing Suicide Surveillance: Uniform Definitions and Recommended Data Elements. The severity of suicidal ideation can be determined by assessing the frequency, intensity, and duration of these thoughts (IOM 2002). CDC is in the process of developing Suicide Surveillance: Uniform Definitions and Recommended Data Elements. This publication is expected to be available starting in 2009. Reference: Goldsmith SK, Pellmar TC, Kleinman AM, Bunney WE, eds. Reducing suicide: a national imperative.

1. Extends *Health Concern*
2. Contains exactly one [1..1] **code** with data type *Code*
   - The business stakeholders may specify what code is associated with SuicidalIdeationObservation. There is an ICDcode attribute in the class SuicideAttemptOrCompletion. Are there two different codes for these classes? If so, what is the definition for this code and as the name implies is an ICD-9 code always used to specify this information.
3. Contains exactly one [1..1] **type** with data type *Self Directed Type*
4. Contains exactly one [1..1] **description** with data type *String*
5. Contains exactly one [1..1] **frequency** with data type *Integer*
6. Contains exactly one [1..1] **intensity** with data type *Code*
   - The intensity may be specified using a value set or a scale of integer values.
7. Contains exactly one [1..1] **previousSuicideAttempts** with data type *Integer*
   - 'A non-fatal, self-inflicted destructive act with explicit or inferred intent to die' (IOM 2002).
8. Contains zero or one [0..1] **alert**, where its type is *Suicide Risk*
9. Contains zero or more [0..*] **suicideAttemptOrCompletion**, where its type is *Suicide Attempt Or Completion*

## Suicide Attempt Or Completion

This class is used to specify past incidents of suicide attempt.
1. Contains exactly one [1..1] **ICDcode** with data type *Code*
   - This coded attribute is used to specify the means by which suicide was attempted. The attribute name implies that an ICD-9 code is used to specify this information. Is this the case?
2. Contains exactly one [1..1] **statusCode** with data type *Code*
   - This coded attribute is used to specify if the suicide attempt was successful/completed, aborted, or otherwise unsuccessful.

## Suicide Risk

This class is used to convey a risk of suicide. This class contains an association to the full details of a patient's suicidal ideation and past history of suicide attempts.
1. Contains zero or more [0..*] **suicidalideation**, where its type is *Suicidal Ideation Observation*
2. Contains exactly one [1..1] **code** with data type *Suicide Risk*

## Supervisor Anesthetist

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Supplemental Feeding

A particular feeding (e.g., the first 10 AM feeding, the second 10 AM feeding, the first 2 PM feeding, the second 2 PM feeding, etc.) for which a menu item is requested.

1. Contains exactly one [1..1] **precedence** with data type *Integer*
   - Maintains the precedence for the requested feedings.
2. Contains exactly one [1..1] **supplementalFeedingItem**, where its type is *Supplemental Feeding Item*
   - An item that is requested as part of a Supplemental Feeding order.

## Supplemental Feeding Item

A record of a feeding item and the quantity in which it is ordered.

1. Contains exactly one [1..1] **quanity** with data type *Integer Ratio*
   - The ordered quantity of the requested food item.
2. Contains exactly one [1..1] **supplementalFeedingItem** with data type *Code*
   - An item that is requested as part of a supplemental feeding order.

## Supplemental Feeding Request

A record of the menu of food items that is requested as part of an order.

1. Extends *Dietetics Request*
2. Contains exactly one [1..1] **supplementalFeedingMenu** with data type *Code*
   - A menu of food items that is requested as part of an order.
3. Contains at least one [1..*] **feeding**, where its type is *Supplemental Feeding*
   - A particular feeding (e.g., the first 10 AM feeding, the second 10 AM feeding, the first 2 PM feeding, the second 2 PM feeding, etc.) for which a menu item is requested.

## Supporter

1.

## Surgeon Category

This field indicates the category of the chief surgeon. The suggested code choices are: V=VA Team, M=Mixed VA and non VA, N=Non VA, 1=Staff FT, 2-Staff PT, 3=Consultant, 4=Attending, 5=Fee Basis, 6=Resident, 7=Other (Includes Interns), ETC.

1. Contains zero or more [0..*] **typeOfSurgeon** with data type *Code*
   - First in the list is the Chief Surgeon; 2nd in the list is the first assistant. This field indicates the category of the chief surgeon. The suggested code choices are: V=VA Team, M=Mixed VA and non VA, N=Non VA, 1=Staff FT, 2-Staff PT, 3=Consultant, 4=Attending, 5=Fee Basis, 6=Resident, 7=Other (Includes Interns), ETC.

## Surgeon Function

Assigned duty or activity performed by the medical specialist who performs surgery :

1. Contains exactly one [1..1] **functionPerformed** with data type *Code*
   - Contains the codeset that assign the duty or activity performed by the medical specialist who performs surgery :

## Surgery Assessment

A test or instrument, often a questionaire, used to evaluate or assess the patient's health, within the context of the surgical event.

1. Contains exactly one [1..1] **assessmentType** with data type *Code*
   - Contains the code that identifies the type of surgery assessment questions being addressed.
2. Contains exactly one [1..1] **assessmentId** with data type *Id*
   - Unique identifier for the Surgery assessment questions be addressed.
3. Contains exactly one [1..1] **result**, where its type is *Surgery Assessment Question*
   - The response result to an surgical assessment question.

## Surgery Assessment Question

Container to hold the response result from a test or instrument, questionaire, used to evaluate or assess the patient's health, within the context of the surgical event.

1. Contains exactly one [1..1] **questionId** with data type *Id*
   - Unique identifier for the assessment response result.
2. Contains exactly one [1..1] **surgeryAssesmentCode** with data type *Code*
   - Code that identifies the assessment being performed.
3. Contains exactly one [1..1] **assessmentTime** with data type *Point In Time*
   - Contains the date and time the assessment questions were taken.

## Surgery Assessment Result Boolean

Contains the response to an surgical assessment question that can be expressed as boolean

1. Extends *Surgery Assessment Question*
2. Contains exactly one [1..1] **value** with data type *Boolean*
   - Contains the response to an surgical assessment question that can be expressed as boolean

## Surgery Assessment Result Coded

Contains the response to an surgical assessment question that can be expressed as a code;

1. Extends *Surgery Assessment Question*
2. Contains exactly one [1..1] **value** with data type *Code*
   - Contains the response to an surgical assessment question that can be expressed as a code.

## Surgery Assessment Result Numeric

Contains the response to an surgical assessment question that can be expressed as an integer.

1. Extends *Surgery Assessment Question*
2. Contains exactly one [1..1] **value** with data type *Real*
   - Contains the response to an surgical assessment question that can be expressed as an integer.

# Surgery Assessment Result Physical Quantity

Contains the response to an surgical assessment question that can be expressed as an physical value.

1. Extends *Surgery Assessment Question*
2. Contains exactly one [1..1] **value** with data type *Physical Quantity*
   - Contains the response to an surgical assessment question that can be expressed as an physical value.

# Surgery Assessment Result String

Contains the response to an surgical assessment question requiring a textual answer.

1. Extends *Surgery Assessment Question*
2. Contains exactly one [1..1] **value** with data type *String*
   - Contains the response to an surgical assessment question requiring a textual answer.

# Surgery Device

A piece of equipment and or a mechanism designed to serve a special purpose or perform a special Surgical function Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.

1. Contains exactly one [1..1] **unitId** with data type *Id*
   - Unique id that identifies the piece of equipment being used in the surgical event
2. Contains exactly one [1..1] **unitName** with data type *Code*
   - The descriptive name for the Surgical device being used.
3. Contains exactly one [1..1] **modelId** with data type *Id*
   - Manufacturers id number for the surgical device.
4. Contains exactly one [1..1] **type** with data type *Code*
   - Contains the code that identifies the type of device.
5. Contains exactly one [1..1] **serialLotNumberId** with data type *Id*
   - Containsthe lot/serial number of the implanted prosthetic device.
6. Contains exactly one [1..1] **quantity** with data type *Physical Quantity*
   - Contains the quantity used during the surgical even t for the device.

# Surgery Specialty

This is the surgical specialty credited for doing this operative procedure. Many reports, including the Annual Report of Surgical Procedures, are sorted by the surgical specialty

1. Contains exactly one [1..1] **surgicalSpecialtyType** with data type *Code*
   - This is the surgical specialty credited for doing this operative procedure. Many reports, including the Annual Report of Surgical Procedures, are sorted by the surgical specialty

# Surgery Supervision Act

The act, process or occupation of supervising: direction, inspection and critical evaluation: oversight of the Surgical Event

1. Contains exactly one [1..1] **id** with data type *Id*

    - Unique identifier for Surgery Supervisor code.
2. Contains exactly one [1..1] **levelOfSupervision** with data type *Code*

    - Contains a code corresponding to the highest level of supervision of the anesthesiology staff supervisor. Suggested values like 4 Staff Assisting Resident

## Surgical Event

Surgical operation or procedure, especially one involving the removal or replacement of a diseased organ or tissue.

1. Extends *Clinical Service*
2. Contains exactly one [1..1] **surgicalEventId** with data type *Id*

    - Unique Identifier for this surgical event.
3. Contains exactly one [1..1] **status** with data type *Code*

    - The value specifying the state of this patient surgical encounter (based on the RIM Act class state machine), for example, active, aborted, completed
4. Contains exactly one [1..1] **surgeryType** with data type *Code*

    - Contains Code Set that identifies the type of Surgery. like Heart, Onocology.
5. Contains exactly one [1..1] **timeSpan** with data type *Time Interval*

    - Contains the duration (date/time) of the Surgical Event.
6. Contains exactly one [1..1] **endDate** with data type *Point In Time*

    - Contains the date and time that the operation ended.
7. Contains exactly one [1..1] **NonOrSurgicalProcedureInd** with data type *Boolean*

    - Indicates whether the case is a non surgical event. Like values are yes, no
8. Contains exactly one [1..1] **preOpInrDate** with data type *Point In Time*

    - This is the date that the preoperative INR was performed.
9. Contains exactly one [1..1] **holdingAreaArrival**, where its type is *Transportation Event*

    - Identifies when the patient arrives in the holding area.
10. Contains exactly one [1..1] **operatingRoomDeparture**, where its type is *Transportation Event*

    - Identifies when the patient leaves the operating room.
11. Contains zero or more [0..*] **generalComment**, where its type is *Comment Event*

    - Contains general comments regarding the Surigcal event.
12. Contains zero or more [0..*] **treatment**, where its type is *Treatment*

    - Administration or application of remedies to a patient or for a disease or an injury; medicinal or surgical management; therapy.
13. Contains exactly one [1..1] **specialityofSurgery**, where its type is *Surgery Specialty*

    - This is the surgical specialty credited for doing this operative procedure. Many reports, including the Annual Report of Surgical Procedures, are sorted by the surgical specialty
14. Contains exactly one [1..1] **severity**, where its type is *Surgical Severity*

    - Identifies the degree of severity.
15. Contains at least one [1..*] **anesthesia**, where its type is *Anesthesia Event*

    - The loss of sensation and usually of consciousness without loss of vital functions artificially produced by the administration of one or more agents that block the passage of pain impulses along nerve pathways to the brain Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.
16. Contains at least one [1..*] **verification**, where its type is *Verification*

- Contains dates that verifications were completed.
17. Contains zero or more [0..*] **prosthesis**, where its type is *Surgery Device*
    - An artificial device used to replace a missing body part, such as a limb, tooth, eye, or heart valve.
18. Contains at least one [1..*] **cellSaver**, where its type is *Cell Saver Event*
    - Cell Saver for the surgical event
19. Contains zero or more [0..*] **concurrentCase**, where its type is *Surgical Event*
    - The current surgical event for the Patient.
20. Contains exactly one [1..1] **relatedCase**, where its type is *Surgical Event*
    - The related surgical event for the current surgical event for the Patient.
21. Contains exactly one [1..1] **specialty**, where its type is *Medical Specialty*
    - the medical specialty credited for doing this non-OR procedure.
22. Contains zero or more [0..*] **assessment**, where its type is *Surgery Assessment*
    - A test or instrument, often a questionaire, used to evaluate or assess the patient's health, within the context of the surgical event.
23. Contains exactly one [1..1] **surgeryCategory**, where its type is *Surgeon Category*
    - Identifies the category of the surgeon.
24. Contains at least one [1..*] **bodyFluid**, where its type is *Bodily Fluid Administration*
    - The liquid parts of the body
25. Contains exactly one [1..1] **audit**, where its type is *Fluid Audit*
    - A methodical examination or review of the fluid utilized in the surgical event.
26. Contains zero or more [0..*] **skinPrep**, where its type is *Skin Prep Event*
    - Tha act of preparing the patient's operative site by applying the agent and wash the site.
27. Contains exactly one [1..1] **location**, where its type is *Service Delivery Location*
    - Defines the location ward room, and service organization for the surgical event.
28. Contains at least one [1..*] **image**, where its type is *Radiology Promise*
    - Identifies the image.
29. Contains at least one [1..*] **device**, where its type is *Surgery Device*
    - A piece of equipment or a mechanism designed to serve a special purpose or perform a special surgical function Source: Merriam-Webster's Medical Dictionary, 2002 Merriam-Webster, Inc.
30. Contains exactly one [1..1] **supervision**, where its type is *Surgery Supervision Act*
    - The act, process, or function of supervising
31. Contains at least one [1..*] **irrigation**, where its type is *Irrigation Event*
    - cleaning a wound or body organ by flushing or washing out with water or a medicated solution
32. Contains zero or one [0..1] **unit**, where its type is *Surgery Device*
    - Contains the Unit being used during the surgical process
33. Contains zero or one [0..1] **laser**, where its type is *Surgery Device*
    - Any of several devices that convert incident electromagnetic radiation of mixed frequencies to discrete frequencies of highly amplified and coherent ultraviolet, visible, or infrared radiation; used in surgery to cut and dissolve tissue.
34. Contains exactly one [1..1] **function**, where its type is *Surgeon Function*
    - Assigned duty or activity performed by the medical specialist who performs surgery :
35. Contains zero or more [0..*] **occurrence**, where its type is *Occurrence Assessment*
    - Identifies the non surgical procedure/s that were performed during the Surgical process.
36. Contains zero or more [0..*] **tourniquet**, where its type is *Tourniquet Event*

- • A device, typically a tightly encircling bandage, used to check bleeding by temporarily stopping the flow of blood through a large artery in a limb.

37. Contains exactly one [1..1] **operatingRoomArrival**, where its type is *Transportation Event*
    - • Identifies when the patient arrives in the operating room..

38. Contains zero or more [0..*] **position**, where its type is *Electrode Position Event*
    - • Identifies a position corresponding to the area of placement of the dispersive electrode pad.

39. Contains at least one [1..*] **labRequest**, where its type is *Lab Test Request*
    - • Request for lab tests to be performed

40. Contains at least one [1..*] **diagnosis**, where its type is *Diagnosis*
    - • The act or process of identifying or determining the nature and cause of a disease or injury through evaluation of patient history, examination, and review of laboratory data.

41. Contains zero or more [0..*] **physiologicMonitoring**, where its type is *Physiologic Monitoring Event*
    - • Monitor the differing in, involving, or affecting physiological factors.

42. Contains zero or more [0..*] **restraintPosition**, where its type is *Restraint Position Event*
    - • An instrument or a means of restraint to prevent the infliction of harm to self or others, such as a straightjacket.

43. Contains zero or more [0..*] **equipmentSterilization**, where its type is *Equipment Sterilization Event*
    - • Sterliizes the equipment and provides the sterilization number of the implanted device

44. Contains zero or more [0..*] **equipmentTiming**, where its type is *Equipment Timing Event*
    - • Contains the Date and time and durationthe piece of Equipment was in use.

45. Contains zero or more [0..*] **accessory**, where its type is *Accessory Event*
    - • Contains the Accessory that is required or used by a surgical device.

46. Contains zero or more [0..*] **equipmentMeasurement**, where its type is *Equipment Measurement Event*
    - • The dimension, quantity, or capacity determined by measuring a peice of equipment.

47. Contains exactly one [1..1] **preOpInrLabRequest**, where its type is *Lab Test Request*
    - • PreOpInr request for lab test to be performed

48. Contains at least one [1..*] **surgicalDevice**, where its type is *Device*
    - • A contrivance or an invention serving a particular purpose, especially a machine used to perform one or more relatively simple tasks." (The American Heritage Stedman's Medical Dictionary)

## Surgical Severity

Identifies the degree of severity of the surgical procedure.

1. Contains exactly one [1..1] **levelOfSeverity** with data type *Code*
   - • Codes that identify the degree of severity of the surgical procedure.

## Suspected Agent

1. Contains exactly one [1..1] **adminDuration** with data type *Integer*
2. Contains exactly one [1..1] **adminStartDate** with data type *Date*
3. Contains exactly one [1..1] **adminStoptDate** with data type *Date*
4. Contains exactly one [1..1] **adverseReactionLikelihood** with data type *Code*
5. Contains exactly one [1..1] **dailyDose** with data type *String*
6. Contains exactly one [1..1] **didReactionCease** with data type *Boolean*
7. Contains exactly one [1..1] **didReappear** with data type *Boolean*

8.  Contains exactly one [1..1] **doesNormallyOccur** with data type *Boolean*
9.  Contains exactly one [1..1] **indicationsForUse** with data type *String*
10. Contains exactly one [1..1] **lastFillDate** with data type *Date*
11. Contains exactly one [1..1] **nbrOfPreviousDoses** with data type *Integer*
12. Contains exactly one [1..1] **route** with data type *String*
13. Contains exactly one [1..1] **sig** with data type *String*
14. Contains exactly one [1..1] **wasAdminStopped** with data type *Boolean*
15. Contains exactly one [1..1] **wasDueToPtCondition** with data type *Boolean*
16. Contains exactly one [1..1] **wasReadministered** with data type *Boolean*
17. Contains exactly one [1..1] **medicinalProduct**, where its type is *Medicinal Product*

## Suspend Act

Contains information about the placement of an order "on hold".

1.  Contains exactly one [1..1] **comment** with data type *String*
    - Any comments or remarks regarding the suspension of the Activity or Order.
2.  Contains exactly one [1..1] **dateTime** with data type *Point In Time*
    - The date/time the Activity (e.g., Order) was suspended.
3.  Contains exactly one [1..1] **reason** with data type *Code*
    - The reason why the Activity or Order was suspended.
4.  Contains exactly one [1..1] **author**, where its type is *Individual Provider*
    - Indicates the practitioner who created the suspension. In other words, the practitioner who suspended the action.

## System A

This is an example subsystem (specified by the subsystem stereotype) that implements a specific use case as a set of functionality used by business users (i.e. actors). It represents independent, behavioral units in a system. Subsystems are used in class, component, and use case diagrams to represent large-scale components of the system at the center of a interoperability use case.. An entire system may be represented as a hierarchy of subsystems. You can also define the behavior that each subsystem represents by specifying interfaces to the subsystems and the operations that support the interfaces.

1.

## Target Substance

This association class is used to describe the priority of the SubstanceOfChoice abused by the client/patient defined by the sequence attribute and is used to distinguish primary from secondary and tertiary substances.

1.  Contains exactly one [1..1] **sequence** with data type *Integer*
    - This attribute defines whether the abused Substance is the primary SubstanceOfChoice or secondary, tertiary, etc. This is captured to determine whether different treatments are effective depending on whether the substance is the primary one being abused or incidental to the primary substance.

## Technologist

1.  Contains exactly one [1..1] **comment** with data type *String*
2.  Contains exactly one [1..1] **time** with data type *Point In Time*

## Telcom Patient

1. Extends *Human Patient*
2. Extends *Patient*
3. Contains exactly one [1..1] **isPregnant** with data type *Boolean*
4. Contains exactly one [1..1] **isSmoker** with data type *Boolean*
5. Contains exactly one [1..1] **residenceType** with data type *Code*
   • N2

## Telecom Due

1. Extends *Drug Use Evaluation*
2. Contains exactly one [1..1] **levelOfEffort** with data type *Code*

## Telecommunications

A collection of electronic addresses at which the person or organization may be reached. This includes telephones, email addresses, etc.

1. Contains exactly one [1..1] **addressType** with data type *Address Type*
   • Indicates the kind of communications address that is contained within this class. Examples include primaryHome, Work, etc. Note that in HL7 V3, this concept is part of the Telecom datatype (the 'use code'). This concept is made explicit in this Telecommunications class, because this is a platform-independent model. Non V3 implementations will need other mechanisms to deal with the type.
2. Contains exactly one [1..1] **effectiveDateRange** with data type *Date*
   • The time period for which the phone number or communications address is valid for the person or organization. The datatype is a TimeInterval, which includes both a start date and end date, either of which may be empty.
3. Contains exactly one [1..1] **universalResourceId** with data type *String*
   • Represents a telecommunications address at which the person or organization may be reached. Note that this property is a simply a string, the formatting of which will depend on the type of communications address employed.

## Test Exception

1. Extends *Reportable Result*
2. Contains exactly one [1..1] **reason** with data type *Code*

## Tested Specimen

1. Extends *Specimen*

## Time Interval

An interval of time specified as an interval of points in time - TS.

This data type represents an Interval, where the Low and High Limits are Points In Time. An Interval is a "set of consecutive values of an ordered base data type." - HL7 V3 A PointInTime is "a quantity specifying a point on the axis of natural time. A point in time is most often represented as a calendar expression." - HL7 V3

1. Contains zero or one [0..1] **low** with data type *Point In Time*
   - This is the low limit of the interval.
   - "The low limit of the interval. The low limit SHALL NOT be positive infinity." - HL7 V3
2. Contains zero or one [0..1] **high** with data type *Point In Time*
   - This is the high limit of the interval.
   - "The high limit of the interval. The high limit SHALL NOT be negative infinity, and SHALL be higher than the low limit if one exists." - HL7 V3
3. Contains zero or one [0..1] **width** with data type *Time Quantity*
   - The difference between high and low boundary. The purpose of distinguishing a width property is to handle all cases of incomplete information symmetrically. In any interval representation only two of the three properties high, low, and width need to be stated and the third can be derived.
   - "The difference between HIGH and LOW boundary. The purpose of distinguishing width is to handle all cases of incomplete information symmetrically. In any IVL representation only two of the three properties HIGH, LOW, and width need to be stated: the third can be derived. When both boundaries are known, width can be derived as HIGH minus LOW. When one boundary and width is known, the other boundary is also known. When no boundary is known, width may still be known. For example, one knows that an activity takes about 30 minutes, but one may not yet know when that activity is started." - HL7 V3

## Time Quantity

A length of time specified as a Physical Quantity, e.g., 5 minutes, 2.5 hours.

This class represents an amount of time, such as 10 minutes, 3.2 seconds, etc. This class is structurally identical to a Physical Quantity, although the units of measure are by definition time units (e.g., hours), rather than physical units (e.g., kilograms).

1. Contains exactly one [1..1] **value** with data type *Real*
   - Value of the number of time units
   - "The magnitude of the quantity measured in terms of the unit" - HL7 V3
2. Contains exactly one [1..1] **unit** with data type *Code*
   - The unit of measure specified in the Unified Code for Units of Measure (UCUM).
   - "The unit of measure specified in the Unified Code for Units of Measure (UCUM)." - HL7 V3 The units of measure used by this class are limited to those measuring time (e.g., minutes, hours, years, etc.)

## Titer

1.

## Tourniquet Event

A device, typically a tightly encircling bandage, used to check bleeding by temporarily stopping the flow of blood through a large artery in a limb.

1. Contains exactly one [1..1] **tourniquetPressure** with data type *Real*
   - Force applied uniformly over a surface, measured as force per unit of area. Source: The American Heritage Stedman's Medical Dictionary
2. Contains exactly one [1..1] **siteApplied** with data type *String*

- Textual description defining the site where the cuff was applied.
3. Contains exactly one [1..1] **timeApplied** with data type *Point In Time*
   - Contains the date and time that the tourniquet was applied.
4. Contains exactly one [1..1] **timeReleased** with data type *Point In Time*
   - Date and time the tourniquet was released.

# Transcriber

"An entity entering the data into the originating system. The data entry entity is collected optionally for internal quality control purposes. This includes the transcriptionist for dictated text transcribed into electronic form." - HL7 V3.

1. Extends *Practitioner Participation Lite*

# Transcription Event

1. Contains exactly one [1..1] **dateTime** with data type *Point In Time*
2. Contains exactly one [1..1] **transcriptionist**, where its type is *Individual Provider*
   - "This field identifies the report transcriber." - HL7 Version 2.8, OBR-35

# Transcriptionist

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Transfusion Data Enterer

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Transfusion Event

This class captures transfusion information associated with a specimen from the blood bank for a patient.

1. Contains exactly one [1..1] **id** with data type *Id*
   - This is the unique identifier of the transfusion event.
2. Contains exactly one [1..1] **date** with data type *Point In Time*
   - Indicates the reverse chronological order of blood components transfused.
3. Contains zero or more [0..*] **transfusionReaction**, where its type is *Transfusion Reaction*
   - Indicates the transfusion reaction information associated with a transfusion.
4. Contains exactly one [1..1] **bloodComponent**, where its type is *Blood Component*
5. Contains exactly one [1..1] **aboGroupCode** with data type *String*
6. Contains exactly one [1..1] **volumeTransfused** with data type *Double*
7. Contains exactly one [1..1] **wasReaction** with data type *Boolean*
8. Contains exactly one [1..1] **crossmatchComment** with data type *String*
9. Contains exactly one [1..1] **isRhPositive** with data type *Boolean*

10. Contains exactly one [1..1] **transfusionDate** with data type *Date*
11. Contains exactly one [1..1] **comment** with data type *String*
12. Contains exactly one [1..1] **nbrOfUnitsPooled** with data type *Integer*

# Transfusion Reaction

This class captures transfusion reaction associated with a transfusion on a patient.
1. Contains exactly one [1..1] **date** with data type *Point In Time*
   - Indicates the transfusion reaction date.
2. Contains exactly one [1..1] **reactionType** with data type *Code*
3. Contains zero or more [0..*] **dataEnterer**, where its type is *Individual Provider*

# Transfusion Reaction Data Enterer

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

# Transportation Event

Identifies the type of Transport used.to move the patient to and from the OR.
1. Contains exactly one [1..1] **time** with data type *Time Interval*
   - Contains the dates and times that the patient was transported in and out of the OR.
2. Contains exactly one [1..1] **transportationType** with data type *Code*
   - Contains codes that identifies the transport type the patient used to travel to and from the OR.
3. Contains exactly one [1..1] **vehicle**, where its type is *Surgery Device*
   - Identifies the type of vehicle used to transport the patient to and from the operating room, recovery room, intensive care Unit etc.

# Treatment

Administration or application of remedies to a patient or for a disease or an injury; medicinal or surgical management; therapy. Source: The American Heritage Stedman's Medical Dictionary
1. Contains exactly one [1..1] **dateTreatment** with data type *Point In Time*
   - This is date and time that the treatment was started.
2. Contains exactly one [1..1] **treatmentId** with data type *Id*
   - Unique Identifier for the treatment
3. Contains exactly one [1..1] **description** with data type *String*
   - Contains the treatment instituted as a result of this non-O.R. procedure occurrence.

# Treatment Condition

This class inlcudes data element that identifies the type of condition of this treatment. DRM Plus Program Specific.
1. Contains exactly one [1..1] **condition** with data type *Code*
   - Identifies the type of condition of this treatment. DRM Plus Program Specific.

## Treatment Plan Service

Includes information related to the dental services provided for the patient.

1. Contains exactly one [1..1] **aspect** with data type *Code*
   - Identifies graphical representation of the tooth this treatment applies to. DRM Plus Program Specific.
2. Contains exactly one [1..1] **canalNbr** with data type *String*
   - Indicates the number of root canals that were involved.
3. Contains exactly one [1..1] **createDate** with data type *Point In Time*
   - Date treatment was recorded.
4. Contains exactly one [1..1] **isJuvenile** with data type *Boolean*
5. Contains exactly one [1..1] **isPlan** with data type *Boolean*
   - Whether the planned treatment will be performed during the patient's next appointment. Possible values are Yes, No etc.
6. Contains exactly one [1..1] **isVisible** with data type *Boolean*
7. Contains exactly one [1..1] **oralRegion** with data type *Code*
   - Identifies the area of the dental treatment. Possible Values are areNone; areOneSurf; areTwoSurfs; areThreeSurfs; areFourormoreSurfs; areWholeTooth; areQuadrant; areSextant ; areArch; areHeader etc. DRM Plus Program Specific.
8. Contains exactly one [1..1] **rvu** with data type *Integer*
   - Indicates whether or not a user can delete this record from treatment plan. Possible values are Yes, No, etc.
9. Contains exactly one [1..1] **surfaceRoots** with data type *Code*
   - Text string that identifies the surfaces that were involved in the treatment. DRM Plus Program Specific.
10. Contains exactly one [1..1] **toothNumber** with data type *Integer*
    - Tooth number which require a tooth related treatment.
11. Contains exactly one [1..1] **treatmentCategory** with data type *String*
    - Optional category that this item falls under in treatment planning and sequencing.
12. Contains zero or one [0..1] **treatmentCondition**, where its type is *Treatment Condition*
    - Treatment condition.
13. Contains exactly one [1..1] **treatmentId** with data type *Id*
    - A unique identifier of a specific treatment.
14. Contains exactly one [1..1] **treatmentPhase** with data type *Integer*
    - Identifies the phase of this treatment.
15. Contains exactly one [1..1] **treatmentStatus** with data type *Code*
    - Identifies the status of the treatment. DRM Plus Program Specific.
16. Contains exactly one [1..1] **treatmentType** with data type *Code*
    - Identifies type of treatment. Possible values are Transaction; PerioExam; PSR; Head&Neck etc.
17. Contains zero or more [0..*] **dataEnterer**, where its type is *Data Enterer*
18. Contains exactly one [1..1] **dentalActivitySystem**, where its type is *Dental Activity System Reporting*
    - This is an association to Dental Activity System (DAS)
19. Contains zero or one [0..1] **dentalProcedure**, where its type is *Dental Procedure*
    - Dental Procedure Provided.
20. Contains at least one [1..*] **dentalVisit**, where its type is *Outpatient Visit*
    - Dental Visit.
21. Contains zero or more [0..*] **headAndNeck**, where its type is *Soft Tissue Exam*

- Head and Neck realted observation.
22. Contains zero or one [0..1] `materialUsed`, where its type is *Dental Material*
    - Material Used in a treatment.
23. Contains zero or one [0..1] `nullification`, where its type is *Nullify Act*
    - Control Act / Nullifying Act.
24. Contains exactly one [1..1] `patient`, where its type is *Patient*
    - The patient who is the subject of this dental treatment.
25. Contains zero or more [0..*] `periodontalExamination`, where its type is *Periodontal Observation*
26. Contains zero or one [0..1] `plaqueObservation`, where its type is *Plaque Observation*
27. Contains zero or more [0..*] `practitioner`, where its type is *Individual Provider*

# Tribal Citizen

'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com
1. Contains zero or one [0..1] `effectiveDateRange` with data type *Time Interval*
   - The time period during which the person is/was a citizen of the associated Tribe.
2. Contains exactly one [1..1] `tribe`, where its type is *Tribe*
   - "Any aggregate of people united by ties of descent from a common ancestor, community of customs and traditions, adherence to the same leaders, etc." - Dictionary.com. Specifically for the FHIM, Tribe represents a first-nation group recognized by the U.S. Federal Government. Certain benefits are limited to formal members of these tribes.

# Tribe

"Any aggregate of people united by ties of descent from a common ancestor, community of customs and traditions, adherence to the same leaders, etc." - Dictionary.com. Specifically for the FHIM, Tribe represents a first-nation group recognized by the U.S. Federal Government. Certain benefits are limited to formal members of these tribes.
1. Contains exactly one [1..1] `code` with data type *Code*
   - Identifies the tribe. This would ordinarily be an Id, but because there are a finite number of tribes, tribes are normally represented as codes.

# Tubefeeding Product

A record of a tubefeeding product that is requested for a patient.
1. Contains exactly one [1..1] `productCode` with data type *Code*
   - A tubefeeding product that is requested to be administered to a patient.
2. Contains exactly one [1..1] `quantity` with data type *Integer Ratio*
   - The quantity of the product that is requested to be administered.
3. Contains exactly one [1..1] `strength` with data type *Code*
   - A code representing the strength of the tubefeeding product requested (e.g., full strength, half-strength, etc.).

# Tubefeeding Request

A record of a tubefeeding requested for a patient.

1. Extends *Dietetics Request*
2. Contains exactly one [1..1] **productDailyKilocalories** with data type *Integer*
   - The number of kilocalories contained in this product as prepared.
3. Contains exactly one [1..1] **productDailyVolume** with data type *Integer*
   - The volume (in cubic centimeters) of the product contained in the order for a day.
4. Contains exactly one [1..1] **totalDailyKilocalories** with data type *Integer*
   - The total kilocalories per day requested to be provided by the tubefeeding.
5. Contains exactly one [1..1] **totalDailyVolume** with data type *Integer*
   - The total daily cc's requested to be administered of the prepared (diluted) product.
6. Contains exactly one [1..1] **waterDailyVolume** with data type *Integer*
   - The volume (in cubic centimeters) of water with which to dilute the product if indicated.
7. Contains at least one [1..*] **tubefeedingProduct**, where its type is *Tubefeeding Product*
   - The tubefeeding product that is requested as part of an order.

## Tumor Evaluation

The evaluation of the patient's abnormal growth, of tissue resulting from uncontrolled, progressive multiplication of cells and serving no physiological function; a neoplasm

1. Contains exactly one [1..1] **clinicalT** with data type *Code*
   - Evaluates the primary tumor and reflects tumor size and/or extension as recorded by the physician. Possible values are Not recorded by the physician; TX; T0; Ta; Tis; Tispu; T1; T4a; Not applicable; etc.
2. Contains exactly one [1..1] **csTumorSize** with data type *Real*
   - Describes the largest dimension or diameter of the primary tumor, and is always recorded in millimeters. To convert centimeters to millimeters, multiply the dimension by 10. If tumor size is given in tenths of millimeters, round down if between .1 and .5 mm, and round up if between .6 and .9 mm. Answer must be 3 numerics.
3. Contains exactly one [1..1] **gradeDifferentiation** with data type *Code*
   - Describes the tumor's resemblance to normal tissue. Well differentiated (Grade I) is the most like normal tissue, and undifferentiated (Grade IV) is the least like normal tissue. Possible values are Grade I - Well differentiated, NOS; Grade II - Moderately, moderately well, intermediate; Grade III - Poorly differentiated; Grade IV - Undifferentiated/anaplastic; T-cell - Lymphomas and leukemias, T-cell; B-cell - Lymphomas and leukemias, B-cell, Pre-B; Null cell - Leukemias only, Null cell, Non T-non B; Natural killer cell - Lymphomas and leukemias; Unknown - Not determined, stated or applicable etc.
4. Contains exactly one [1..1] **laterality** with data type *Code*
   - Identifies the side of a paired organ or the side of the body on which the reportable tumor originated, applies to the primary site only. Possible values are Not a paired site; Right; Left; One side involved, right/left not specified; Bilateral involvement, side of origin unknown; Paired site, lateral origin unknown; etc.
5. Contains exactly one [1..1] **otherT** with data type *Code*
   - Indicates the code that evaluates the primary tumor and identifies the tumor size and/or extension. Possible values are TX, T0, Ta, Tis, T1, T1A, T2B, T3C, T4D, Not Applicable; etc.
6. Contains exactly one [1..1] **pathologicT** with data type *Code*
   - Indicates the appropriate code that evaluates the primary tumor (T) and reflects the tumor size and/or extension as recorded by the physician. Possible Values are Not recorded by the physician; TX, T0; Ta, Tis; Tispu; Tispd; T1mic; T1; T1a; T1a1; T1a2; T1b; T1b1; T1b2; Not applicable etc.
7. Contains exactly one [1..1] **serumTumorMarkers** with data type *Code*
   - "Serum Tumor Markers (S): SX Marker studies not available or not performed S0 Marker study levels within normal limits* S1 LDH < 1.5 X N AND hCG (mIU/ml) < 5000 AND AFP (ng/ml) < 1000 S2 LDH 1.5-10

X N OR hCG (mIu/ml) 5000-50,000 OR AFP (ng/ml) 1000-10,000 S3 LDH > 10 X N OR hCG (mIu/ml) > 50,000 OR AFP (ng/ml) > 10,000 N indicates the upper limit of normal for the LDH assay. Possible values are Not available; Normal; LDH < 1.5XN, hCG < 5000 mIU/ml, AFP < 1000 ng/ml; LDH 1.5-10XN or hCG 5000-50,000 mIu/ml or AFP 1000-10,000 ng/ml; LDH > 10XN or hCG > 50,000 mIu/ml or A FP > 10,000 ng/ml; etc."

8. Contains exactly one [1..1] **tumorMarker1** with data type *Code*

   - Indicates prognostic indicators. Possible values are None done; Positive/elevated; Negative/normal; Borderline; Range 1; Range 2; Range 3; Ordered, results not in chart; Unknown or no information; etc.

9. Contains exactly one [1..1] **tumorMarker2** with data type *Code*

   - Indicates prognostic indicators. Possible values are None done; Positive/elevated; Negative/normal; Borderline; Range 1; Range 2; Range 3; Ordered, results not in chart; Unknown or no information; etc.

10. Contains exactly one [1..1] **tumorMarker3** with data type *Code*

    - Record LDH prognostic indicators for testicular cancer. Possible values are None done; Positive/elevated; Negative/normal; Borderline; Range 1; Range 2; Range 3; Ordered, results not in chart; Unknown or no information; etc.

11. Contains exactly one [1..1] **tumorSize** with data type *Real*

    - Describes the largest dimension of the diameter of the primary tumor in millimeters (mm). Code the exact size of the primary tumor in millimeters (mm).

12. Contains exactly one [1..1] **csExtension**, where its type is *Cs Extension Evaluation*

    - contiguous growth (extension) of the primary tumor

13. Contains exactly one [1..1] **extension**, where its type is *Extension Evaluation*

    - The method used in determining the size and dimensions of the tumor.

14. Contains exactly one [1..1] **pathologicExtension**, where its type is *Pathologic Extension Evaluation*

    - extension caused by or altered by or manifesting disease or pathology.

## Tumor Status

Contains the status of the patient's tumor.

1. Contains exactly one [1..1] **cancerStatus** with data type *Code*

   - Indicates the presence or absence of clincial evidence of cancer as of the DATE OF LAST CONTACT OR DEATH. Possible values are No evidence of this tumor; Evidence of this tumor; Unknown/not stated if this tumor present etc.

2. Contains exactly one [1..1] **lastTumorStatus** with data type *Code*

   - Indicates the code that summarizes the cancer status.Possible values are No evidence of this tumor; Evidence of this tumor; Unknown/not stated if this tumor present; etc.

3. Contains exactly one [1..1] **multipleTumors** with data type *Code*

   - Indicates the existence and (if known) number of multiple tumors at an anatomic site. If there are NOT multiple tumors at this site, this field is BLANK. If there ARE multiple tumors at this site, the exact number of tumors is entered; if known, or a 1 if the exact number if not known. Possible values are blank; 1 etc.

4. Contains exactly one [1..1] **surgicalApproach** with data type *Code*

   - Indicates the method used to approach the organ of origin and/or primary tumor. The approach for surgery of the primary site only. Possible values are No surgery performed; Open approach, endoscopy not used; Open approach, assisted by laparoscope; Laparoscopic approach only; Laparoscopy NOS (unknown if with or without open approach; Video assisted Thoracoscopy (VAT); Thoracoscopy NOS; Endoscopy NOS; Unknown approach, not applicable; etc.

5. Contains exactly one [1..1] **tumorStatusDate** with data type *Point In Time*

   - The date on which the tumor status was evaluated.

## US Uniformed Services Person

This class represents information about a person while in the role of a member of the United States Uniformed Services, which includes military and Public Health Service members.

1. Contains exactly one [1..1] **grade** with data type *Code*

   • A military, naval, or civil service rank
2. Contains exactly one [1..1] **rank** with data type *Code*

   • An official position or grade; e.g., the rank of sergeant.


## Us Mailing Address

A specialization of MailingAddress that is used for U.S. addresses. Note that the state property may only contain a code for a U.S. State, territory, or APO.

1. Extends *Address*
2. Contains exactly one [1..1] **state** with data type *Code*

   • An Address Part (ADXP) that contains the state or province. A state or provinces is a sub-unit of a country with limited sovereignty in a federally organized country.


## User

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*


## User Identity

This class is used to specify the user identification attributes. Note that the user here is typically a provider.

1. Contains exactly one [1..1] **id** with data type *Id*

   • This attribute is used to represent the user's identifier. Note that the user here is typically a provider.
2. Contains exactly one [1..1] **name** with data type *String*

   • This attribute specifies the user's name. Note that the user here is typically a provider.
3. Contains exactly one [1..1] **securityRole**, where its type is *Security Role*

   • ISO-22600 specifies a role as 'set of competences and/or performances which is associated with a task'. A role is a specialization of CompositePolicy that define a group of policies (authorization, obligation, delegation and refrain policies).
4. Contains exactly one [1..1] **location**, where its type is *Workstation Location*

   • This association is used to specify the provider's location when using or requesting IIHI.


## User Role

This class is used to specify the role of a user of a computer system. The role is typically associated with the Information Requester and specifies what capabilities are available to a specific type of computer user (i.e., in the Windows operating system, a user may have the role of Administrator which enables the capability to add new users).

1. Contains zero or one [0..1] **allowedSensitivity** with data type *Code*

   - Coded attribute that describes the level sensitivity of the protected information (including IIHI) that the user may access or use. Sensitivity is a characteristic of a resource which implies its value or importance.

2. Contains zero or one [0..1] **name** with data type *String*

   - This attribute is used to specify the role name, if available.

3. Contains zero or one [0..1] **roleCode** with data type *Code*

   - This coded descriptor is used to specify a user role. It is an identifier of a hierarchical group in which membership is asserted, for example, organizational position. Structural roles provide authorizations on objects at a global level without regard to internal details (ASTM E2595). Examples include authorization to participate in a session, connect authorization to a database, authorization to participate in an order workflow, or connection to a protected uniform resource locator (URL). A structural role applies to the business process task as a group. This attribute refers to a coded structural role specified by an external coding system.

4. Contains zero or one [0..1] **roleId** with data type *Id*

   - This attribute is used to represent a unique role identifier.

5. Contains zero or more [0..*] **functional Role**, where its type is *Functional Role*

   - This attribute refers to a coded structural role specified by an external coding system.

6. Contains zero or more [0..*] **organizationalProvider**, where its type is *Organizational Provider*

   - The organizational provider with which the user is associated.

7. Contains zero or more [0..*] **userIdentity**, where its type is *User Identity*

   - A unique identifier for the role.

## VA Code

This class represents a codified concept as used within the VA Enterprise Terminology Systems (VETS). This class is anticipated to only be used by VA clients. It contains VA Unique concept Identifiers (VUIDs) for the concept, the surface form (or designation), and the Value Set of which the concept is a proper member. It also contains a display text, which is the surface form of the Desination VUID, which while technically not necessary, is useful to store in the class in order to avoid a call to a terminology service. In addition, this class contains four properties to contain alternate code information, primarily for use when an application requires a code from a particular coding system (e.g., a billing system needs a CPT code). Finally, this class contains an alternate Reason property to indicate why the alternate fields are populated (e.g., perhaps because of a mediation failure).

1. Extends *Code*

2. Contains zero or one [0..1] **conceptVuid** with data type *String*

   - Identifies the concept being conveyed in this class, regardless of the surface form or designation used to describe the concept.

3. Contains zero or one [0..1] **designationVuid** with data type *String*

   - Identifies the surface form or designation used to describe the concept.

4. Contains zero or one [0..1] **valueSetVuid** with data type *String*

   - Identifies a set of concepts to which this concept belongs. The Value Set may be "States of the United States", of which the concepts of "Virginia" and "Utah" are members, but "Ottawa" is not. The value set vuid is used to define a priori a set of possible concepts that may be used "at run time".

5. Contains zero or one [0..1] **displayText** with data type *String*

   - Contains the text that corresponds to the designation vuid. Technically this is not necessary, but may be used in order to avoid a call to a terminology service.

6. Contains zero or one [0..1] **alternateCode** with data type *String*

   - At times, it may be useful or necessary to include an alternate representation of the concept being conveyed using another code system. These "alternate" properties contain the data necessary to identify the coding

system, code, etc. that correspond to the concept. The alternate code contains the code in the alternate coding system that corresponds to the concept vuid.

7. Contains zero or one [0..1] **alternateCodeSystem** with data type *String*

   • At times, it may be useful or necessary to include an alternate representation of the concept being conveyed using another code system. These "alternate" properties contain the data necessary to identify the coding system, code, etc. that correspond to the concept. The alternate coding system identifies the alternate coding system, the code from which corresponds to the concept vuid.

8. Contains zero or one [0..1] **alternateCodeSystemVersion** with data type *String*

   • At times, it may be useful or necessary to include an alternate representation of the concept being conveyed using another code system. These "alternate" properties contain the data necessary to identify the coding system, code, etc. that correspond to the concept. The alternate coding system version identifies version of alternate coding system, if the alternate coding system is versioned. Otherwise, this property is empty.

9. Contains zero or one [0..1] **alternateDisplayText** with data type *String*

   • At times, it may be useful or necessary to include an alternate representation of the concept being conveyed using another code system. These "alternate" properties contain the data necessary to identify the coding system, code, etc. that correspond to the concept. The alternate designation text contains the textual value of the code in the alternate coding system that corresponds to the concept vuid. This text should ideally correspond with the designation vuid, and with the designation text.

10. Contains zero or one [0..1] **alternateReason** with data type *String*

   • At times, it may be useful or necessary to include an alternate representation of the concept being conveyed using another code system. These "alternate" properties contain the data necessary to identify the coding system, code, etc. that correspond to the concept. This property provides an explanation of why the alternate properties are populated. Possible values include: Backwards compatibility with systems requiring a particular coding scheme (e.g., billing systems require CPT and ICD codes), Mediation failure on incoming data from other systems, etc.

# VA Person

A subtype of Person that contains additional properties unique to the needs of the Department of Veterans Affairs.

1. Extends *Person*
2. Contains zero or more [0..*] **alias** with data type *Person Name*

   • A name assigned to a person either because their real name is not known (e.g.,, an unconscious person brought into an emergency room), or because the person is a highly visible person (e.g., a celebrity or a prominent politician) whose real name should be obscured. It is noted that in the latter use case, a rigorous security capability should obviate the need for an alias field.

3. Contains zero or one [0..1] **confidentialAddress** with data type *Address*

   • A confidential address for the Patient that is used for correspondence. When producing correspondence, the Confidential Address is used first; if it is empty, then the Temporary address is used; if it is empty, then the Permanent address is used. This property contains the actual address - not the circumstances under which the temporary address is to be used. The one or more uses of this address are indicated in the confidentialAddressReasonCategory property.

4. Contains zero or more [0..*] **confidentialAddressReasonCategory** with data type *Code*

   • Indicates the circumstances under which correspondence should be addressed to the Patient's confidential address. Examples include: Eligibility/enrollment, Appointment scheduling, Copayments/billing, or Medical records.

5. Contains exactly one [1..1] **icn** with data type *String*

   • A identifier assigned by the Department of Veterans Affairs to uniquely identify a Person. ICN stands for Integrated Control Number.

6. Contains zero or more [0..*] **relationshipToVa** with data type *Code*

- Indicates how this person is related to the Department of Veterans Affairs. Possible values include: VA Patient, Veteran, Healthcare Provider, Veteran Advocate, Family Member, Family Friend, VA Employee, Other (Note: Can be multiple)
7. Contains zero or one [0..1] **vPid** with data type *String*
   - A identifier assigned by the Department of Veterans Affairs to uniquely identify a Person. VPID stands for VA Person Identifier
8. Contains zero or one [0..1] **asVeteran**, where its type is *Veteran*
   - Represents information about a person while in the role of a Veteran

# Vaccination Event

1. Extends _ *Medication Administration Event*
2. Contains zero or more [0..*] **vaccine**, where its type is *Vaccine*
3. Contains zero or more [0..*] **patientDocumentPresentation**, where its type is *Patient Document Presentation*

# Vaccine

1. Contains exactly one [1..1] **cvx** with data type *Code*
2. Contains exactly one [1..1] **productInstance**, where its type is *Packaged Medicinal Product*
3. Contains zero or more [0..*] **diseaseRisk**, where its type is *Disease Risk*

# Vaccine Group

1. Contains exactly one [1..1] **category** with data type *Code*
2. Contains zero or more [0..*] **diseaseRisk**, where its type is *Disease Risk*

# Vaccine Information Statement

1. Contains exactly one [1..1] **dateOfPublication** with data type *Point In Time*
2. Contains exactly one [1..1] **id** with data type *Integer*
3. Contains exactly one [1..1] **language** with data type *Integer*
4. Contains zero or more [0..*] **vaccine**, where its type is *Vaccine Group*

# Vehicle

1. Contains exactly one [1..1] **volume** with data type *Physical Quantity*
2. Contains exactly one [1..1] **productInstance**, where its type is *Medicinal Product Instance*

# Vendor

A participation that is used to identify the name of the company from which an item was or is to be purchased. The vendor may or may not be the same as the manufacturer.

1. Contains exactly one [1..1] **organization**, where its type is *Organization*
   - Identifies the organization that provided the prosthetic.

## Verification

An act or process of verifying the results of counts, etc.

1. Contains exactly one [1..1] **imagingDate** with data type *Time Interval*

    • Contains the Date and time the Imaging was performed.
2. Contains exactly one [1..1] **siteMarkDate** with data type *Time Interval*

    • Contains the Date and time the Site Marked was performed.
3. Contains exactly one [1..1] **tovDate** with data type *Time Interval*

    • Contains date and time the TOV modified.

## Verifier

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Verifier

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Verifier

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Verify Status Enterer

1. Contains exactly one [1..1] **comment** with data type *String*
2. Contains exactly one [1..1] **time** with data type *Point In Time*

## Veteran

A person who has served in the U.S. Military Forces.

1. Contains zero or one [0..1] **assignedName** with data type *Person Name*

    • The name assigned to a person where the person's actual legal or pseudonym is to remain anonymous or is unknown. If this property is not empty, its contents are used for publication and for searches - even if there are other names present. This property is cleared to null values when it is no longer to be used. When this property is empty, the pseudonym or legal name is to be used.
2. Contains exactly one [1..1] **claimId** with data type *Id*

    • An identifier assigned to a veteran's upon the receipt and processing of their claim. Used to associate various benefits to the veteran.
3. Contains exactly one [1..1] **confidentialityCode** with data type *Code*

4. Contains exactly one [1..1] **isCompetent** with data type *Boolean*

   • A flag identifying whether the veteran has been ruled to be incompetent to make decisions about their own care.

5. Contains exactly one [1..1] **isHomeless** with data type *Boolean*

   • A flag identifying whether the veteran is currently homeless

6. Contains exactly one [1..1] **isStudent** with data type *Boolean*

   • A flag identifying whether the veteran is currently a student

7. Contains exactly one [1..1] **participantId** with data type *id*

8. Contains zero or one [0..1] **pseudonym** with data type *Person Name*

   • An alternate name by which the person is known.

9. Contains exactly one [1..1] **veteranFileId** with data type *Id*

   • An identifier assigned to a veteran's upon the receipt and processing of their claim. Used to associate various benefits to the veteran.

10. Contains zero or more [0..*] **ruledIncompetent**, where its type is *Ruled Incompetent*

    • In cases where the patient has been ruled to be incompetent to make decisions about their own care, this identifies the organization which made such ruling, and the date upon which it occurred.

11. Contains exactly one [1..1] **asPerson**, where its type is *VA Person*

    • The person who is playing the role of Veteran

12. Contains zero or more [0..*] **veteranDependent**, where its type is *Veteran Dependent*

    • A person entitled to VA benefits due primarily to their relationship to a veteran.

## Veteran Dependent

A person entitled to VA benefits due primarily to their relationship to a veteran.

1. Contains exactly one [1..1] **asPerson**, where its type is *VA Person*

   • The person who is playing the role of VeteranDependent

2. Contains exactly one [1..1] **relationshipToVeteran** with data type *Code*

   • A categorization of the person's relationship to the veteran; by virtue of which the person is entitled to certain VA benefits.

## Victim Of Abuse Or Neglect Record

This class is used to record the details of a history of abuse perpetrated by others. The client/patient, as victim of abuse or neglect, may have additional forensic tests (e.g. imaging, lab) and medications. Therefore this specialization class has associations to medication, diagnostic imaging, and laboratory results.

1. Extends *History Of Abuse Or Neglect Record*

2. Contains exactly one [1..1] **code**

   • This attribute specifies the type of victim or abuse or neglect using a standard coding system.

3. Contains zero or one [0..1] **medication**, where its type is *Pharmacy Promise*

   • If the record contains references to specific medication associated with the abuse, this association will provide the supporting information.

4. Contains zero or one [0..1] **diagnosticImages**, where its type is *Diagnostic Imaging Event*

   • If the record contains references to specific diagnostic images that document the abuse, this association will provide supporting information.

5. Contains zero or one [0..1] **laboratoryResults**

- If the record contains references to specific laboratory that document the abuse, this association will provide the supporting information.

## Victim Of Intimate Partner Or Domestic Violence

This specialization class is used to specify the codes and details related to a history of violence perpetrated by a domestic partner.

1. Extends *Victim Of Abuse Or Neglect Record*
2. Contains exactly one [1..1] **code**
   - This attribute specifies the type of victim or abuse or neglect using a standard coding system.

## Violent Behavior Risk

This class is used to alert providers of any risk of violent behavior posed by the patient. This class is used convey information about the violent tendencies of a client/patient in the context of protecting healthcare providers.

1. Contains exactly one [1..1] **code** with data type *Violence Risk Type*
2. Contains zero or more [0..*] **historyofabuseorneglectrecord**, where its type is *History Of Abuse Or Neglect Record*

## Virtual Encounter

Services provided includes Telehealth, Web health etc.

1. Extends *Encounter Event*

## Visit Location

A location at which an outpatient visit can take place. This is equivalent to File 9999999.06 in Vista.

1. Extends *Service Delivery Location*

## Vital Sign Observation Event

An event in which an objective measurement is taken of an aspect of a patient. While the class of measurements traditionally called "Vital Signs" originally included only a few measurements such as Height, Weight, Pulse, Blood Pressure, Temperature and Respiration Rate, "Vital Signs" has grown to include other measurements such as Blood oxygenation.

1. Contains zero or more [0..*] **bodySite** with data type *Code*
   - A code specifying detail about the anatomical site or system that is the focus of the observation.
2. Contains zero or one [0..1] **collectionSessionTime** with data type *Point In Time*
   - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 12.75pt" height=17> <TD style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 12.75pt; BACKGROUND-COLOR: transparent" width=590 height=17><FONT face=Arial size=2>This field contains the time duration for the Vital Signs observation of the patient</FONT></TD></TR></TBODY></TABLE></BODY></HTML>

3. Contains exactly one [1..1] **id** with data type *Id*
   - Uniquely identifies the Vital Signs measurement.
4. Contains zero or one [0..1] **observationMethod** with data type *Code*
   - A code that provides additional detail about the means or technique used to ascertain the observation.
5. Contains exactly one [1..1] **observationTime** with data type *Point In Time*
   - The date/time on which the measurement was taken.
6. Contains exactly one [1..1] **observedCharacteristic** with data type *Code*
   - Indicates which Vital Sign was measured. From a code set of allowable Vital Sign codes. Possible values include: Characteristic Name Datatype Units =============== ============== ======= Audiometry PhysicalQuantity dB Blood Pressure PhysicalQuantity mmHg Central Venous Pressure PhysicalQuantity mmHg Circumference/Girth PhysicalQuantity cm Fetal Heart Tones PhysicalQuantityRatio Beats/Min Fundal Height PhysicalQuantity cm Hearing PhysicalQuantity dB Height PhysicalQuantity cm Pain Integer (Coded Ordinal) Pulse PhysicalQuantityRatio Beats/Min Pulse Oximetry/O2 Saturation PhysicalQuantity % Respiration PhysicalQuantityRatio Breaths/Min Temperature PhysicalQuantity Degrees Celsius Tonometry PhysicalQuantity mmHg Vision Corrected IntegerRatio? (n/a) Vision Uncorrected IntegerRatio? (n/a) Weight PhysicalQuantity Kg
7. Contains exactly one [1..1] **status** with data type *Code*
   - Indicates the status of the Vital Signs measurement record. Currently in VistA, this is a boolean flag indicating whether or not the record was Entered in Error. To be consistent with HL7, the ActStatusCode vocabulary will be used here instead of the boolean flag. The code would be set to "Nullified" if the record was set in error. Otherwise this value is "Active" The reason why the record was nullified, or any other comments by the person nullifying the record, can be stored in PractitionerParticipation.comments.
8. Contains exactly one [1..1] **value** with data type *Any*
   - The value of the Vital Sign Observation.
9. Contains exactly one [1..1] **author**, where its type is *Author*
10. Contains zero or one [0..1] **clinicStop**, where its type is *Clinic Stop*
11. Contains zero or one [0..1] **division**, where its type is *Division*
12. Contains zero or one [0..1] **homeTelehealthMonitor**, where its type is *Home Telehealth Monitor*
    - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY>Cotains the identity of  the device used to transmit the vital sign(s).  Note that this device may be associated with multiple measurement devices.</BODY></HTML>
    - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY>Cotains the identity of  the device used to transmit the vital sign(s).  Note that this device may be associated with multiple measurement devices.</BODY></HTML>
    - the Home TeleHealth Monitor Equipment used by the patient.
13. Contains zero or one [0..1] **measurementDevice**, where its type is *Device*
    - Identifies the device used to measure the vital sign.
14. Contains zero or one [0..1] **nullify**, where its type is *Nullify Act*
    - Records the nullification of an Act. Typically used when an erroneous record is "deleted". Because medical records should never be deleted, the record is instead "nullified", and is rendered not visible to typical users, but still exists in the system for the purpose of audit trails, etc.
15. Contains exactly one [1..1] **patient**, where its type is *Patient*
16. Contains zero or more [0..*] **patientState**, where its type is *Patient State Observation*
    - Provides an indication of the state of the patient at the time of the observation. For example, a blood pressure may be taken while the patient is exercising or at rest.
17. Contains zero or one [0..1] **serviceDepartment**, where its type is *Service Department*
18. Contains zero or one [0..1] **supplementalOxygen**, where its type is *Oxygen Administration*
    - Information about any Supplemental Oxygen administered to the patient; used only if the vital sign observed is a pulse oximetry observation.

## Vital Sign Qualifier

<HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 12.75pt" height=17> <TD style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 12.75pt; BACKGROUND-COLOR: transparent" width=590 height=17><FONT face=Arial size=2>This field contains the name of the qualifier associated with this measurement</FONT></TD></TR></TBODY></TABLE></BODY></HTML>

Qualifer for a VitalSign

1.  Contains zero or one [0..1] **value** with data type *Code*
    - <HTML><HEAD> <META content="MSHTML 6.00.2900.3429" name=GENERATOR></HEAD> <BODY> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 12.75pt" height=17> <TD style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 12.75pt; BACKGROUND-COLOR: transparent" width=590 height=17><FONT face=Arial size=2> <TABLE style="WIDTH: 443pt; BORDER-COLLAPSE: collapse" cellSpacing=0 cellPadding=0 width=590 border=0 x:str> <COLGROUP> <COL style="WIDTH: 443pt; mso-width-source: userset; mso-width-alt: 21577" width=590> <TBODY> <TR style="HEIGHT: 12.75pt" height=17> <TD style="BORDER-RIGHT: #ece9d8; BORDER-TOP: #ece9d8; BORDER-LEFT: #ece9d8; WIDTH: 443pt; BORDER-BOTTOM: #ece9d8; HEIGHT: 12.75pt; BACKGROUND-COLOR: transparent" width=590 height=17><FONT size=2>This field contains the actual value of Vital Sign qualifier</FONT></TD></TR></TBODY></TABLE></FONT></TD></TR></TBODY></TABLE></BODY></HTML>
    - the value of the qualifer

## Ward

"1. A room in a hospital usually holding six or more patients. 2. A division in a hospital for the care of a particular group of patients" The American Heritage Stedman's Medical Dictionary. This is equivalent to File 42 in Vista.

1.  Extends *Service Delivery Location*

## Witness

1.  Contains exactly one [1..1] **comment** with data type *String*
2.  Contains exactly one [1..1] **time** with data type *Point In Time*

## Witness

1.  Contains exactly one [1..1] **comment** with data type *String*
2.  Contains exactly one [1..1] **time** with data type *Point In Time*

## Womens Health Case Summary

This class captures pertinent information of women's health case summarization of a patient for an assigned caseManager.

1. Contains exactly one [1..1] **breastCancerFamilyHistory** with data type *Code*

    • Indicates whether the patient or the one of the patient's relatives have had breast cancer. Possible values include: No family history, 2nd degree relative, 1st degree relative, 3: More than one 1st degree relatives, Personal history, or Unknown.

2. Contains exactly one [1..1] **breastTreatment** with data type *Code*

    • Identifies the current or next breast procedure or treatment recommended for this patient.

3. Contains exactly one [1..1] **breastTreatmentDate** with data type *Point In Time*

    • The date when the current or next breast procedure or treatment should be completed.

4. Contains exactly one [1..1] **cervicalTreatment** with data type *Code*

    • Identifies the current or next cervical procedure or treatment recommended for this patient.

5. Contains exactly one [1..1] **cervicalTreatmentDate** with data type *Point In Time*

    • The date when the current or next cervical procedure or treatment should be completed.

6. Contains exactly one [1..1] **estimatedDateOfConfinement** with data type *Point In Time*

    • An archaic term for the estimated date a baby might be born. It is determined based on the first day of a woman's last menstruation. See Naegele's rule.

7. Contains exactly one [1..1] **desDaughter** with data type *Code*

    • An indication of whether the patient was exposed to diethylstilbestrol (DES) in utero. Possible values include: Yes, No, or Unknown.

8. Contains exactly one [1..1] **historyOfSexualTrauma** with data type *Code*

    • Indicates whether the patient has experienced any sexual trauma (rape, sexual assault, etc.) as a civilian. Possible values include: Yes, No, Declined to answer, Unknown.

9. Contains exactly one [1..1] **id** with data type *Id*

    • Uniquely identifies the summary of the patient's Women's Health record.

10. Contains exactly one [1..1] **isPregnant** with data type *Boolean*

    • Indicates whether the patient is currently pregnant.

11. Contains exactly one [1..1] **papRegimen** with data type *Code*

    • Identifies the current Pap regimen for the patient.

12. Contains exactly one [1..1] **papRegimenStartDate** with data type *Point In Time*

    • The date on which the patient began or will begin her current PAP regimen.

13. Contains exactly one [1..1] **remarks** with data type *String*

14. Contains zero or one [0..1] **caseManager**, where its type is *Responsible Party*

15. Contains at least one [1..*] **women'sHealthNotification**, where its type is *Womens Health Patient Notification*

    • Indicates the notification to the patient from the case manager.

16. Contains exactly one [1..1] **patient**, where its type is *Patient*

    • Identifies the patient associated with the procedure, notification and/or refusal.

17. Contains zero or one [0..1] **dataEnterer**, where its type is *Data Enterer*

18. Contains zero or one [0..1] **refusal**, where its type is *Womens Health Patient Refusal*

    • Indicates the procedure refused by the patient.

19. Contains zero or more [0..*] **womensHealthProcedure**, where its type is *Womens Health Procedure*

## Womens Health Patient Notification

This class captures information about notification.

1. Contains exactly one [1..1] **category** with data type *Code*

- Indicates the method used to notify the patient.

2. Contains exactly one [1..1] **dateCreated** with data type *Point In Time*

- The date the notification was first created. It may be today's date or a date in the past. A future date cannot be associated with this record.

3. Contains exactly one [1..1] **dateDue** with data type *Point In Time*

- The date that this notification will be considered delinquent or past due if it does not have a status of closed

4. Contains exactly one [1..1] **datePrinted** with data type *Point In Time*

- The date on which this letter was or will be printed.

5. Contains exactly one [1..1] **dateToPrint** with data type *Point In Time*

- The date on which this letter should be printed. This date can then be used for automatic printing. For "reminder" letters, the date to print would typically be based on the due date of the treatment need associated with the purpose for notification. For "results" letters, the date to print would typically be the date that the results are made available.

6. Contains exactly one [1..1] **id** with data type *Id*

7. Contains exactly one [1..1] **outcomeOrResults** with data type *Code*

- The results or outcome, which may be a goal or an event, associated with this patient's notification.

8. Contains exactly one [1..1] **purpose** with data type *Code*

- Indicates the reason for the notification.

9. Contains exactly one [1..1] **status** with data type *Code*

- The status for this notification.

10. Contains exactly one [1..1] **notifyingFacility**, where its type is *Service Delivery Location*

- The name of the health care facility that initiated and printed the letter or notification.

## Womens Health Patient Refusal

This class captures information about the procedures a patient has refused.

1. Contains exactly one [1..1] **date** with data type *Point In Time*

- The date the patient refused the procedure, test or examination.

2. Contains exactly one [1..1] **reason** with data type *Code*

- Indicates a general reason for why the patient refused treatment.

3. Contains exactly one [1..1] **remarks** with data type *String*

4. Contains exactly one [1..1] **refusedActivity** with data type *Code*

- Identifies the procedure or type of health care the patient refused.

## Womens Health Procedure

This class captures information about the procedures a patient has undergone and will undergo in future.

1. Contains exactly one [1..1] **accessionId** with data type *String*

- Accession number of the procedure associated with this patient's notification. (composed of the procedure's abbreviated code, a four digit year and a sequential number).

2. Contains exactly one [1..1] **datePerformed** with data type *Point In Time*

- The date on which the procedure was performed. Dates in the future may not be entered.

3. Contains exactly one [1..1] **dateRequired** with data type *Point In Time*

- The date used to determine that this procedure record is delinquent when a closed status has not been entered in the record.

4. Contains exactly one [1..1] **status** with data type *Code*

   - Contains the status of the procedure record.

5. Contains exactly one [1..1] **performer**, where its type is *Primary Performer*
6. Contains exactly one [1..1] **procedure**, where its type is *Procedure*
7. Contains zero or one [0..1] **procedureResult**, where its type is *Womens Health Procedure Result*

   - Indicates the procedure result after the procedure is done to a patient.

8. Contains zero or more [0..*] **relatedProcedure**, where its type is *Related Procedure*
9. Contains exactly one [1..1] **treatmentFacility**, where its type is *Service Delivery Location*

   - The name of the health care facility where this procedure was performed.

## Womens Health Procedure Result

This class captures information about procedure results of a patient.

1. Contains exactly one [1..1] **areMarginsClear** with data type *Boolean*
2. Contains exactly one [1..1] **biopsyImpression** with data type *Code*

   - Contains the diagnosis or impression resulting from the cytology examination. (Bethesda Classification)

3. Contains exactly one [1..1] **clinicalImpression** with data type *Code*

   - Contains the impression of the clinician performing the exam.

4. Contains exactly one [1..1] **dateResultsReceived** with data type *Point In Time*

   - Date that the results were received/uploaded from the lab.

5. Contains exactly one [1..1] **eccDysplasiaPresent** with data type *Code*

   - Indicates whether ectocervical dysplasia was present, if an insufficient tissue sample was provided, or the sample was not examined for dysplasia. Possible values include: Yes (present), No (not present), Not performed, Insufficient tissue present, etc.

6. Contains exactly one [1..1] **isExamSatisfactory** with data type *Boolean*
7. Contains exactly one [1..1] **isHpvPositive** with data type *Boolean*
8. Contains exactly one [1..1] **isLegionOutsideCanal** with data type *Boolean*
9. Contains exactly one [1..1] **isMultifocal** with data type *Boolean*
10. Contains exactly one [1..1] **lesionQuadrantLocation** with data type *String*
11. Contains exactly one [1..1] **remarks** with data type *String*
12. Contains exactly one [1..1] **stageAtFinalDiagnosis** with data type *Code*
13. Contains exactly one [1..1] **stdEvaluation** with data type *Code*

   - Documents the findings after testing for sexually transmitted diseases.

14. Contains exactly one [1..1] **nbrOfLesionQuadrants** with data type *Integer*
15. Contains exactly one [1..1] **mamographyLateralityCode** with data type *String*
16. Contains exactly one [1..1] **wasTZoneAdequatelySeen** with data type *Boolean*
17. Contains zero or more [0..*] **diagnosisList**, where its type is *Diagnosis List Entry*

## Workers Comp Billable Event

1. Contains zero or one [0..1] **payee**, where its type is *Payee*
2. Contains zero or more [0..*] **workersCompClaim**, where its type is *Workers Comp Claim*
3. Contains zero or more [0..*] **packagedMedicinalProduct**, where its type is *Packaged Medicinal Product*

## Workers Comp Claim

1. Extends *Patient Case Management*
2. Contains exactly one [1..1] **employerId** with data type *Id*
3. Contains exactly one [1..1] **dateOfInjury** with data type *Point In Time*
4. Contains exactly one [1..1] **employerAddress** with data type *Us Mailing Address*
5. Contains exactly one [1..1] **employerName** with data type *String*
6. Contains exactly one [1..1] **employerPhone** with data type *Telecommunications*
7. Contains exactly one [1..1] **employerPointOfContact** with data type *Person Name*
8. Contains zero or one [0..1] **carrier**, where its type is *Health Plan*

## Workstation Location

Access may be granted only to initiators on specific end-systems, workstations or terminals, or only to initiators in a specific physical location. This class is required to support user authorization as specified by the business requirements (use case S.1).

1. Extends *Location*
2. Contains exactly one [1..1] **organizationalProvider**, where its type is *Organizational Provider*
   - The organizational provider with which the workstation is associated.

## _AB Oand RH Otyping

1. Extends *_ Immunohematology*

## _ Anatomic Measurement

This class contains measurements of various organs and structures to include the entire body. The bodySite property indicates the organ or structure to be measured, e.g., Brain. The measurementType indicates whether we're measuring the length, volume, or weight. The measurementValue property holds the actual measurement e.g., 1500 grams. In VA's VistA system, the following fields are specificaly called out, which would be contained in this class, along with potentially others: Body Height, Body Weight, Length Of Aortic Valve, Length Of Mitral Valve, Length Of Pulmonic Valve, Length Of Tricuspid Valve, Length Of Ventricle (Left), Length Of Ventricle (Right), Volume Of Pericardial Cavity, Volume Of Peritoneal Cavity, Volume Of Pleural Cavity (Left), Volume Of Pleural Cavity (Right), Weight Of Adrenal Gland (Left), Weight Of Adrenal Gland(Right), Weight Of Brain , Weight Of Heart , Weight Of Kidney (Left), Weight Of Kidney (Right), Weight Of Liver, Weight Of Lung (Left), Weight Of Lung (Right), Weight Of Ovary (Left), Weight Of Ovary (Right), Weight Of Pancreas, Weight Of Parathyroid (Left Lower), Weight Of Parathyroid (Left Upper), Weight Of Parathyroid (Right Lower), Weight Of Parathyroid (Right Upper), Weight Of Pituitary Gland, Weight Of Spleen, Weight Of Testis (Left), Weight Of Testis (Right), Weight Of Thyroid Gland

1. Contains exactly one [1..1] **bodySite** with data type *Code*
   - This property indicates the organ or structure that is being measured, e.g., the Brain. Note that this property will require an extensive effort by the terminology team to define fully.
2. Contains exactly one [1..1] **measurementType** with data type *Code*
   - Identifies the kind of measurement that is contained in the measurement value such as weight, length, or volume.
3. Contains exactly one [1..1] **measurementValue** with data type *Physical Quantity*
   - Contains the actual measurement of the organ or bodily structure measured. Note that this is a physical quantity, so the datatype contains both the measurement value and the unit of measure (e.g., 1500 grams).

## _ Antibody Identification

1. Extends _ *Immunohematology*

## _ Autopsy Document Reference

Contains all documentation produced as a result of the autopsy.

1. Contains exactly one [1..1] **checksum** with data type *String*
   - This field stores the checksum that is calculated at the time the report version is initially stored in TIU. It will be used for comparison in future print/view requests. A new checksum will be calculated whenever the report version is printed/viewed, and matching checksums are proof that the report version has not been illegally altered.
2. Contains exactly one [1..1] **dateModified** with data type *Point In Time*
   - This is the date the report was modified if it was modified after it was electronically signed/released.
3. Contains exactly one [1..1] **referenceDate** with data type *Point In Time*
   - This is the date and time that the autopsy SF515 was stored in TIU.
4. Contains exactly one [1..1] **wasDiagnosisModified** with data type *Boolean*
   - Diagnosis modified after report was electronically signed/released. 1= ' YES' or 0 = 'NO'.

## _ Autopsy Event

Clinical documents commonly have 'Subjective' and 'Objective' findings, both of which are kinds of Observations. In addition, clinical documents commonly contain 'Assessments', which are also kinds of Observations. Thus, the establishment of a diagnosis is an Observation.

1. Contains exactly one [1..1] **ageAtDeath** with data type *Physical Quantity*
   - Contains the age of the patient at the time of death.
2. Contains exactly one [1..1] **autopsyDate** with data type *Point In Time*
   - The date and time when the autopsy assessment is completed. Also the date of the final diagnosis of cause of death.
3. Contains exactly one [1..1] **autopsyType** with data type *Code*
   - Anatomical areas of the body the autopsy is performed on. This can be as broad as a full autopsy or grouping of the body region such as chest, trunk, head. lower body.
4. Contains exactly one [1..1] **clinicalDiagnoses** with data type *String*
   - Contains information in textual format about the autopsy.
5. Contains exactly one [1..1] **comments** with data type *String*
   - Contains information in textual format about the autopsy.
6. Contains exactly one [1..1] **dateOfDeath** with data type *Point In Time*
   - This is the date and time of the death of the patient.
7. Contains exactly one [1..1] **dxClarificationCode** with data type *Code*
   - Contains the Code value to indicate whether the clinical dx insufficient (ex. Intracranial hemorrhage) did autopsy clarify the dx (ex. ruptured aneurysm) ? '1' FOR YES; '0' FOR NO; '2' FOR CONFIRMED;
8. Contains exactly one [1..1] **finalDiagnosisDate** with data type *Point In Time*
   - This is the date and time the final diagnosis was given.

9. Contains exactly one [1..1] **isMajorDxDisagreement** with data type *Boolean*

   - Contains the Code value to indicate whether there is major disagreement with the clinical Diagnoses. 0 = No 1 = Yes.

10. Contains exactly one [1..1] **pathologicalDiagnoses** with data type *String*

    - These are the pathological diagnoses in textual format.

11. Contains exactly one [1..1] **provisionalDiagnosisDate** with data type *Point In Time*

    - Contains the date provisional anatomic diagnoses reported.

12. Contains exactly one [1..1] **serviceCode** with data type *Code*

    - Contains the code set that identifies the reason for autopsy service performed.

13. Contains zero or one [0..1] **autopsyAssistant**, where its type is *Individual Provider*

    - Identifies the Autopsy Assistant that is performing the autopsy.

    - The practitioner who assisted in performing the autopsy.

14. Contains zero or more [0..*] **diagnosis**, where its type is *Diagnosis*

    - Contains the Diagnosis of the patient health Issue for the episode of care.

    - An association from AutopsyEvent2 to Diagnosis identifying a dignosis associated to the autopsy event.

15. Contains zero or more [0..*] **document**, where its type is *_ Autopsy Document Reference*

    - The text of the report in it's entirety, as signed by the practitioner. Can also mean the text that comprises the report section.

    - An association from AutopayEvent2 to AutopsyDocumnetReference identifying the document referencing the autopsy.

16. Contains zero or more [0..*] **grossImage**, where its type is *Image*

    - Images associated with Autopsy Organ/Tissue reports are stored in this multiple within the Autopsy Organ/Tissue field of the Lab Data (#63) file.

    - Images associated with Autopsy Organ/Tissue reports are stored in this multiple within the Autopsy Organ/Tissue field of the Lab Data (#63) file.

17. Contains at least one [1..*] **measurement**, where its type is *_ Anatomic Measurement*

    - Measurement value is the actual value of the result and its unit of measure.

18. Contains zero or one [0..1] **microscopicImage**, where its type is *Image*

    - Images associated with Autopsy Organ/Tissue reports are stored in this multiple within the Autopsy Organ/Tissue field of the Lab Data file.

    - Images associated with Autopsy Organ/Tissue reports are stored in this multiple within the Autopsy Organ/Tissue field of the Lab Data file.

19. Contains exactly one [1..1] **residentPathologist**, where its type is *Individual Provider*

    - Resident Pathologist who authored the autopsy assessment.

20. Contains exactly one [1..1] **seniorPathologist**, where its type is *Individual Provider*

    - Senior Pathologist who verified and approved autopsy assessment.

21. Contains zero or one [0..1] **treatingSpecialtyAtDeath**, where its type is *Facility Treating Specialty*

    - Contains the name of treating specialty at time of patient's death.

    - An association from AutopsyEvent2 to FacilityTreatingSpeciality identifying the Treating specialist at death.

## _ Bacteriology

1. Extends *_ Microbiology*

## _ Billing Individual

1.

## _ Biochemical

1. Extends _ *Genetics*

## _ Chemistry

1.

## _ Coagulation

1.

## _ Compatibility Testing

1. Extends _ *Immunohematology*

## _ Cyto Pathology

1. Extends _ *Pathology*

## _ Cytogenetics

1. Extends _ *Genetics*

## _ Diagnostic Immunology

1.

## _ Electon Microscopy

1. Extends _ *Pathology*

## _ Endocrinology

1. Extends _ *Chemistry*

## _ Flow Cytometry

1.

## _ General Immunology

1. Extends _ *Diagnostic Immunology*

## _ Genetics

1.

## _ Hematology

1.

## _ Histo Compatibility

1.

## _ Histopathology

1.

## _ Immunohematology

1.

## _ Lab

1.

## _ Lab Report

1. Contains at least one [1..*] **testPerformed**, where its type is _ *Test Performed*

## _ Medical Transport

1.

## _ Medication Administration Component

The medication component administered to the patient.

1. Contains exactly one [1..1] **doseQuantityGiven** with data type *Real*

   • "The amount of the therapeutic agent or other substance given at one administration event." (HL7 3.0)

2. Contains exactly one [1..1] **doseQuantityOrdered** with data type *Real*

   • "The amount of the therapeutic agent or other substance given at one administration event." (HL7 3.0)

3. Contains exactly one [1..1] **doseUnit** with data type *Real*

   • Unit of administration (i.e., tablet, ml, vial).

4. Contains exactly one [1..1] **drug**, where its type is *Medicinal Product Instance*

   • The medication that is or was administered to the patient.

5. Contains zero or more [0..*] **pharmacyManufacturedProduct**, where its type is *Pharmacy Manufactured Product*


## _ Medication Administration Event

"Information about the actual consumption of medication by a patient. While is generally only relevant for hospital/institutional systems which track individual administrations, it could also be used in ambulatory care e.g. home-health environments which capture administrations such as insulin injections and which use messaging to communicate the information back to a central source; recording immunizations." (HL7 Version 3)

1. Contains exactly one [1..1] **dateTime** with data type *Point In Time*

   • The date and time that the medication was or will be administered.

2. Contains exactly one [1..1] **bodySite** with data type *Code*

3. Contains exactly one [1..1] **route** with data type *Code*

4. Contains exactly one [1..1] **dosageOrdered** with data type *Real*

   • This is the amount of the medication the patient is to receive as one dose for this order. This should be an amount with a unit of measure, such as '500MG' or '50cc'. THIS SHOULD NOT BE THE NUMBER OF TABLETS, ETC.

5. Contains exactly one [1..1] **frequency** with data type *Time Interval*

   • Specifies when the substance is to be administered and how frequently. Note that this is a complex data type that may indicate specific times or intervals (e.g., 10:00 AM, MWF, etc).

6. Contains exactly one [1..1] **patientLocation** with data type *String*

   • Free text; location (room, bed and ward) of the patient at the time of the medication administration.

7. Contains exactly one [1..1] **status** with data type *Code*

   • The current state of the Substance Administration. Possible values include: Infusing, Given, Held, Completed, etc.

8. Contains zero or more [0..*] **comments**, where its type is *Comment Event*

   • Comments regarding the Medication order.

   • Any additional comments regarding the SubstanceAdministrationEvent.

9. Contains zero or one [0..1] **performer**, where its type is *Practitioner Participation Lite*

   • "Captures participation information (who, when, comments) of the person who performed the procedure. " "A person witnessing the action happening without doing anything. A witness is not necessarily aware, much less approves of anything stated in the service event."" (HL7)"

10. Contains exactly one [1..1] **patientDivision**, where its type is *Institution*

- Division of the ward where the patient was located for this administration event.
11. Contains zero or more [0..*] **administeredItem**, where its type is _ *Medication Administration Component*
    - The medication component administered to the patient.
12. Contains exactly one [1..1] **orderedItem**, where its type is *Orderable Pharmacy Item*
    - The item that was ordered to be administered to the patient.
13. Contains zero or more [0..*] **prnMedicationAdministration**, where its type is *Prn Medication Administration*
14. Contains exactly one [1..1] **administeringProvider**, where its type is *Responsible Party*
15. Contains exactly one [1..1] **patient**, where its type is *Patient*
16. Contains zero or more [0..*] **observedReaction**, where its type is *Observed Reaction*

## _ Medication Administration Promise

1. Contains exactly one [1..1] **administrationStatus** with data type *Code*
    - The latest BCMA (Bar Code Medication Administration) for this order. VALUES: I=Infusing, S=Stop, H=Held, R=Refuse, C=Completed, G=Given.
2. Contains zero or more [0..*] **medicationAdministrationEvent**, where its type is _ *Medication Administration Event*

## _ Medication List

1. Contains zero or more [0..*] **patientReportedMedication**, where its type is *Patient Reported Medication*
2. Contains zero or more [0..*] **pharmacyRequest**, where its type is *Pharmacy Request*
3. Contains zero or more [0..*] **pharmacyPromise**, where its type is *Pharmacy Promise*

## _ Microbiology

1.

## _ Molecular

1. Extends _ *Genetics*

## _ Mycobateriology

1. Extends _ *Microbiology*

## _ Mycology

1. Extends _ *Microbiology*

## _ Parasitology

1. Extends _ *Microbiology*

# _ Pathology

1.

# _ Prn Effectiveness Observation

Indicates why the nurse determined to administer a medication that was ordered as "Pro re nata" (take as needed). Includes a narrative of the efficacy of the PRN medication.

1. Contains exactly one [1..1] **effectiveness** with data type *String*

   • Provides an narrative of the efficacy of a medication that was ordered as "Pro re nata" (take as needed).

2. Contains exactly one [1..1] **reason** with data type *Code*

   • Indicates why the nurse determined to administer a medication that was ordered as "Pro re nata" (take as needed).

3. Contains exactly one [1..1] **author**, where its type is *Author*

   • Captures participation information (who, when, comments) of the person who performed the procedure. "A party that originates the Act and therefore has responsibility for the information given in the Act and ownership of this Act. ... The author (or authors) has ownership of the Acts that they originate. This means that a party other than this author (or those authors) cannot cancel, abort, complete or modify the state or content of this Act in any other way. A party other than the author may only amend, reverse, override, replace, or follow up in other ways on this Act, whereby the Act remains intact and is linked to another Act authored by that other party." (HL7)

# _ Rendering Individual

1.

# _ Routine Chemistry

1. Extends _ *Chemistry*

# _ Specialty

Provides an indication of the medical specialty of the organization-location. Examples include Allergy, Neurology, Cardiology, etc. This is equivalent to File 42.4 in Vista.

1. Extends *Organization*
2. Contains exactly one [1..1] **specialtyCode** with data type *Code*

   • Identifies the Specialty

# _ Supplier

1.

## _ Surgical Pathology

**1.** Extends _ *Pathology*

## _ Syphilis Serology

**1.** Extends _ *Diagnostic Immunology*

## _ Test Or Panel Ordered

**1.** Contains zero or more [0..*] **testPerformed**, where its type is _ *Test Performed*
**2.** Contains zero or more [0..*] **labReport**, where its type is _ *Lab Report*

## _ Test Performed

**1.**

## _ Toxicology

**1.** Extends _ *Chemistry*

## _ Unexpected Antibody Detection

**1.** Extends _ *Immunohematology*

## _ Urinalysis

**1.**

## _ Virology

**1.** Extends _ *Microbiology*

# Chapter

# 6

# VALUE SETS

**Topics:**

The following tables summarize the value sets used in this Implementation Guide.

## Abuse Type

| Value Set | AbuseType | | |
|---|---|---|---|
| Description | This enumeration illustrates the types of values that may be used to populate the 'typeCode' attribute of a 'HistoryOfAbuse/Neglect' class. | | |
| **Concept Code** | **Concept Name** | **Code System** | **Description** |
| PhysicalAbuseIndicator | | | |
| NeglectIndicator | | | |
| SexualVictimIndicator | | | |

## Address Type

| Value Set | AddressType | | |
|---|---|---|---|
| Description | This enumeration describes types of Addresses at which a person or organization exists or can be reached. | | |
| **Concept Code** | **Concept Name** | **Code System** | **Description** |
| mobileContact | | | A telecommunication device that moves and stays with its owner. May have characteristics of all other use codes, suitable for urgent matters, not the first choice for routine business. |
| pager | | | A paging device suitable to solicit a callback or to leave a very short message. |
| primaryHome | | | The primary home, to reach a person after business hours. |
| temporaryAddress | | | The temporary address where a person resides. An address that is different from the permanent address, but at which the person is residing for a limited, defined period of time. Note that for military personnel, this address may represent a location at which the person is temporarily assigned or deployed. |
| vacationHome | | | A vacation home, to reach a person while on vacation |
| workPlace | | | An office address. First choice for business related contacts during business hours. |

## Applicability Code

| Value Set | ApplicabilityCode |
|---|---|

| | Description | This value set specifies the how the content of assessment being exchanged is used. |
|---|---|---|

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| Clinical | | | This code specifies that the assessment is applicable to clinical evaluation of the patient. |
| Research | | | This code specifies that the assessment is applicable for research. |
| ProgramEvaluation | | | The value ProgramEvaluation identifies types of patients and problems presenting for treatment, quantifies level of problems, measures patients response to treatment, identifies agencies /workers strengths and areas for improvement with particular populations and problems, enables management by outcome, reports to funding sources, etc. |

## Custodial Status Code

| | Value Set | CustodialStatusCode |
|---|---|---|
| | Description | This enumeration illustrates the types of values that may be used to populate the custodialStatus code of the Patient_BehavioralHealth class. |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| AdultNoGuardian | | | |
| AdultConservator | | | |
| AdultEstatePerson | | | |
| AdultEstate | | | |
| AdultPerson | | | |
| AdultLimGuardian | | | |
| AdultTempGuardian | | | |
| MinorConservator | | | |
| Minor | | | |

## Healthcare Provider Taxonomy (HIPAA)

| | Value Set | Healthcare Provider Taxonomy (HIPAA) |
|---|---|---|

## Healthcare Provider Taxonomy (HIPAA)

| | Value Set | Healthcare Provider Taxonomy (HIPAA) |
|---|---|---|

## Healthcare Service Location (HL7)

| | |
|---|---|
| Value Set | Healthcare Service Location (HL7) |

## Healthcare Service Location (NHSN)

| | |
|---|---|
| Value Set | Healthcare Service Location (NHSN) - 2.16.840.1.113883.13.19 |
| Code System | Healthcare Service Location (HL7) - 2.16.840.1.113883.6.259 |
| Version | 3 |
| Definition | NHSN's value set for healthcare service location. |

## Immigration Status Code

| | |
|---|---|
| Value Set | ImmigrationStatusCode |
| Description | This enumeration illustrates the types of values that may be used to populate the immigrationStatus code of the Patient_BehavioralHealth class. |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| CitizenLegalResident | | | |
| StudentVisa | | | |
| VisitorVisa | | | |
| IllegalImmigrant | | | |

## New Code System Version

| | |
|---|---|
| Value Set | NewCodeSystemVersion |

## New Code System Version1

| | |
|---|---|
| Value Set | NewCodeSystemVersion1 |

## New Value Set Version

| | |
|---|---|
| Value Set | NewValueSetVersion - (OID not specified) |
| Code System | NewCodeSystemVersion - (OID not specified) |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| AA | | NewCodeSystemVersion | |
| BB | | NewCodeSystemVersion | |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| CC | | NewCodeSystemVersion | |

## Null Flavor

| Value Set | NullFlavor |
|---|---|
| Description | This enumeration defines the set of possible "null-flavors", which are used to communicate why a datatype value is empty when otherwise it should not be empty. Null Flavor: "If a value is an exceptional value (NULL-value), this specifies in what way and why proper information is missing." - HL7 V3 |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| AskedButUnknown | | | "Information was sought but not found (e.g., patient was asked but didn't know)" - HL7 V3 |
| Derived | | | "An actual value may exist, but it must be derived from the provided information (usually an EXPR generic data type extension will be used to convey the derivation expression" - HL7 V3 |
| Invalid | | | "The value as represented in the instance is not a member of the set of permitted data values in the constrained value domain of a variable." - HL7 V3 |
| Masked | | | "There is information on this item available but it has not been provided by the sender due to security, privacy or other reasons. There may be an alternate mechanism for gaining access to this information." - HL7 V3 |
| NegativeInfinity | | | "Negative infinity of numbers." - HL7 V3 |
| NoInformation | | | "The value is exceptional (missing, omitted, incomplete, improper). No information as to the reason for being an exceptional value is provided. This is the most general exceptional value. It is also the default exceptional value." - HL7 V3 |
| NotApplicable | | | "Known to have no proper value (e.g., last menstrual period for a male)." - HL7 V3 |
| NotAsked | | | "This information has not been sought (e.g., patient was not asked)" - HL7 V3 |
| Other | | | "The actual value is not a member of the set of permitted data values in the constrained value domain of a variable. (e.g., concept not provided by required code system)." - HL7 V3 |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| PositiveInfinity | | | "Positive infinity of numbers." - HL7 V3 |
| SufficientQuantity | | | "The specific quantity is not known, but is known to be non-zero and is not specified because it makes up the bulk of the material. e.g. 'Add 10mg of ingredient X, 50mg of ingredient Y, and sufficient quantity of water to 100mL.' The null flavor would be used to express the quantity of water." - HL7 V3 |
| TemporarilyUnavailable | | | "Information is not available at this time but it is expected that it will be available later." - HL7 V3 |
| Trace | | | "The content is greater than zero, but too small to be quantified." - HL7 V3 |
| Unencoded | | | "The actual value has not yet been encoded within the approved valueset for the domain." - HL7 V3 |
| Unknown | | | "A proper value is applicable, but not known." - HL7 V3 |

## Self Directed Type

| | |
|---|---|
| Value Set | SelfDirectedType |
| Description | This enumeration illustrates the values that may be used to populate the type attribute of a SuicidialIdeationObservation class. |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| Suicide | | | |
| NonFatalSuicideBehavior | | | |

## Suicide Risk

| | |
|---|---|
| Value Set | SuicideRisk |
| Description | This enumeration illustrates the values that may be used to populate the attribute code of the SuicideRisk class. These values may be associated with a LOINC Answer ID associated with the LOINC code 42823-5 Suicide risk). |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| Mild | | | LOINC Answer ID LA6752-5 |
| Moderate | | | LOINC Answer ID LA6751-7 |
| Severe | | | LOINC Answer ID: LA6750-9 |

# Violence Risk Type

| Value Set | ViolenceRiskType |
|---|---|
| Description | This enumeration illustrates the values that may be used to populate the attribute code of the ViolentBehaviorRisk class. |

| Concept Code | Concept Name | Code System | Description |
|---|---|---|---|
| Assault | | | |
| Homicide | | | |

# REFERENCES

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