Canada Health Infoway
Inforoute Santé du Canada

Canadian Clinical Drug (CeRx) Messaging Standard

Package # 4 Overview (Clinical and Infrastructure Subject Areas)

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Version	Author(s)	Change Description	Date
1.00	Michael van Campen	Original version and framework	2005-June-02
1.01	Project Team	Pre-publication updates	2005-Jun-12

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PREFACE – QUICK DOCUMENT OVERVIEW

Purpose	To provide a summary view of all of the artifacts included in a delivery package for the CeRx messaging standard.
Audience	CeRx-pCSG (Standards Working Group) and other interested stakeholders.
Instructions	Instructions have been provided for each element in this document. Use the Show/Hide button in Word to show the hidden text. ¶

Structure	In addition to the standard "Executive Summary" and "Appendix" sections, this document includes the following specific sections:	
	Introduction	Introduction to the Package Overview.
	Package Scope	The scope of the package is described by listing all included (and excluded) transactions. Interaction diagrams are used to help illustrate scope.
	Transaction Synopsis	A detailed synopsis which outlines the information exchanged, is provided for each transaction.
	Key Package Assumptions	Key package assumptions that were made during the development of the message specifications.
	Key Package Issues	Issues, outstanding questions or areas of clarification that require resolution to complete the package.
	Artifact Status	An enumeration of all artifacts included in the package, by subject area (*e.g*. prescribing). This section also outlines the current status.
	HL7 Context	General comments on the package and its context vis-à-vis the broader HL7 community.
	Appendix A - HL7 Methodology Background	Provides some basic background on the HL7 methodology.

Related documents	• Infoway Style Guide – June 17, 2003

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I EXECUTIVE SUMMARY

Specification materials for the Canadian Clinical Drug (CeRx) Messaging Standard are published for review by the CeRx Standards Working Group (CeRx-pCSG) and others in distinct packages. This document represents a summary overview for Package 4 – Clinical and Infrastructure.

The main package elements include:

Package Artifacts

- PN502-2001-EN - Package Overview (this document)
  - Provides a framework for review of the package by summarizing the status of all key artifacts, by providing a message synopsis that lists the content of all messages, and by summarizing other key information pertaining to the package.
- PN502-2002-EN - Storyboards
  - No specific storyboards for this package have been developed; however, storyboards for earlier package include references to transactions enabled by this package.
- PN502-2004-EN - Interaction Models
  - These describe key interactions (message exchanges).
- PN502-2005-EN - Message Worksheets
  - A number of documents that specify the detailed data elements in CeRx messages, including definitions, rationale, code sets (if applicable), and conformance (*i.e*. whether an attribute is mandatory, populated, or required). Certain design decisions are based on assumptions that are listed in the Standards Development Tracking Logs; where these assumptions are considered controversial they have also been included in this summary.

Additional review artifacts include the following:

Project Artifacts

- PN502-0002-EN - Business Model
- PN502-0006-EN - Implementation Guide
- PN502-0003-EN - Glossary
- PN502-0004-EN - Standards Development Tracking Logs
- PN502-0008-EN - Scope & Package Tracking Framework

Cross-Package Artifacts

- No cross-package artifacts are highlighted for specific review. However, it should be noted that several models in the cross-package are referenced by the message models for this package. These include wrapper materials and other reusable model components ("CMETs").

The following notes summarize the overall stability of this package through progressive releases:

Package Release	Stability Notes
2005-06-10	• The work products developed to date reflect the analysis from packages 1 through 3. • Several of the documents are at the 'Team Draft' status rather than Working Group Draft status. • Vocabulary work is pending. • CeRx-pCSG review is pending. • Public exposure, including HL7 community exposure is pending.

Package Release	Stability Notes
	• Identifiers might change prior to final publication based on a pending decision to use Canadian-specific ids or the international ones; similarly identifiers may shift from the current sequential approach to a more meaningful mechanism.

II INTRODUCTION

2.1 Scope

The scope of this document is limited to the content of Package 3 – Medication Profile Support. It includes all related message and business artifacts.

2.2 Purpose

The purpose of this document is to support review of the contents of the package by the CeRx-pCSG and other interested stakeholders. The document aims to achieve this as follows:

- A package synopsis is provided which outlines each transaction and describes the information interchanged. This is intended to offer sufficient information for reviewers to confirm that the messages meet the high level business requirements for e-Prescribing and Drug Information System implementation.
- Review guidance is provided for each deliverable (including the detailed message specification worksheets) to assist those reviewers interested in providing comment at a more detailed level

In addition, stability comments are provided (1) for each deliverable based on the development process as well as the level of core team review and QA; and (2) for the package overall based on the extent of pan-Canadian review and potential directions in the broader HL7 community.

Note that key elements of the package have been highlighted for review using green text/boxes.

2.3 Audience

CeRx-pCSG (Standards Working Group) and other interested stakeholders.

2.4 Assumptions

The following assumptions were made in this document:

- See Key Planning Assumptions section.

2.5 Related Documents

Author	Document Name	Comments
Michael van Campen	PN502-0001-EN - Standards Development Documentation Framework (SDDF)	Documents all key project deliverables into 5 categories, of which the following 3 are germane to this package: • Project Artifacts • Package Artifacts • Cross-Package Artifacts
CeRx Core Project Team	Package Documents	Suite of deliverables for the package, contained in a directory structure that corresponds to the 3 major document categories (Project Artifacts, Package Artifacts and Cross-Package Artifacts).

III PACKAGE SCOPE

3.1 Subject Areas

This package contains the following subject areas:

- Allergy, Intolerance, ADR (8)
- Medical Conditions (3)
- Patient Drug Permissions (4)

3.1.1 Allergy, Intolerance, ADR (8)

Within this subject area, the following transactions (interaction pairs) are included:

- C11.1 Add Allergy, Intolerance
- C11.2 Update Allergy, Intolerance
- C11.3 Get Patient Allergies, Intolerances
- C11.4 Get Allergy, Intolerance Change History
- C11.5 Add Patient Adverse Reactions
- C11.6 Update Patient Adverse Reactions
- C11.7 Get Patient Adverse Reactions
- C11.8 Adverse Reaction Notification

Transactions noted in green below are high priority items that require detailed review.

#	Business Name	Description	Planning Note	Status
C11.1	Add Allergy, Intolerance	Record of an allergy or intolerance to a drug or non-drug substance is added to the patient's electronic health record.		Team Draft
C11.2	Update Allergy, Intolerance	Update the information associated with a particular allergy or intolerance in the patient's record.		Team Draft
C11.3	Get Patient Allergies, Intolerances	Retrieve the list of all current allergies and intolerances recorded against a specific patient.		Team Draft
C11.4	Get Allergy, Intolerance Change History	Review the set of changes that have occurred over the lifetime of an allergy or intolerance for a particular patient.		Team Draft
C11.5	Add Patient Adverse Reactions	Records a specific occurrence of a patient adverse reaction.		Team Draft
C11.6	Update Patient Adverse Reactions	Adds or modifies information attached to an adverse reaction for a patient that had been previously recorded.		Team Draft

#	Business Name	Description	Planning Note	Status
C11.7	Get Patient Adverse Reactions	Retrieves a list of the adverse reactions that have been recorded against a specific patient.		Team Draft
C11.8	Adverse Reaction Notification	Notify a system about an adverse reaction that is not patient specific.		Team Draft

It is proposed that the following transactions be **ADDED** to this subject area.

None.

It is proposed that the following transactions be **DROPPED** from this subject area:

None.

3.1.2 Medical Conditions (3)

Within this subject area, the following transactions (interaction pairs) are included:

- C12.1 Add Patient Medical Condition
- C12.2 Update Patient Medical Condition
- C12.3 Get Patient Medical Conditions

Transactions noted in green below are high priority items that require detailed review.

#	Business Name	Description	Planning Note	Status
C12.1	Add Patient Medical Condition	Record a medical condition (indication, diagnosis) on a patient's record.		Team Draft
C12.2	Update Patient Medical Condition	Update the information associated with a patient's medical condition(s).		Team Draft
C12.3	Get Patient Medical Conditions	Retrieves the list of recorded patient medical conditions (indications, diagnosis).		Team Draft

It is proposed that the following transactions be **ADDED** to this subject area.

None.

It is proposed that the following transactions be **DROPPED** from this subject area:

#	Business Name	Description	Planning Note	Status
C12.4	Search For Medical Condition Code	Retrieve a list of medical conditions (indications, diagnosis) and associated codes by criteria (e.g.	2005-05-01 Core Team: This should be treated as a standard vocabulary query, in	Canc

#	Business Name	Description	Planning Note	Status
		name, billing id).	the same way the drug form, gender and other codes are maintained and distributed.	
C12.6	Get Therapies by Medical Condition	Identifies the recommended therapy course associated with a specific medical condition (indication, diagnosis). This may be limited to drug therapy (first-line treatment, second line treatment), or might also include recommended diagnostic tests (lab, imaging) as well as other therapies (surgery, physiotherapy, etc.).	2005-05-20 Dropped as this functionality is already covered by the "Get drug product detail" and the "Get Drug documentation" queries	Canc

3.1.3 Patient Drug Permissions (4)

Note to Reader: The Patient Drug Permissions subject area is expected to be dropped unless the requirement finds support from Health Canada and the CeRx-pCSG during June 2005.

Within this subject area, the following transactions (interaction pairs) are included:

- C10.1 Request Patient Drug Permission
- C10.2 Patient Drug Permission Notification
- C10.3 Patient Drug Permission Query

Transactions noted in green below are high priority items that require detailed review.

#	Business Name	Description	Planning Note	Status
C10.1	Request Patient Drug Permission	Request permission for a specific patient to receive a special-access medication. This permission is regulatory in nature, rather than financial.		Team Draft
C10.2	Patient Drug Permission Notification	A regulatory authority notifies an applicant on the result of their request for a specific patient to receive a special-access medication.		Team Draft
C10.3	Patient Drug Permission Query	Query to determine whether a patient has permission to receive a particular drug (e.g. special access medications).		Team Draft

It is proposed that the following transactions be **ADDED** to this subject area.

None.

It is proposed that the following transactions be **DROPPED** from this subject area:

None.

3.2 Selected Interactions

There are no compound or chained interactions for this package. Therefore, there are no specific interactions highlighted in this section. Interaction diagrams are included in the detailed message specifications.

3.3 Key Package Design Concepts

This section of the document highlights some of the key design concepts used in constructing this package. They include:

- Recording physiological states and disease states in the EHR

3.3.1 Recording Physiological States and Disease States in the EHR

There are a number of reasons for the inclusion of a description of physiologic states and disease conditions in a prescribing policy. The inclusion of both is of significant importance to safe and effective pharmaceutical prescribing.

Firstly, there are a number of normal physiological states which require recognition such as pregnancy and lactation; in these circumstances the prescribing of certain medications would be ill advised as they might cause harm to a developing fetus or infant. These are not disease states and should not be so considered but they are prescribing precautions, which should be taken into consideration when prescribing, and the prescribing provider should be alerted to their existence.

Secondly, the state of the patient, either physiological or pathological, should be recorded in the EHR so that proper DUR can take place. Modern knowledge bases can present prescribers with warnings if they try to prescribe a medication which may be contra-indicated in certain disease or physiological states. For example, advanced age is a physiologic state that can be associated with pathologic conditions such as renal failure and thus the importance of knowing what is the state of the patient who is receiving the prescription. Broad categories like pregnancy, lactation or advanced age all have a bearing on effective and safe prescribing and should be indicated to guide the prescriber.

Thirdly, in disease states or conditions like cancer of a solid organ, there are many associated conditions for which a provider might prescribe. In the situation where a patient is suffering from underlying cancer of the breast, providers often prescribe narcotics to manage the pain associated with the spread of the disease. The pathologic condition here is breast cancer which is the disease but the indication for the narcotic is the bone pain associated with the disease condition. This will help to distinguish between the disease state or condition and the prescribing indication for which the drug is ostensibly ordered.

Finally, there are situations where there could be confusion and doubt in the mind of the patient if there is not some indication provided for the medication For example, when a provider uses amitriptyline for neuropathic pain, a dispenser might inform the patient that the drug is used for depression where this is clearly not the reason. By providing prescribing indications, the healthcare provider avoids this confusion at the dispensing phase of therapy. In this case, providing the indication facilitates greater compliance and peace of mind for the patient.

IV TRANSACTION SYNOPSIS

4.1 Overview

4.1.1 Message Wrappers and Payloads

Transactions consist of one or more messages to support both outbound and inbound communications (i.e. send/receive pairs). Every HL7 v3 message (send or receive) contains two major components:

- **Transport Wrapper:** One can think of transport wrappers as being the equivalent of envelopes which describe where the message originated and where it is being sent, primarily in technical terms. For example, the transport wrapper indicates which system originated the message.
- **Message Content:** The message content includes two components:
  - **Control Event Wrapper:** One can think of control event wrappers as file folders which provide business information about the content. This wrapper contains information about the business event that precipitated the sending of this message, who sent it and other associated business information such as the facility from which it was sent. Thjs wrapper will, for example, also include the Prescriber for a new prescription request;
  - **Payload:** This element contains the core data attributes for the message such as a prescription order or dispense event.

It is the combination of each of these components that make up a valid HL7 message.

Of note, any particular message component (*e.g*. Rx Order Payload) may include nested message models (*e.g*. Patient). The use of multiple message models in a message allows message models to be reused multiple times to provide consistency throughout all domains in the HL7 standard. For example, the Patient message model can be used in an Rx Order message, in an Rx Dispense message as well as in a Lab or Claims related message.

The diagram below helps to illustrate the wrapper and payload concept:

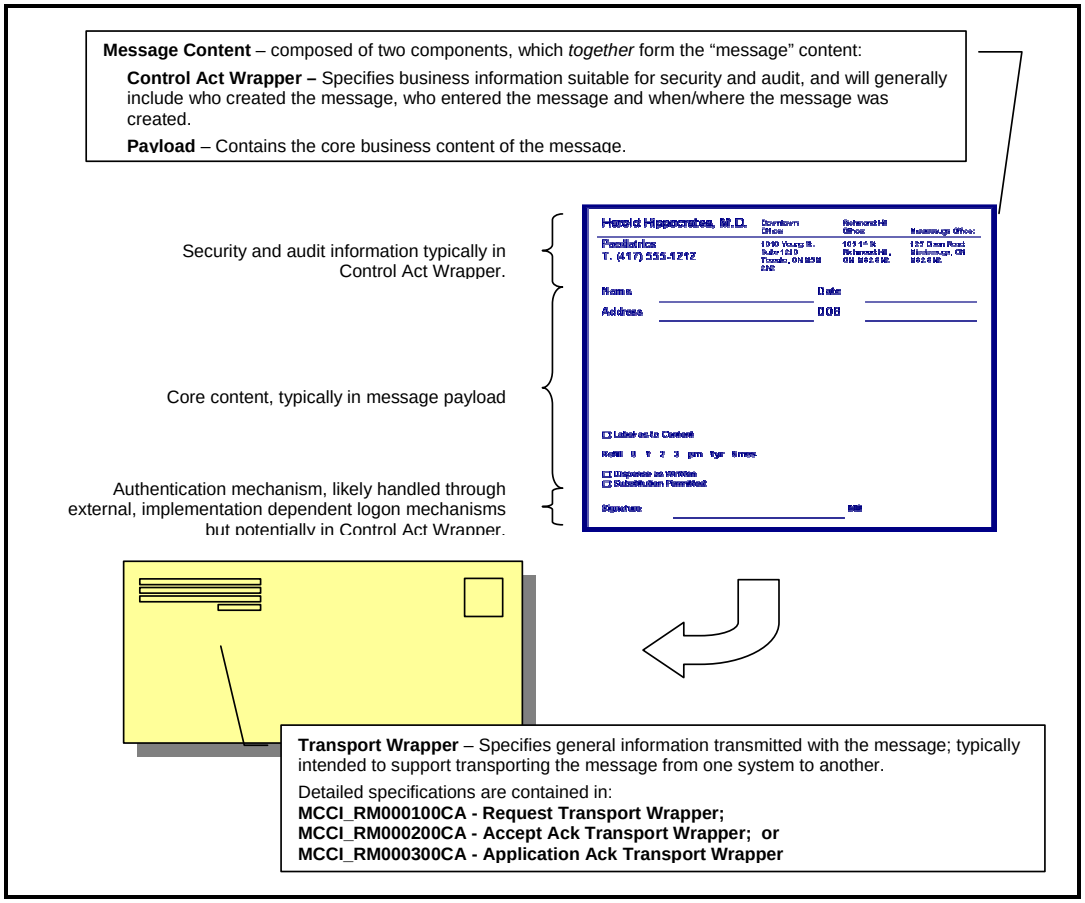

Figure 1 – Message Structure

4.1.2 Message Flow

There are three styles of transactions:

1. A REQUEST transaction consists of the following types of messages:
   - REQUEST: This message (*e.g.* Rx Order) is sent by a sending system (*e.g.* EMR) to a receiving system (*e.g.* EHR/DIS);
   - RESPONSE, one of:
     - RESPONSE (ACCEPT): If the intent of the request message was successful (*e.g.* Rx Order created), this message is returned to the requesting system;
     - RESPONSE (REFUSE): If the intent of the request message was not successful but well formed (*e.g.* Rx Order had contraindications), this message is returned to the requesting system; or
     - RESPONSE (REJECT): If the request message is malformed (that is to say it did not follow the formatting specifications of the standard), a standard HL7 message is returned. Note that the details of this message are not specified in this document. Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.
2. A NOTIFICATION transaction consists of the following types of messages:
   - NOTIFICATION: This message (*e.g.* Dispense Pickup) is sent by a sending system (*e.g.* Pharmacy) to a receiving system (*e.g.* EHR/DIS) as a simple notification, with no response message returned (other than a message receipt acknowledgement);
   - RESPONSE (REJECT): If the notification message is malformed (that is to say it did not follow the formatting specifications of the standard), a standard HL7 message is returned. Note that the details of this message are not specified in this document. Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.
3. A QUERY REQUEST transaction consists of the following types of messages:
   - QUERY REQUEST: This message (*e.g.* Prescription Query) is sent by a sending system (*e.g.* EMR) to a receiving system (*e.g.* EHR/DIS);
   - RESPONSE, one of:
     - QUERY RESPONSE (ACCEPT): If the intent of the query request message was successful, this message will contain the query results, which could include no records found;
     - QUERY RESPONSE (REFUSE): If the intent of the query of the query request message was not successful, this message will indicate reasons why the query was refused (e.g. too many records, requestor not allowed to run this query, etc.); or
     - RESPONSE (REJECT): If the query request message is malformed (that is to say it did not follow the formatting specifications of the standard), a standard HL7 message is returned. Note that the details of this message are not specified in this document. Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.

4.1.3 Conformance

Mandatory (Must Exist)

A valid instance of this message must include all mandatory content elements.

Populated (Expected to Exist)

Content elements in this category must be present in all circumstances. However, on occasion, values for these elements will not be present and a Null Flavour would be provided to indicate why the data is not being provided (*e.g.* masked for hidden/protected data, unable to send due to regulatory constraint).

Required (May Exist)

These content elements may or may not be present in the message but implementers are required to support the interchange of this information.

Note that message specifications often reference information elements that are themselves complex structures of other attributes (or other structures). When such an "association" is present, it is important to note that it too may contain mandatory elements. However, these mandatory elements only come into play when such a required association is actually used in a message and therefore they should not be considered mandatory for the message as a whole. For example, on an Rx Order, if Coverage Extension is specified in a message, then there may be some mandatory data elements such as a Coverage Extension Id and Payor Id.

Optional (May or May Not be Supported)

These content elements may or may not be present and there is no requirement for implementers to support the interchange of this information. Generally, categorizing attributes and attribute groups as optional has been avoided within the CeRx standard and will be handled on an exception basis.

4.2 Transactions

This section describes each of the in-scope transactions included in this package at a level which is intended to facilitate a business review of the transaction's purpose and the content of associated messages.

4.2.1 C11.1 Add Allergy, Intolerance

4.2.1.1 Transaction Overview

The intention of this transaction is to record an allergy or intolerance to a drug or non-drug substance and add it to the patient's electronic health record.

The importance of this to healthcare is obvious; it will enhance safety and efficiency to the prescribing act and allow physicians and other healthcare providers ensure that a complete profile of allergies and intolerances is recorded against a patient's record. It can be used when a patient first registers with a provider and also every time a new allergy or adverse reaction occurs in the course of treatment with either drugs or non drug substances like food additives or actual food substances (i.e. Nuts or dairy products).

4.2.1.2 Key Design Elements

None.

4.2.1.3 Key Assumptions

The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

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4.2.1.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

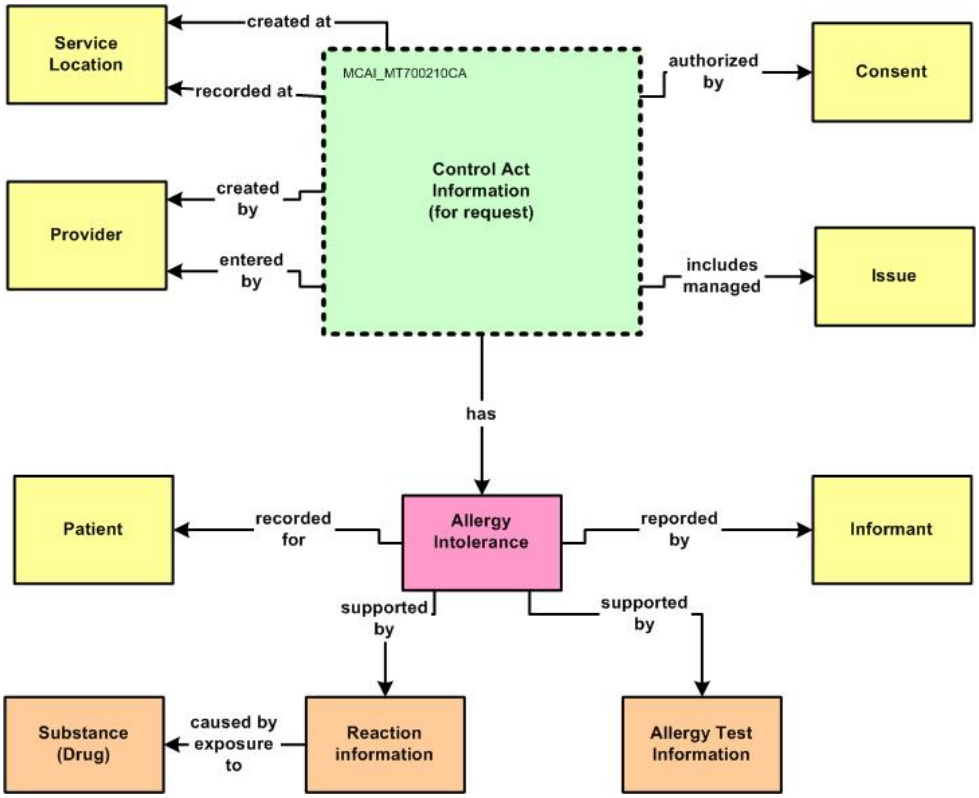

Figure 2 – C11.1 Add Allergy, Intolerance – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Allergy/Intolerance Type	A coded value denoting whether the record pertains to an intolerance or true allergy. May be set to a code indicating "either allergy or non-allergy intolerance"
Agent	The drug, food or environmental substance to which the patient has an allergy or intolerance
Allergy/Intolerance Status	A coded value that indicates whether an allergy/intolerance is 'ACTIVE' (patient is still affected by the condition) or 'COMPLETE' (indicating no longer active).
Patient (🗁)	Identifies the patient for whom allergy/intolerance information is being recorded.

Attribute/ Attribute Group	Notes
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Severity Level	Indicates the gravity of the allergy or intolerance in terms of its actual or potential impact on the patient.
Allergy/Intolerance Refuted	An indication that a clinician has determined that the patient does not suffer from a particular allergy or intolerance.
Allergy/Intolerance Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her allergy/intolerance information.
Allergy/Intolerance Date	The date on which the allergy or intolerance occurred and became active.
Information Source	A coded value denoting the source of the allergy/intolerance information as being the patient, the patient's representative or the provider.
Allergy/Intolerance supported by (🗁)	Information on a particular type of reaction experienced by the patient or testing performed on the patient which provides evidence for the existence (or non-existence) of the allergy/intolerance.
Reported Reactions (🗁)	Information on a patient's specific reaction that is believed to be associated with he allergy/intolerance.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Allergy Tests (🗁)	Information on the specific allergy test that supports the recording of the allergy/intolerance.
Allergy/Intolerance Notes (🗁)	Additional textual information entered by the author or data-enterer about the medical condition record.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;

Attribute/ Attribute Group	Notes
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.1.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

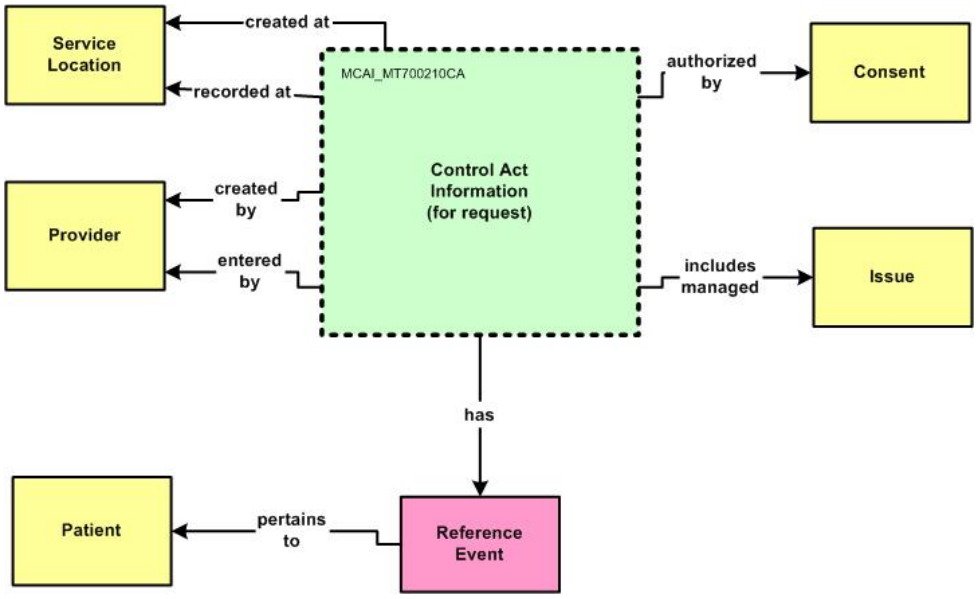

Figure 3 – C11.1 Add Allergy, Intolerance – Response Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Record Id	Specifies the unique identifier of the record which has been successfully created
Patient (🗁)	Used to ensure linking of the identifier to the correct patient record;
Patient Identifier	Uniquely identifies the patient;
Patient Name	Indicates the name of the patient for cross-checking purposes;
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Event Reason (✉)	Provides a reason for the requested change or addition;

Attribute/ Attribute Group	Notes
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created at Service Delivery Location Type (✉)	A code identifying the kind of Service Delivery Location. Examples are: pharmacy, clinic, hospital, long term care, *etc;*
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber); **Note:** A constraint exists that either Created by Provider ID or Created by Provider Name must be specified;
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider ID (✉)	A unique identifier for a provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider Name is null;
Created by Provider Name (✉)	The name by which the provider is known; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;
Responsible Provider ID (✉)	A unique identifier for the provider who was supervising the actions of the Created by Provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;
Responsible Provider Name (✉)	The name of the supervising provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which a Service Delivery Location may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location;

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed prescription, along with how the issue has been managed by the prescriber;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

4.2.1.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000001CA - Allergy/Intolerance**, Used to record allergies and intolerances; • (✉)**MCAI_MT700210CA - Trigger Event Wrapper for Acts from Clinical**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• **COCT_MT050002CA – Patient**, to identify the patient; • **POME_MT000002CA – Administrable Medication**, to describe the drug prescribed; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**,

Message	Core Models	Key Supporting Models
		to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **COMT_MT000001CA - Event Id**, Used to indicate identifier created or adopted by receiving system; • (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Refuse)	(✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.2 C11.2 Update Allergy, Intolerance

4.2.2.1 Transaction Overview

This transaction is used to update the information associated with a particular allergy or intolerance in the patient's record.

It would be used commonly with an established patient who experiences a new reaction or a changed reaction to a drug or non drug substance. The transaction will allow the provider the opportunity to distinguish between the two types of adverse reaction to a drug – the true allergy or the intolerance.

4.2.2.2 Key Design Elements

None.

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4.2.2.3 Key Assumptions

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The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

4.2.2.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

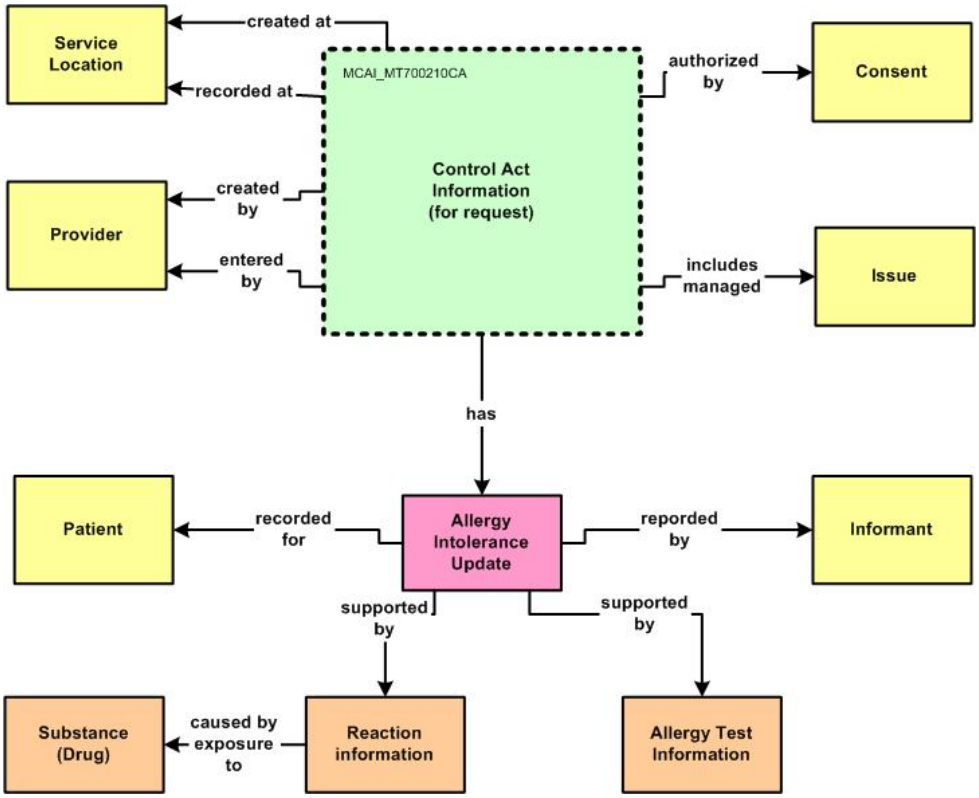

Figure 4 – C11.2 Update Allergy, Intolerance – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Allergy/Intolerance Type	A coded value denoting whether the record pertains to an intolerance or true allergy. May be set to a code indicating "either allergy or non-allergy intolerance"
Allergy/Intolerance Record Id	Unique identifier of the allergy/intolerance being updated.
Allergy/Intolerance Status	A coded value that indicates whether an allergy/intolerance is 'ACTIVE' (patient is still affected by the condition) or 'COMPLETE' (indicating no longer active).
Patient (🗁)	Identifies the patient for whom allergy/intolerance information is being recorded.

Attribute/ Attribute Group	Notes
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Allergy/Intolerance Type	A coded value denoting whether the record pertains to an intolerance or true allergy.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Severity Level	Indicates the gravity of the allergy or intolerance in terms of its actual or potential impact on the patient.
Allergy/Intolerance Refuted	An indication that a clinician has determined that the patient does not suffer from a particular allergy or intolerance.
Allergy/Intolerance Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her allergy/intolerance information.
Allergy/Intolerance Date	The date on which the allergy or intolerance occurred and became active.
Information Source	A coded value denoting the source of the allergy/intolerance information as being the patient, the patient's representative or the provider.
Allergy/Intolerance supported by (🗁)	Information on a particular type of reaction experienced by the patient or testing performed on the patient which provides evidence for the existence (or non-existence) of the allergy/intolerance.
Reported Reactions (🗁)	Information on a patient's specific reaction that is believed to be associated with he allergy/intolerance.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Allergy Tests (🗁)	Information on the specific allergy test that supports the recording of the allergy/intolerance.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;

Attribute/ Attribute Group	Notes
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.2.5 Response (Accept) Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

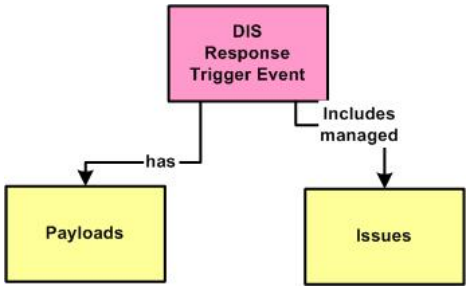

Figure 5 – C11.2 Update Allergy, Intolerance – Response Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction. Used for debugging only;
Event Effective Period (✉)	Indicates when the event was performed;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Event Reason (✉)	Provides a reason for the refusal to act or for a variation in the requested action;
Issues & Managements (✉) (🗁)	Detailed information indicating detected issues (access authority, identifier issues, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed action, along with how the issue might be managed by the requesting provider;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur and how it has been managed; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient	This is the recorded observation (e.g. allergy, medical condition, lab result, weight,

Attribute/ Attribute Group	Notes
Measurable Observations (✉) (🗁)	pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

4.2.2.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000013CA - Allergy/Intolerance Update**, Allows information about a previously recorded allergy and intolerance to be changed; • (✉)**MCAI_MT700210CA - Trigger event Wrapper for Acts from Clinical**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260002CA – Detected Issues**, to note any medication issues that have been managed;
Response (Refuse)	• **MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260001CA – Detected Issues**, to note any medication issues that have been managed;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.3 C11.3 Get Patient Allergies, Intolerances

4.2.3.1 Transaction Overview

This transaction allows the retrieval of the list of all current allergies and intolerances recorded against a specific patient.

It will be used by providers to determine prior to prescribing which medications may have produced an adverse drug reaction in the past. Some drug classes exhibit cross-reactivity when used in a patient who has had an adverse reaction to a drug of the same class in the past (i.e. Cephalosporin can cross react with penicillin.)

4.2.3.2 Key Design Elements

None.

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4.2.3.3 Key Assumptions

The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

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#	Topic	Description (first 50 words only)

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4.2.3.4 Request Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

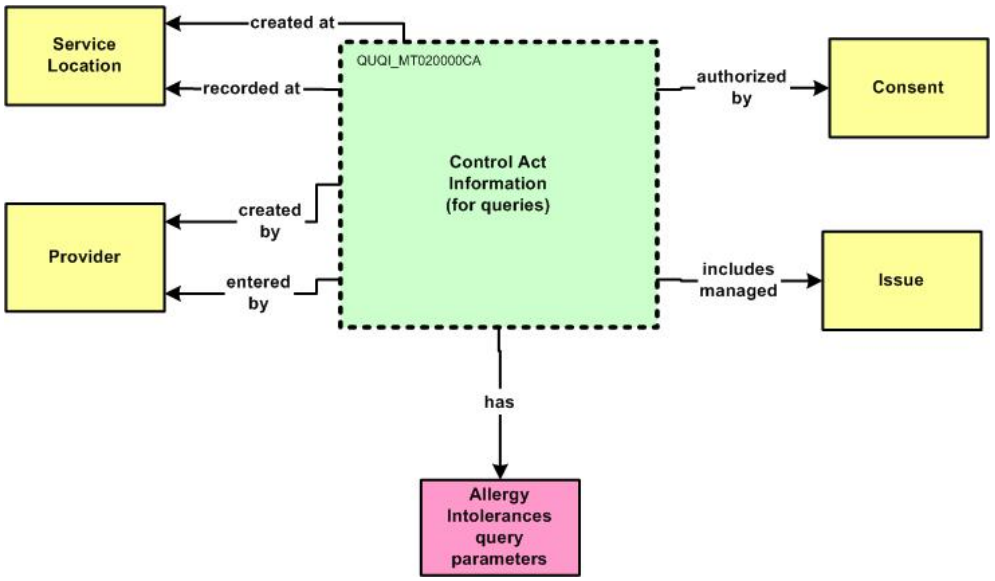

Figure 6 – C11.3 Get Patient Allergies, Intolerances – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Patient Id	Identifier of the patient whose allergy/intolerance records are to be returned.
Patient Name	Name of the patient whose allergy/intolerance records are be returned (for verification purposes).
Patient Gender	Indicates the gender (sex) of the patient. Used to confirm the identity of the patient for the query.
Patient Birth Date	Indicates the date on which the patient was born. Used to confirm the identity of the patient for the query.
Query Identifier (✉)	Unique identifier for this query. Allows for continuation of a query across multiple messages;
Event Type (✉)	Indicates what sort of query is desired. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this query should be performed. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the query occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the query;
Time of Creation (✉)	The time the person responsible for creating the query made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the query may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the query;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the query
Created by Provider Id (✉)	The unique identifier of the provider responsible for the query. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Allergy/Intolerance Period	The period in which the recorded allergy/intolerance is considered active.
Allergy/Intolerance Change Period	Filters the query response to only include allergy/intolerance records which have been created or modified within the date-range specified.
Allergy/Intolerance Status	Indicates that the result set should be filtered to included only those allergy/intolerance records for the specified status. Valid statuses include: ACTIVE or COMPLETE.
Allergy/Intolerance Type	A coded value indicating whether to return allergy record or an intolerance record.
Reaction	Filters the query response to only include allergy and intolerance records which have an associated reaction of the indicated type
Query Limit (✉)	Indicates the desired maximum number of rows to be returned;
Event Reason (✉)	Provides a reason for the query;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the query;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the query;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query was electronically recorded;
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the query electronically;

Attribute/ Attribute Group	Notes
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the query into the DIS;
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider to access the information. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query originated;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access restrictions, etc.) with the query, along with how the issue has been managed by the query provider;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.3.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

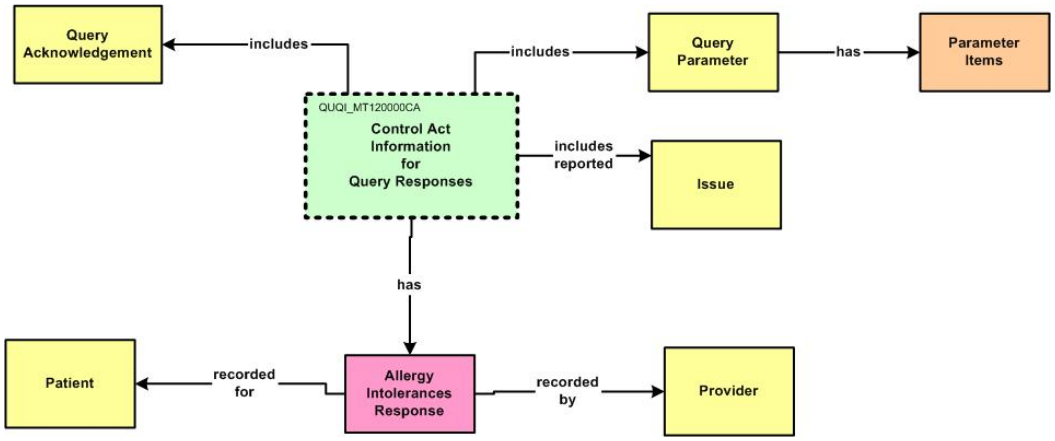

Figure 7 – C11.3 Get Patient Allergies, Intolerances – Accept Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Allergy/Intolerance Type	A coded value denoting whether the record pertains to an intolerance or true allergy. May be set to a code indicating “either allergy or non-allergy intolerance”
Agent	The drug, food or environmental substance to which the patient has an allergy or intolerance
Allergy/Intolerance Record Id	Unique identifier of the allergy/intolerance record.
Allergy/Intolerance Status	A coded value that indicates whether an allergy/intolerance is ‘ACTIVE’ (patient is still affected by the condition) or ‘COMPLETE’ (indicating no longer active).
Patient (🗁)	Identifies the patient for whom allergy/intolerance information is being recorded.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in ‘undos’;
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to ‘immediately’;
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Severity Level	Indicates the gravity of the allergy or intolerance in terms of its actual or potential impact on the patient.
Allergy/Intolerance Refuted	An indication that a clinician has determined that the patient does not suffer from a particular allergy or intolerance.
Allergy/Intolerance Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her allergy/intolerance information.
Allergy/Intolerance Date	The date on which the allergy or intolerance occurred and became active.
Notes Exist Indicator	An indication of the existence of allergy/intolerance notes. This merely indicates what types of notes exist.
Issue Indicator	An indication of the existence of reported issues for the medical condition record
Allergy/Intolerance supported by (🗁)	Information on a particular type of reaction experienced by the patient or testing performed on the patient which provides evidence for the existence (or non-existence) of the allergy/intolerance.
Reported Reactions (🗁)	Information on a patient's specific reaction that is believed to be associated with he allergy/intolerance.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Allergy Tests (🗁)	Information on the specific allergy test that supports the recording of the allergy/intolerance.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);

Attribute/ Attribute Group	Notes
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.3.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000004CA - Allergies Query**, Retrieve allergies and/or intolerances associated with a patient; • **(✉)QUQI_MT020000CA - Trigger**	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues

Message	Core Models	Key Supporting Models
	Event Wrapper for Queries, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **POMC_MT000005CA - Allergy/Intolerances Repsonse;** Returns list of allergies and intolerances in a query response; • (✉)**QUQI_MT120000CA - Trigger Event Wrapper for Query Responses**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.4 C11.4 Get Allergy, Intolerance Change History

4.2.4.1 Transaction Overview

This transaction allows the review of the set of changes that have occurred over the lifetime of an allergy or intolerance for a particular patient.

The transaction will be used when a patient has experienced an adverse reaction to a substance or drug and over time has had repeated exposure to the same substance during which time the reaction has abated or even disappeared. The history will allow providers or researcher to determine the abetting or worsening of an allergy or other adverse reaction over the period of time captured by the EHR.

4.2.4.2 Key Design Elements

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None.

4.2.4.3 Key Assumptions

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The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

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4.2.4.4 Request Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

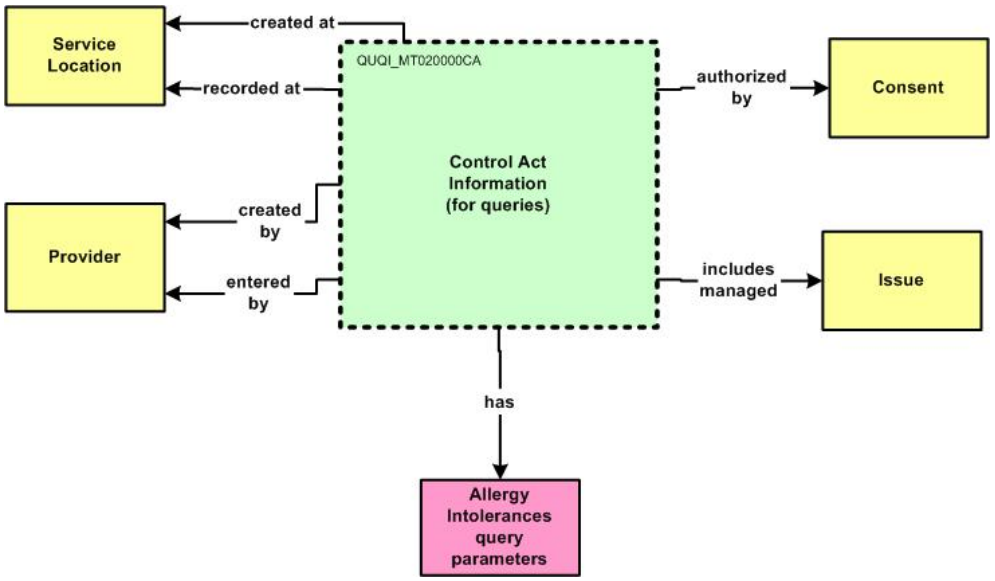

Figure 8 – C11.4 Get Allergy, Intolerance Change History – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Patient Id	Identifier of the patient whose condition history records are to be returned.
Patient Name	Name of the patient whose condition history records are be returned (for verification purposes).
Patient Gender	Indicates the gender (sex) of the patient. Used to confirm the identity of the patient for the query.
Patient Birth Date	Indicates the date on which the patient was born. Used to confirm the identity of the patient for the query.
Condition Identifier	Identifier of the Condition record to be retrieved. This can pertain to an allergy/intolerance or medical condition record.
Query Identifier (✉)	Unique identifier for this query. Allows for continuation of a query across multiple messages;
Event Type (✉)	Indicates what sort of query is desired. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this query should be performed. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the query occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the query;
Time of Creation (✉)	The time the person responsible for creating the query made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the query may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the query;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the query
Created by Provider Id (✉)	The unique identifier of the provider responsible for the query. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Query Limit (✉)	Indicates the desired maximum number of rows to be returned;
Event Reason (✉)	Provides a reason for the query;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the query;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the query;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query was electronically recorded;
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the query electronically;
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the query into the DIS;
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider to access the information. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query originated;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access restrictions, etc.) with the query, along with how the issue has been managed by the query provider;

Attribute/ Attribute Group	Notes
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.4.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

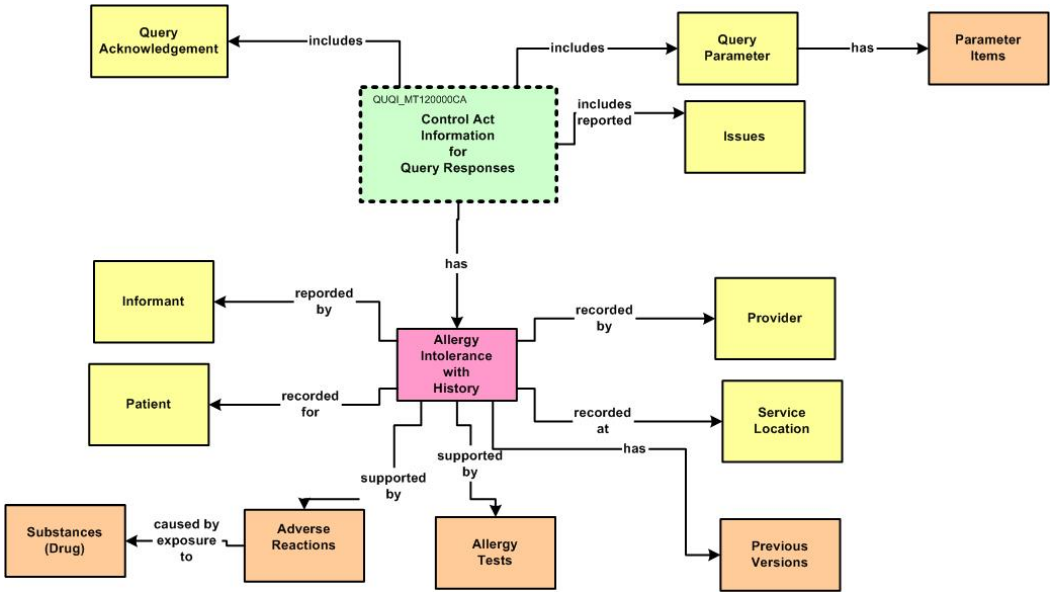

Figure 9 – C11.4 Get Allergy, Intolerance Change History – Accept Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Allergy/Intolerance Type	A coded value denoting whether the record pertains to an intolerance or true allergy. May be set to a code indicating "either allergy or non-allergy intolerance"
Agent	The drug, food or environmental substance to which the patient has an allergy or intolerance

Attribute/ Attribute Group	Notes
Allergy/Intolerance Record Id	Unique identifier for an allergy/intolerance record.
Allergy/Intolerance Status	A coded value that indicates whether an allergy/intolerance is 'ACTIVE' (patient is still affected by the condition) or 'COMPLETE' (indicating no longer active).
Patient (🗁)	Identifies the patient for whom allergy/intolerance information is being recorded.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Creator (🗁)	Identification of the provider who created the allergy or intolerance record.
Created by Provider ID	A unique identifier for the creator of the record. **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Provider Name is null.
Created by Provider Name	The name by which the creator of the record is known; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Provider ID is null;
Responsible Provider(🗁)	Identification of the provider who supervised the creation of the allergy or intolerance record.
Responsible Provider ID	A unique identifier for the provider who was supervising the actions of the Created by Provider (allergy/intolerance author); **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Responsible Provider Name is null;
Responsible Provider Name	The name of the supervising provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Responsible Provider ID is null;
Service Location(🗁)	Contact information for the service location where the allergy or intolerance originated.
Created at Service Location Address	The information by which the recording service location may be contacted either physically or by mail;
Created at Service Location Name	The name assigned to the recording service location;
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;

Attribute/ Attribute Group	Notes
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Severity Level	Indicates the gravity of the allergy or intolerance in terms of its actual or potential impact on the patient.
Allergy/Intolerance Refuted	An indication that a clinician has determined that the patient does not suffer from a particular allergy or intolerance.
Allergy/Intolerance Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her allergy/intolerance information.
Allergy/Intolerance Date	The date on which the allergy or intolerance occurred and became active.
Informant Code	A coded value denoting the source of the allergy/intolerance information as being the patient, the patient's representative or the provider.
Allergy/Intolerance supported by (🗁)	Information on a particular type of reaction experienced by the patient or testing performed on the patient which provides evidence for the existence (or non-

Attribute/ Attribute Group	Notes
	existence) of the allergy/intolerance.
Reported Reactions (🗁)	Information on a patient's specific reaction that is believed to be associated with he allergy/intolerance. Includes reaction type, severity, No Reaction indicator, onset date, description and id
Exposures (🗁)	Information on the agent(s) that are believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Allergy Tests (🗁)	Information on the specific allergy test that supports the recording of the allergy/intolerance. Includes test type, test identifier, test date and test result
Notes (🗁)	Additional comments recorded about the allergy or intolerance.
Notes (🗁)	This is a list of comments made about the allergy/intolerance by providers. It includes note type, note text and note recorded date;
Note Created by Provider (🗁)	Indicates the name, identifier and license number of the provider who created a note;
Status Changes (🗁)	Indicates the change which caused a particular version of the allergy record to come into being. Includes: type of change, change effective date, change reason and change time
Changed by (🗁)	Indicates the name, identifier and license number of the provider who caused the current version of the allergy/intolerance record to exist;
Previous version (🗁)	Contains the complete contents of a previous version of the allergy or intolerance. Prior versions may be reached by tracing to the previous version of the previous version, etc.
Issues & Managements (🗁)	Detailed information indicating issues (drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) that were detected with the recording of the allergy or intolerance, along with how the issues might have been managed by the provider.
Issue Caused By (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue could have been caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);

Attribute/ Attribute Group	Notes
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.4.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000008CA - Condition History Query**, Retrieve details about allergy or intolerance recorded for a patient;	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues

Message	Core Models	Key Supporting Models
	• (✉)**QUQI_MT020000CA - Trigger Event Wrapper for Queries**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **POMC_MT000009CA - Allergy/Intolerance with History**, Returns information about a single allergy or intolerance including history in a query response; • **(✉)QUQI_MT120000CA - Trigger Event Wrapper for Query Responses**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	
Query Continuation	Please consult the query infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.5 C11.5 Add Patient Adverse Reactions

4.2.5.1 Transaction Overview

This transaction allows the recording of a specific occurrence of an adverse reaction on a patient's record.

The most appropriate time to record a specific occurrence is at the time of the event and this transaction will allow the provider to record the specifics of the reaction and often allows the distinction between a true allergic reaction and an intolerance to the specific agent in question.

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4.2.5.2 Key Design Elements

None.

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4.2.5.3 Key Assumptions

The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

4.2.5.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

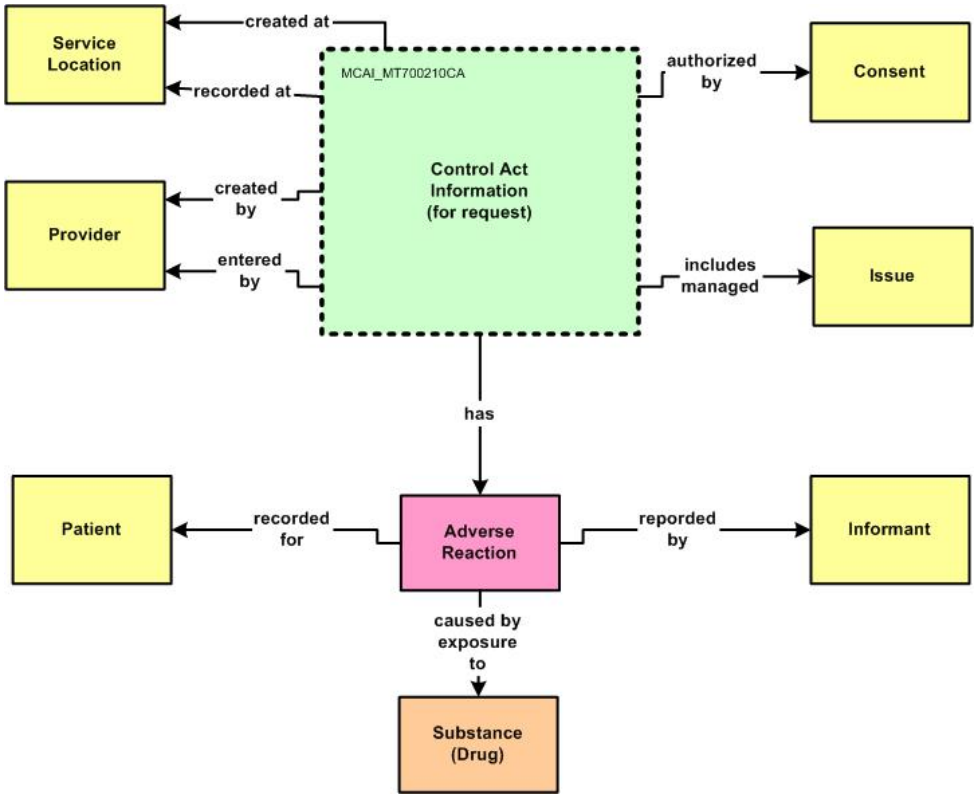

Figure 10 – C11.5 Add Patient Adverse Reactions – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Patient (🗁)	Identifies the patient for whom adverse reaction information is being recorded.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth	Communicates the birth date of the patient to help confirm the identity of the patient.

Attribute/ Attribute Group	Notes
Date	
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Reaction	A coded value denoting the specific reaction experienced by the patient.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Reaction Onset Date	The date on which the reaction first occurred.
Severity Level	Indicates the gravity of the reaction in terms of its actual or potential impact on the patient.
Adverse Reaction Comment Text	Free text comment about the adverse reaction.
Information Source	A coded value denoting the source of the adverse reaction information as being the patient, the patient's representative or the provider.
Exposure (🗁)	Information on a particular type of reaction experienced by the patient which provides evidence for the adverse reaction.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Exposure Method	The method by which the patient was exposed to the substance.
Incidence Identifier	Identifier of the exposure event that caused the adverse reaction. This could be an identifier for a prescription, immunization, or other active medication record.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the

Attribute/ Attribute Group	Notes
	issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.5.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

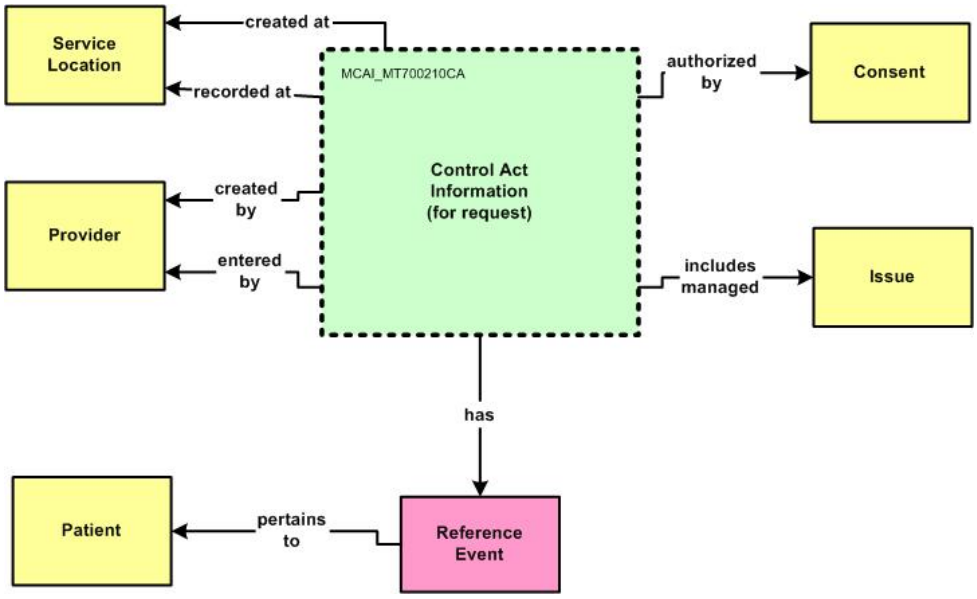

Figure 11 – C11.5 Add Patient Adverse Reactions – Accept Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Record Id	Specifies the unique identifier of the record which has been successfully created
Patient (🗁)	Used to ensure linking of the identifier to the correct patient record;
Patient Identifier	Uniquely identifies the patient;
Patient Name	Indicates the name of the patient for cross-checking purposes;
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Event Reason	Provides a reason for the requested change or addition;

Attribute/ Attribute Group	Notes
(✉)	
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created at Service Delivery Location Type (✉)	A code identifying the kind of Service Delivery Location. Examples are: pharmacy, clinic, hospital, long term care, *etc;*
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber); **Note:** A constraint exists that either Created by Provider ID or Created by Provider Name must be specified;
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider ID (✉)	A unique identifier for a provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider Name is null;
Created by Provider Name (✉)	The name by which the provider is known; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;
Responsible Provider ID (✉)	A unique identifier for the provider who was supervising the actions of the Created by Provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;
Responsible Provider Name (✉)	The name of the supervising provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which a Service Delivery Location may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location;

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed prescription, along with how the issue has been managed by the prescriber;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

4.2.5.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000002CA - Adverse Reaction**, Used to record patient adverse reactions; • (✉)**MCAI_MT700210CA - Trigger Event Wrapper for Acts from Clinical**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• **COCT_MT050002CA – Patient**, to identify the patient; • **POME_MT000002CA – Administrable Medication**, to describe the drug prescribed; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided;

Message	Core Models	Key Supporting Models
		• (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **MFMT_MT000001CA – Event Id**, to identify the Adverse Reaction Record Number; • (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Refuse)	• (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.6 C11.6 Update Patient Adverse Reactions

4.2.6.1 Transaction Overview

The intention of this transaction is to update an existing adverse reaction record for a patient.

It is common for patients to identify all reactions as allergies whereas most are simple intolerances to the substance such as nausea or headache. The provider will be able to use this transaction to add further information that would allow, for example, the distinction between allergies and other adverse reactions to drugs or non drug substances. An example of this would be to append a comment indicating that a previously identified allergy to Demerol for pain which was nausea was in fact, an intolerance and this would not preclude using the drug at another time.

4.2.6.2 Key Design Elements

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None.

4.2.6.3 Key Assumptions

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The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

4.2.6.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

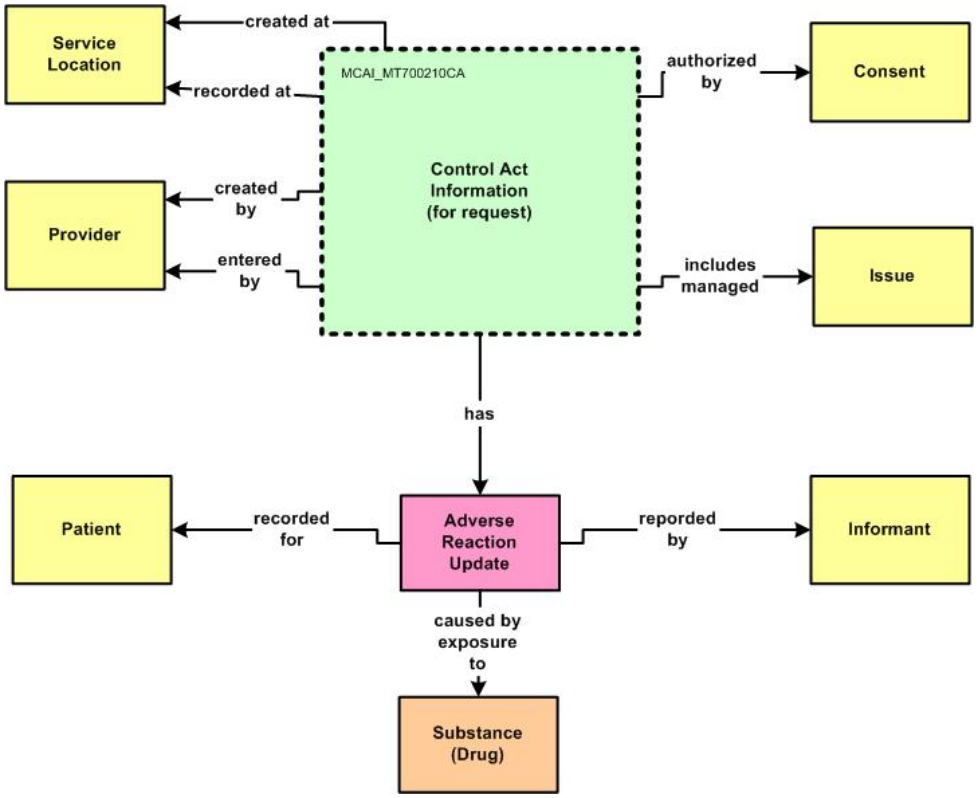

Figure 12 – C11.6 Update Patient Adverse Reactions – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Adverse Reaction Record Id	Unique identifier of the adverse reaction record to be updated.
Patient (🗁)	Identifies the patient for whom adverse reaction information is being recorded.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;

Attribute/ Attribute Group	Notes
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Reaction	A coded value denoting the specific reaction experienced by the patient.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Reaction Date	The date on which the reaction first occurred.
Severity Level	Indicates the gravity of the reaction in terms of its actual or potential impact on the patient.
Adverse Reaction Comment Text	Free text comment about the adverse reaction.
Information Source	A coded value denoting the source of the adverse reaction information as being the patient, the patient's representative or the provider.
Exposure (🗁)	Information on a particular type of reaction experienced by the patient which provides evidence for the adverse reaction.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Exposure Method	The method by which the patient was exposed to the substance.
Incidence Identifier	Identifier of the exposure event that caused the adverse reaction. This could be an identifier for a prescription, immunization, or other active medication record.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;

Attribute/ Attribute Group	Notes
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.6.5 Response (Accept) Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

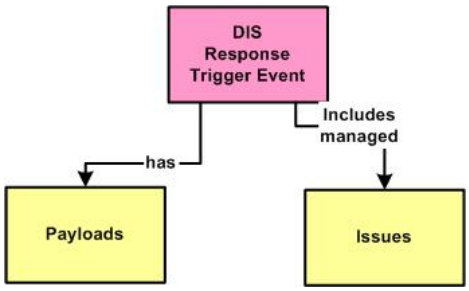

Figure 13 – C11.6 Update Patient Adverse Reactions – Response Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction. Used for debugging only;
Event Effective Period (✉)	Indicates when the event was performed;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Event Reason (✉)	Provides a reason for the refusal to act or for a variation in the requested action;
Issues & Managements (✉) (🗁)	Detailed information indicating detected issues (access authority, identifier issues, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed action, along with how the issue might be managed by the requesting provider;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur and how it has been managed; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;

Attribute/ Attribute Group	Notes
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

4.2.6.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000012CA - Adverse Reaction Update**, Allows information about a previously recorded adverse reaction to be changed; • (✉)**QUQI_MT020000CA - Trigger Event Wrapper for Queries**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260002CA – Detected Issues**, to note any medication issues that have been managed;
Response (Refuse)	• (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260001CA – Detected Issues**, to note any medication issues that have been managed;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.7 C11.7 Get Patient Adverse Reactions

4.2.7.1 Transaction Overview

The intention of this transaction is to retrieve a list of adverse reactions that have been recorded against a patient's record.

Since adverse reactions to drugs or non drug substances cause considerable morbidity and some mortality, this transaction will allow the provider to retrieve a list of these such occurrences for a patient. It will be used when a provider is trying to determine which adverse reaction is a true allergy and which might be other reactions which might be mitigated by other drugs. (i.e. the adverse reaction to NSAID medications can be mitigated by using a gastric protective medication such as a PPI).

4.2.7.2 Key Design Elements

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None.

4.2.7.3 Key Assumptions

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The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

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4.2.7.4 Request Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

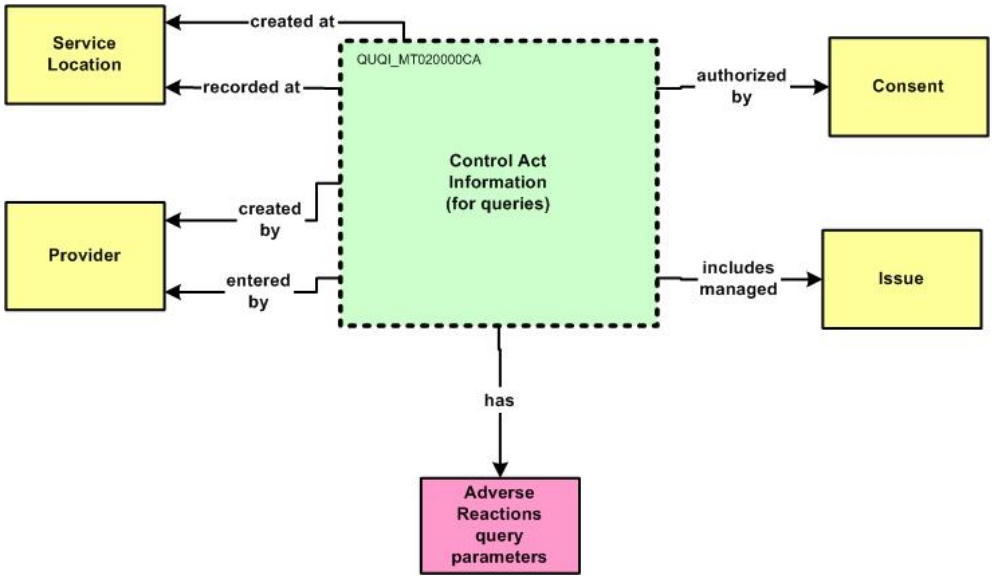

Figure 14 – C11.7 Get Patient Adverse Reactions – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Patient Id	Identifier of the patient whose adverse reaction records are to be returned.
Patient Name	Name of the patient whose adverse reaction records are be returned (for verification purposes).
Patient Gender	Indicates the gender (sex) of the patient. Used to confirm the identity of the patient for the query.
Patient Birth Date	Indicates the date on which the patient was born. Used to confirm the identity of the patient for the query.
Query Identifier (✉)	Unique identifier for this query. Allows for continuation of a query across multiple messages;
Event Type (✉)	Indicates what sort of query is desired. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this query should be performed. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the query occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the query;
Time of Creation (✉)	The time the person responsible for creating the query made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the query may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the query;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the query
Created by Provider Id (✉)	The unique identifier of the provider responsible for the query. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Reaction Period	The period in which the recorded adverse reaction occurred or was updated. I.e. Filters the result-set to those reactions whose onset occurred within the time-range specified by this parameter.
Reaction Type	Indicates that the result set be filtered to include only those allergy/intolerance records for which specific type of reaction was recorded. Reaction types include: STEVEN JOHNSON, ANAPHYLAXIS, NAUSEA, etc.
Query Limit (✉)	Indicates the desired maximum number of rows to be returned;
Event Reason (✉)	Provides a reason for the query;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the query;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the query;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query was electronically recorded;
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the query electronically;
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the query into the DIS;
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider to access the information. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;

Attribute/ Attribute Group	Notes
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query originated;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access restrictions, etc.) with the query, along with how the issue has been managed by the query provider;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.7.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

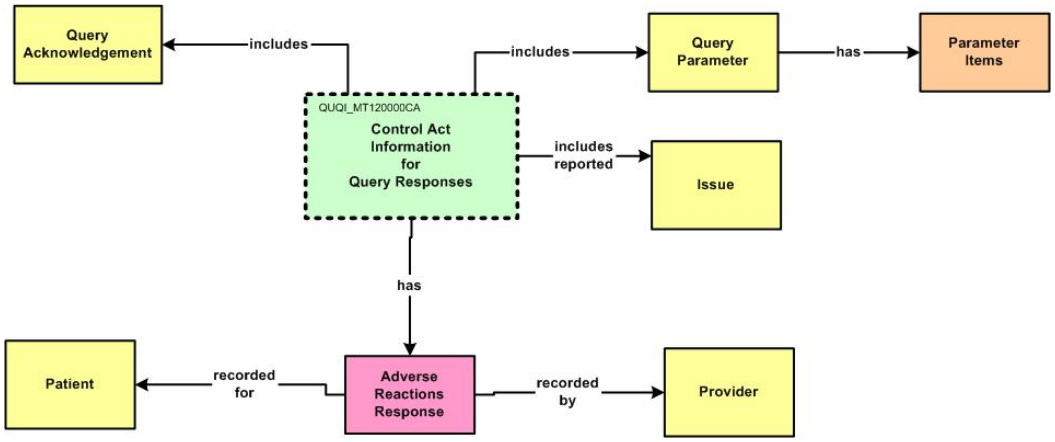

Figure 15 – C11.7 Get Patient Adverse Reactions – Response (Accept) Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Adverse Reaction Record Id	Unique identifier of the adverse reaction record.
Patient (🗁)	Identifies the patient for whom adverse reaction information is being recorded.
Patient Identifier	Unique identifier for the patient.

Attribute/ Attribute Group	Notes
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Creator (🗁)	Identification of the provider who created the adverse reaction record.
Created by Provider ID	A unique identifier for the creator of the record. **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Provider Name is null.
Created by Provider Name	The name by which the creator of the record is known; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Provider ID is null;
Responsible Provider(🗁)	Identification of the provider who supervised the creation of the adverse reaction record.
Responsible Provider ID	A unique identifier for the provider who was supervising the actions of the Created by Provider (allergy/intolerance author); **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Responsible Provider Name is null;
Responsible Provider Name	The name of the supervising provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Responsible Provider ID is null;
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Reaction	A coded value denoting the specific reaction experienced by the patient.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Reaction Date	The date on which the reaction first occurred.
Severity Level	Indicates the gravity of the reaction in terms of its actual or potential impact on the patient.
Adverse Reaction Comment Text	Free text comment about the adverse reaction.
Information Source	A coded value denoting the source of the adverse reaction information as being the patient, the patient's representative or the provider.
Exposure (🗁)	Information on a particular type of reaction experienced by the patient which provides evidence for the adverse reaction.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Exposure Method	The method by which the patient was exposed to the substance.
Incidence Identifier	Identifier of the exposure event that caused the adverse reaction. This could be an identifier for a prescription, immunization, or other active medication record.
Issues & Managements (🗁)	Detailed information indicating issues (drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) that were detected with the recording of the adverse reaction, along with how the issues might have been managed by the provider.
Issue Caused By (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue could have been caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;

Attribute/ Attribute Group	Notes
Dispense (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;

Attribute/ Attribute Group	Notes
Observations (✉) (🗁)	
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.7.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000016CA - Adverse Reactions Query**, Retrieve adverse reactions associated with a patient; • (✉)**QUQI_MT020000CA - Trigger Event Wrapper for Queries**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **POMC_MT000006CA - Adverse Reactions Response**, Returns adverse events in a query response; • (✉)**QUQI_MT120000CA - Trigger Event Wrapper for Query Responses**, ????	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.8 C11.8 Adverse Reaction Notification

4.2.8.1 Transaction Overview

Health jurisdictions such as Health Canada regularly send notifications to providers about potential adverse drug reactions which are not patient specific but which can affect patients in general and this transaction would allow this to occur more rapidly and conveniently. An example of this transaction would be when certain drugs in large doses can cause serious adverse reactions such as high dose statin therapy which has an affect on muscle.

4.2.8.2 Key Design Elements

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None.

4.2.8.3 Key Assumptions

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The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)

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4.2.8.4 Request Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

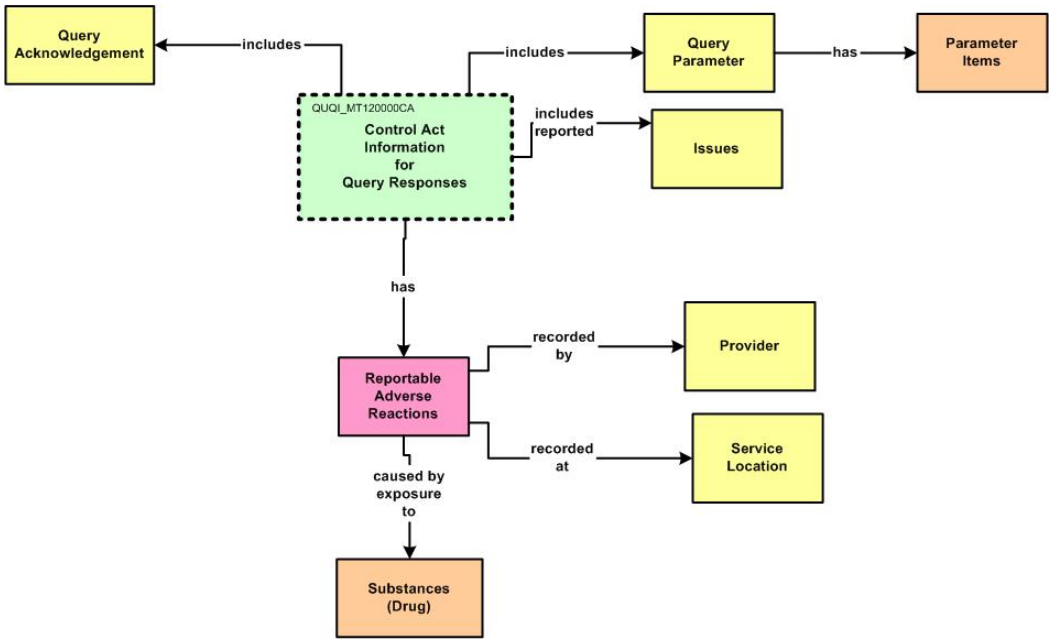

Figure 16 – C11.8 Adverse Reaction Notification – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Adverse Reaction Record Id	Unique identifier of the adverse reaction record.
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Reaction	A coded value denoting the specific reaction experienced by the patient.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;

Attribute/ Attribute Group	Notes
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Reaction Date	The date on which the reaction first occurred.
Severity Level	Indicates the gravity of the reaction in terms of its actual or potential impact on the patient.
Informant Code	A coded value denoting the source of the adverse reaction information as being the patient, the patient's representative or the provider.
Exposure (🗁)	Information on a particular type of reaction experienced by the patient which provides evidence for the adverse reaction.
Exposure to Agent (🗁)	Information on the agent that is believed to have caused the adverse reaction. Types of agent include: Drug, Food, Pollen, etc.
Exposure Method	The method by which the patient was exposed to the substance.
Incidence Identifier	Identifier of the exposure event that caused the adverse reaction. This could be an identifier for a prescription, immunization, or other active medication record.
Adverse Reaction Comment Text	Free text comment about the adverse reaction.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);

Attribute/ Attribute Group	Notes
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.8.5 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Notification	• **POMC_MT000011CA - Reportable Adverse Reaction**, Used to send information about a "reportable" adverse reaction; • (✉)**MCAI_MT700210CA - Trigger Event Wrapper for Acts from Clinical**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the	• (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;

Message	Core Models	Key Supporting Models
	message;	
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.9 C12.1 Add Patient Medical Condition

4.2.9.1 Transaction Overview

This transaction is used to record a medical condition (i.e. indication, diagnosis) against a patient's record.

This transaction allows a provider wishes to enter a medical condition which may affect prescribing and dispensing behaviour. This information will aide both the providers and the dispensers of medication important knowledge which will guide further prescribing and dispensing.

4.2.9.2 Key Design Elements

None.

4.2.9.3 Key Assumptions

The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)
28	Diagnosis	The prescription supports (at the level of "populated") sending the indication(s) for the Rx in question. Medical conditions are not supported as a component of the prescription but are available through queries, which may be role based and /or by consent only. Only those with the authority to diagnose as per their Standard of Practice may enter medical conditions in the role of author. Others may be able to record the information through delegation. It is recognised that not all indications are appropriate for recording in the patient's EHR e.g. preliminary indication.

4.2.9.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

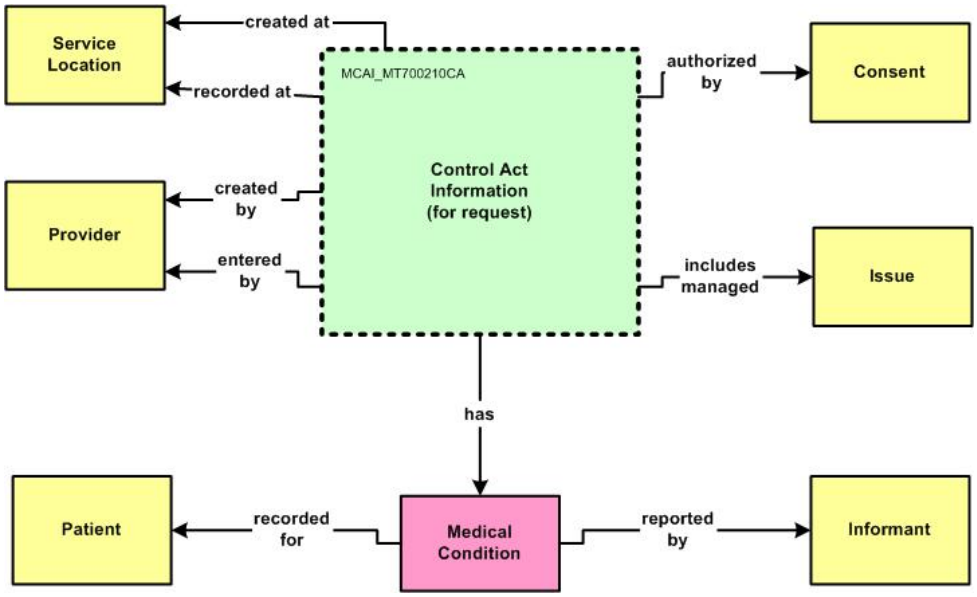

Figure 17 – C12.1 Add Patient Medical Condition – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Condition	A coded value indicating the specific condition being recorded. E.g. Hypertension, Pregnancy, etc.
Patient (🗁)	Identifies the patient for whom medical condition information is being recorded.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective	Indicates when this change should come into effect. Usually left blank, defaulting to

Attribute/ Attribute Group	Notes
Period (✉)	'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Condition Status	A coded value that indicates whether the condition is still impacting the patient. Status of 'ACTIVE' means the condition is still affecting the patient. 'COMPLETE' means the condition no longer holds.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes

Attribute/ Attribute Group	Notes
Condition Time Period	Indicates the date on which the condition first began and when it ended.
Condition Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her medical condition information.
Information Source	A coded value denoting the source of the medical condition information as being the patient, the patient's representative or the provider.
Medical Condition Notes (🗁)	Additional textual information entered by the author or data-enterer about the medical condition record.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy

Attribute/ Attribute Group	Notes
Observations (✉) (🗁)	status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.9.5 Response (Accept) Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

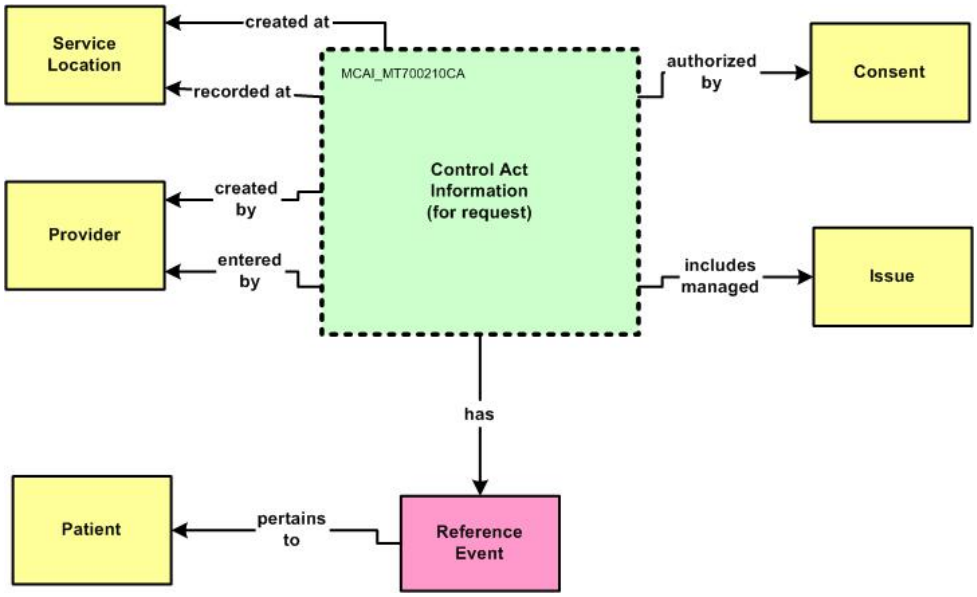

Figure 18 – C12.1 Add Patient Medical Condition – Response Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Record Id	Specifies the unique identifier of the record which has been successfully created
Patient (🗁)	Used to ensure linking of the identifier to the correct patient record;
Patient Identifier	Uniquely identifies the patient;
Patient Name	Indicates the name of the patient for cross-checking purposes;
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Event Reason (✉)	Provides a reason for the requested change or addition;
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created at Service Delivery Location Type (✉)	A code identifying the kind of Service Delivery Location. Examples are: pharmacy, clinic, hospital, long term care, *etc;*
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber); **Note:** A constraint exists that either Created by Provider ID or Created by Provider Name must be specified;
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider ID (✉)	A unique identifier for a provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider Name is null;
Created by Provider Name (✉)	The name by which the provider is known; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;
Responsible Provider ID (✉)	A unique identifier for the provider who was supervising the actions of the Created by Provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;
Responsible Provider Name (✉)	The name of the supervising provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute must be specified if Provider ID is null;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which a Service Delivery Location may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location;

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed prescription, along with how the issue has been managed by the prescriber;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

4.2.9.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000003CA - Medical condition**, Used to record patient medical conditions (other than allergies and intolerances); • (✉)**MCAI_MT700210CA - Trigger Event Wrapper for Acts from Clinical**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• **COCT_MT050002CA – Patient**, to identify the patient; • **POME_MT000002CA – Administrable Medication**, to describe the drug prescribed; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **COMT_MT000001CA - Event Id**, Used to indicate identifier created or adopted by receiving system; • (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Refuse)	• **MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.10 C12.2 Update Patient Medical Condition

4.2.10.1 Transaction Overview

This transaction will update patient medical condition information.

Information on a record occasionally become out-of-date and in need of correction or updating and in such instances this transaction would allow important new information to be entered into the record and an example of this would be in the case where a patient's creatinine level were to increase due to some medical condition such as diabetes. This would be important information to guide future prescribing.

4.2.10.2 Key Design Elements

None.

4.2.10.3 Key Assumptions

The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)
28	Diagnosis	The prescription supports (at the level of "populated") sending the indication(s) for the Rx in question. Medical conditions are not supported as a component of the prescription but are available through queries, which may be role based and /or by consent only. Only those with the authority to diagnose as per their Standard of Practice may enter medical conditions in the role of author. Others may be able to record the information through delegation. It is recognized that not all indications are appropriate for recording in the patient's EHR e.g. preliminary indication.

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4.2.10.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

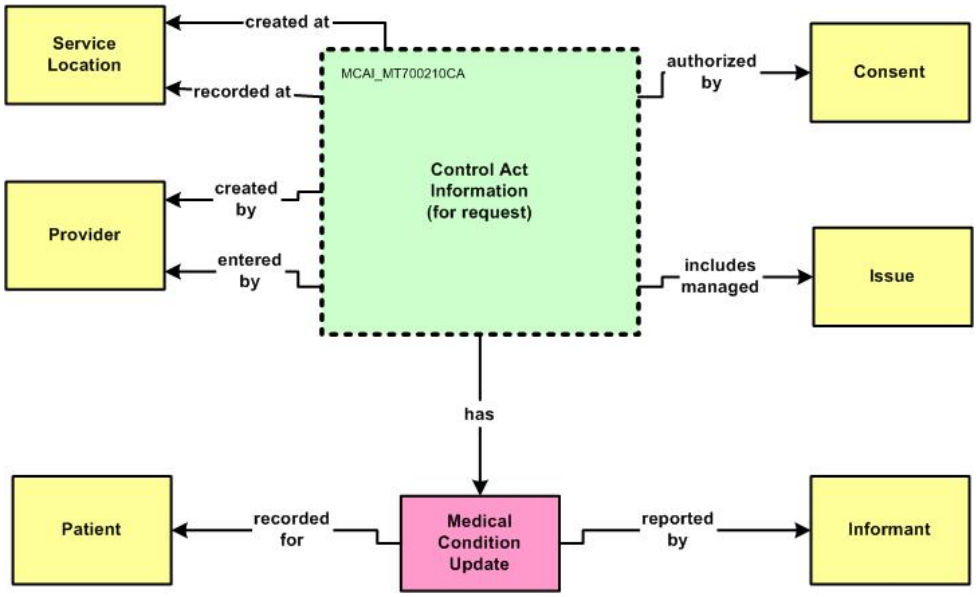

Figure 19 – C12.2 Update Patient Medical Condition – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Medical Condition Record Id	A unique identifier of the medical condition record that is being updated.
Condition	A coded value indicating the specific condition being updated. E.g. Hypertension, Pregnancy, etc.
Medical Condition Masking Indicator	Communicates the intent that the medical condition record should be masked or unmasked.
Patient (🗁)	Identifies the patient whose medical condition record is being updated.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.

Attribute/ Attribute Group	Notes
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation (✉)	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Condition Status	A coded value that indicates whether the condition is still impacting the patient. Status of 'ACTIVE' means the condition is still affecting the patient. 'COMPLETE' means the condition no longer holds.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Condition Time Period	Indicates the date on which the condition first began and when it ended.
Condition Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her medical condition information.
Information Source	A coded value denoting the source of the medical condition information as being the patient, the patient's representative or the provider.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the event occurred;
Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed request, along with how the issue has been managed by the submitter;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉)	Indicates a particular dispense event that resulted in the issue;

Attribute/ Attribute Group	Notes
(🗁)	
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.10.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

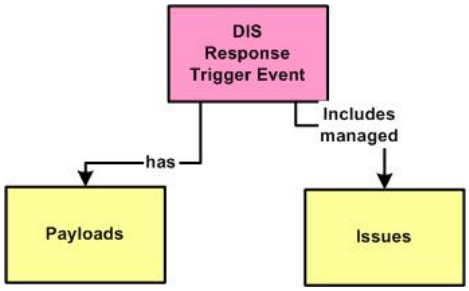

Figure 20 – C12.2 Update Patient Medical Condition – Response (Accept) Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction. Used for debugging only;
Event Effective Period (✉)	Indicates when the event was performed;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Event Reason (✉)	Provides a reason for the refusal to act or for a variation in the requested action;
Issues & Managements (✉) (🗁)	Detailed information indicating detected issues (access authority, identifier issues, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) with the proposed action, along with how the issue might be managed by the requesting provider;
Issue Caused By (✉) (🗁)	Indicates the event/process that caused the issue to occur and how it has been managed; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (✉) (🗁)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (✉) (🗁)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (✉) (🗁)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.10.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000014CA - Medical Condition Update**, Allows information about a previously recorded medical condition to be changed; • (✉)**MCAI_MT700210CA - Trigger Event Wrapper for Acts from Clinical**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260002CA – Detected Issues**, to note any medication issues that have been managed;
Response (Refuse)	• (✉)**MCAI_MT700220CA - Trigger Event Wrapper for Act Responses from EHR**, describes the framework for tracking the responsibility for creating and entering the message, and together with the payload message, make up the clinical content of the message;	(✉)**COCT_MT260001CA – Detected Issues**, to note any medication issues that have been managed;
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

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4.2.11 C12.3 Get Patient Medical Conditions

4.2.11.1 Transaction Overview

This transaction allows the retrieval of the list of recorded patient medical conditions (indications, diagnosis).

It is of great assistance to know why certain drugs have been prescribed for a patient over time and where this information has been recorded, it can be obtained from the record to determine which medications have been effective against a certain condition; this might be either a diagnosis or simple a physiologic state for which further prescribing needs to be done with caution such as in pregnancy.

4.2.11.2 Key Design Elements

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None.

4.2.11.3 Key Assumptions

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The following key assumptions may affect final message content. Detailed descriptions of these assumptions are tracked in *PN502-0004-EN - Standards Development Tracking Logs - yyyymmdd.xls*.

#	Topic	Description (first 50 words only)
28	Diagnosis	The prescription supports (at the level of "populated") sending the indication(s) for the Rx in question. Medical conditions are not supported as a component of the prescription but are available through queries, which may be role based and /or by consent only. Only those with the authority to diagnose as per their Standard of Practice may enter medical conditions in the role of author. Others may be able to record the information through delegation. It is recognized that not all indications are appropriate for recording in the patient's EHR e.g. preliminary indication.

4.2.11.4 Request Message

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Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

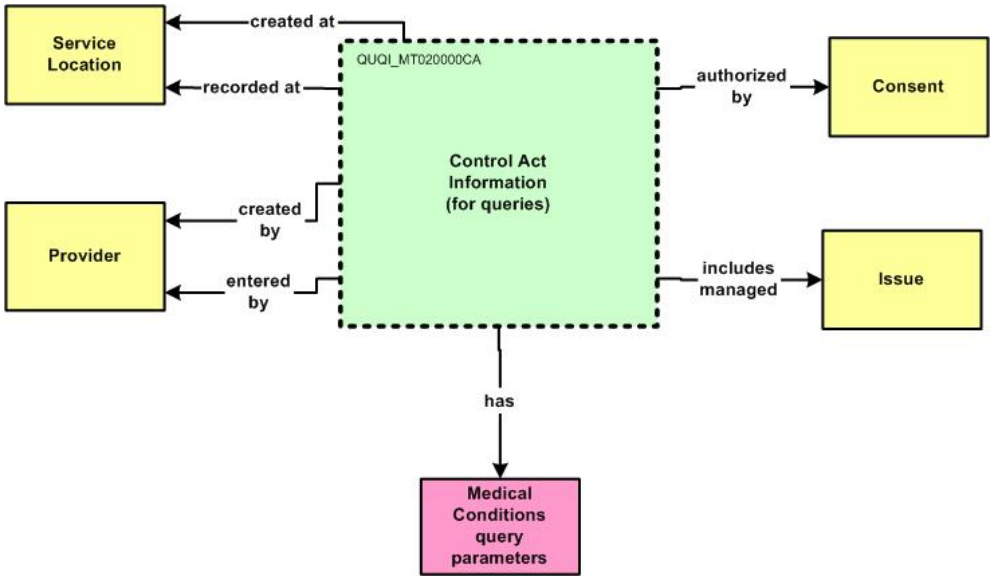

Figure 21 – C12.3 Get Patient Medical Conditions – Request Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Patient Id	Identifier of the patient whose medical condition records are to be returned.
Patient Name	Name of the patient whose medical condition records are be returned (for verification purposes).
Patient Gender	Indicates the gender (sex) of the patient. Used to confirm the identity of the patient for the query.
Patient Birth Date	Indicates the date on which the patient was born. Used to confirm the identity of the patient for the query.
Query Identifier (✉)	Unique identifier for this query. Allows for continuation of a query across multiple messages;
Event Type (✉)	Indicates what sort of query is desired. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective	Indicates when this query should be performed. Usually left blank, defaulting to

Attribute/ Attribute Group	Notes
Period (✉)	'immediately';
Created at (✉) (🗁)	Indicated the Service Delivery Location where the query occurred;
Created at Service Delivery Location ID (✉)	Unique identifier for a healthcare Service Delivery Location;
Created by (✉) (🗁)	Indicates the person responsible for the query;
Time of Creation (✉)	The time the person responsible for creating the query made the decision for it to occur;
Created by Provider Name (✉)	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the query may be contacted either physically or by mail;
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the query;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the query
Created by Provider Id (✉)	The unique identifier of the provider responsible for the query. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Medical Condition Change Period	The response is filtered to only include those medical conditions which have been created or updated within the time-range specified

Attribute/ Attribute Group	Notes
Medical Condition Status	The response is filtered to only include those medical conditions with the specified status. E.g. Only return 'active' medical conditions.
Query Limit (✉)	Indicates the desired maximum number of rows to be returned;
Event Reason (✉)	Provides a reason for the query;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the query;
Creation Supervised by Responsible Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the query;
Recorded at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query was electronically recorded;
Entered by Provider (✉)(🗁)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the query electronically;
Entry Supervised by Provider (✉)(🗁)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the query into the DIS;
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider to access the information. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;
Created at Service Location (✉)(🗁)	Indicates the Service Delivery Location where the query originated;
DUR Issues & Managements (✉) (🗁)	Detailed information indicating potential issues (access restrictions, etc.) with the query, along with how the issue has been managed by the query provider;
Issue Managements (✉) (🗁)	Indicates how the issue has been managed;

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4.2.11.5 Response Message

Details for each attribute or attribute group can be found in the Design Models (PN502-2003 series documents). Attribute groups are marked with (🗁). Attributes or attribute groups marked with (✉) are specified in the wrapper for the specific message.

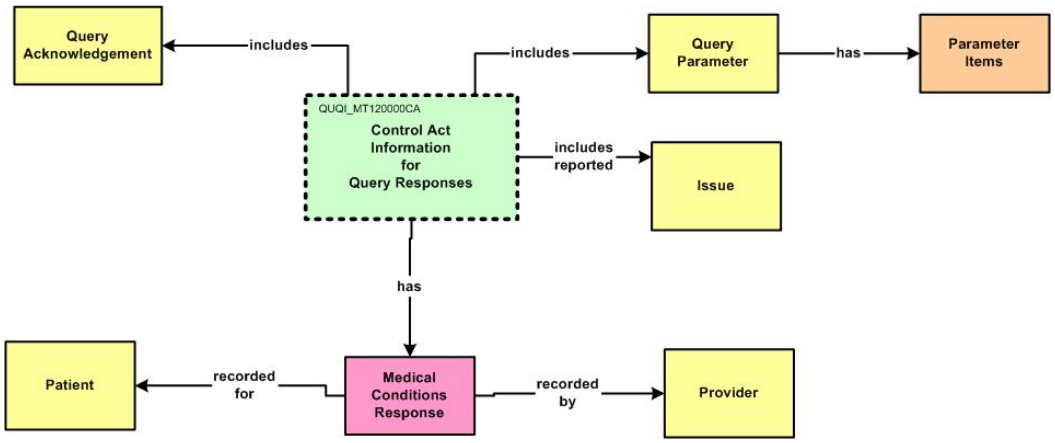

Figure 22 – C12.3 Get Patient Medical Conditions – Response (Accept) Message

Minimum Mandatory Attributes/Attribute Groups (Must Exist)

The following table summarizes Minimum Mandatory attributes and/or attribute groups which *must* be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Medical Condition Record Id	Unique identifier for the medical condition record.
Condition	A coded value indicating the specific condition being recorded. E.g. Hypertension, Pregnancy, etc.
Patient (🗁)	Identifies the patient to whom medical condition information pertains.
Patient Identifier	Unique identifier for the patient.
Patient Name	Name by which the patient is known;
Patient Gender	Communicates the gender of the patient to help confirm the identity of the patient;
Patient Birth Date	Communicates the birth date of the patient to help confirm the identity of the patient.
Creator (🗁)	Identification of the provider who created the medical condition record.
Created by Provider ID	A unique identifier for the creator of the record. **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Provider Name is null.
Created by	The name by which the creator of the record is known;

Attribute/ Attribute Group	Notes
Provider Name	**Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Provider ID is null;
Responsible Provider(🗁)	Identification of the provider who supervised the creation of the medical condition record.
Responsible Provider ID	A unique identifier for the provider who was supervising the actions of the Created by Provider (allergy/intolerance author); **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Responsible Provider Name is null;
Responsible Provider Name	The name of the supervising provider; **Note:** Although this attribute has been defined as Populated, a constraint exists that this attribute will exist if Responsible Provider ID is null;
Event Type (✉)	Indicates what sort of action occurred. This will be echoed back when retrieving history. The appropriate code is determined by which interaction is being sent.
Event Identifier (✉)	Unique identifier for this transaction, used in 'undos';
Event Effective Period (✉)	Indicates when this change should come into effect. Usually left blank, defaulting to 'immediately';
Created at (🗁)	Indicated the Service Delivery Location where the event occurred;
Created at Service Delivery Location ID	Unique identifier for a healthcare Service Delivery Location;
Created by (🗁)	Indicates the person responsible for the event that caused this message (e.g. prescriber);
Time of Creation	The time the person responsible for creating the event made the decision for it to occur;
Created by Provider Name	The name by which the provider is known;

Minimum Populated Attributes/Attribute Groups (Expected to Exist)

The following table summarizes Minimum Populated attributes and/or attribute groups which are *expected* to be specified in every message.

Note that the table does not include mandatory or populated attributes and/or attribute groups from the Trigger Event Wrapper for Acts that are considered purely technical in nature. Technical audiences may wish to consult the detailed specifications for further information.

Attribute/ Attribute Group	Notes
Condition Status	A coded value that indicates whether the condition is still impacting the patient. Status of 'ACTIVE' means the condition is still affecting the patient. 'COMPLETE' means the condition no longer holds.
Created at Service Delivery Location Address (✉)	The information by which the Service Delivery Location responsible for the action may be contacted either physically or by mail;

Attribute/ Attribute Group	Notes
Created at Service Delivery Location Name (✉)	The name assigned to the Service Delivery Location responsible for the action;
Created at Service Location Phone and E-mails (✉)	The phone, fax and/or e-mail contact information that can be used to reach the service delivery location responsible for the action
Created by Provider Id (✉)	The unique identifier of the provider responsible for the action. This is only populated rather than mandatory because not all providers have identifiers.

Additional Attributes and/or Attribute Groups

The following table includes all top-level attributes and/or attribute groups in the payload message. The table also includes selected attributes and attribute groups from any applicable wrappers.

Attribute/ Attribute Group	Notes
Condition Time Period	Indicates the date on which the condition first began and when it ended.
Condition Masking Indicator	Denotes whether or not the patient has put a restriction on access to his/her medical condition information.
Notes Indicator	An indication of the existence of medical condition notes. This is a set of codes indicating what type(s) of notes exist
Issue Indicator	An indication of the existence of reported issues for the medical condition record. This is a simple Y/N value.
Event Reason (✉)	Provides a reason for the requested change or addition;
Created by Provider License Number (✉)	The professional license number of the provider responsible for the action;
Creation Supervised by Responsible Provider (🗁)(✉)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the action;
Recorded at Service Location (🗁)(✉)	Indicates the Service Delivery Location where the event was electronically recorded (e.g. the pharmacy where a prescription was entered);
Entered by Provider (🗁)(✉)	Indicates the name, identifier, license number and phone/e-mail information of the provider who recorded the action electronically (e.g. the pharmacy technician who transcribed a faxed prescription into the system.);
Entry Supervised by Provider (🗁)(✉)	Indicates the name, identifier and license number of the provider who accepts professional responsibility for the correct entry of the action into the DIS (e.g. the pharmacist who supervised the pharmacy technician who transcribed a faxed prescription into the system.);
Consent (✉) (🗁)	Information documenting the consent which authorizes the provider who recorded the information to place it in the DIS. Includes Consent form number, end time, override reason, keyword, verbal vs. written indicator, consenting person, authorized person or facility;

Attribute/ Attribute Group	Notes
Created at Service Location (🗁)(✉)	Indicates the Service Delivery Location where the event occurred;
Reported Issues (🗁)(✉)	Detailed information indicating potential issues (access authority, identifier recognition, drug-drug interactions, dosage issues, duplicate therapy, drug-allergy, drug-lab, age appropriateness, *etc*.) along with how the issue has been managed by the submitter;
Issue Caused By (🗁)(✉)	Indicates the event/process that caused the issue to occur; **Note:** The issue can be caused by Active Medication (🗁)and/or Dispense (🗁), and/or Patient Coded Observations (🗁) and/or Patient Measurable Observations (🗁).
Active Medication (🗁)(✉)	Indicates an active medication (prescription or non-prescription medication) that is recorded in the patient's record and which contributed to triggering the issue;
Dispense (🗁)(✉)	Indicates a particular dispense event that resulted in the issue;
Patient Coded Observations (🗁)(✉)	This is the recorded observation (e.g. allergy, medical condition, lab result, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Patient Measurable Observations (🗁)(✉)	This is the recorded observation (e.g. allergy, medical condition, lab result, weight, pregnancy status, etc.) of the patient that contributed to the issue being raised;
Issue Managements (🗁)(✉)	Indicates how the issue has been managed;

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4.2.11.6 Detailed Model References

This transaction references the following model components:

Message	Core Models	Key Supporting Models
Request	• **POMC_MT000015CA - Medical Conditions Query**, Retrieve medical conditions associated with a patient; • (✉)**QUQI_MT020000CA - Trigger Event Wrapper for Queries**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	• **COCT_MT050002CA – Patient**, to identify the patient; • (✉)**COCT_MT260001CA – Managed Issue**, to note any medication issues that have been managed; • (✉)**COCT_MT240003CA – Service Location**, to describe the location where the service was provided; • (✉)**COCT_MT470000CA – Consent**, to describe consent information; • (✉)**COCT_MT090103CA – Provider**, to describe a provider;
Response (Accept)	• **POMC_MT000007CA - Medical Conditions Response**, Returns	• (✉)**COCT_MT260002CA - Detected Issue**, to describe any detected issues;

Message	Core Models	Key Supporting Models
	medical conditions in a query response; • (✉)**QUQI_MT120000CA - Trigger Event Wrapper for Query Responses**, describes the framework for tracking the responsibility for creating and entering the query, and together with the query parameters, make up the definition of the query;	
Response (Reject)	Please consult the transmission infrastructure section of the HL7 version 3 specifications under Infrastructure Management (IM) Domain for further details.	

V KEY PACKAGE ISSUES

This section describes key package issues that were uncovered during the development of the message specifications for this package. These require resolution in order to complete the package.

The source of truth for these issues is *PN502-0004-EN - Standards Development Tracking Logs*. Only key active issues have been extracted in this document. Readers are urged to read all issues contained in the aforementioned document.

In addition, some issues will have detailed issue papers, prefixed by PN502-0005-EN.

Issues noted in green below are high priority items that require detailed review.

#	Topic	Description	Current Notes/Resolution

VI ARTIFACT STATUS

This section of the document provides a summary of all package deliverables based on the Standards Development Documentation Framework (SDDF). The SDDF diagram is included here for reference purposes. Additional detail can be obtained by reviewing the SDDF document, *PN502-0001-EN - Standards Development Documentation Framework - 20041202.doc*.

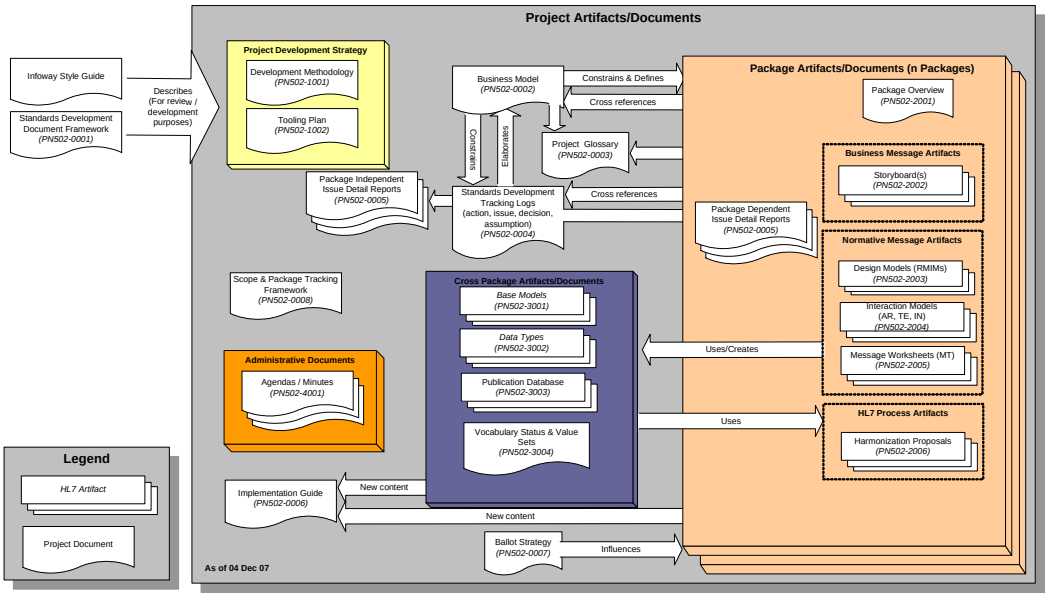

Figure 23 – Standards Development Documentation Framework (SDDF)

This package contains a number of deliverables, grouped into three major categories (Project Artifacts, Package Artifacts and Cross-Package Artifacts), as described below.

6.1 Project Artifacts / Documents

This category contains the following deliverables:

- PN502-0001-EN - Standards Development Documentation Framework
- PN502-0002-EN - Business Model
- PN502-0003-EN - Glossary
- PN502-0004-EN - Standards Development Tracking Logs
- PN502-0005-EN - Issue Detail Reports
- PN502-0006-EN - Implementation Guide
- PN502-0007-EN - Ballot Strategy
- PN502-0008-EN - Scope & Package Tracking Framework

Refer to the *Project-Artifacts* directory for a complete list of these deliverables.

Documents in green below are high priority items that require detailed review.

Doc #	Title	Review Guidance	Stability	
PN502-0001-EN	Standards Development Documentation Framework	Reference document for all CeRx deliverables. Review as time permits or to understand where a particular deliverable fits into the broader context.	Multiple CeRx core team and Infoway S reviews. Will be adjusted to reflect final deliverables. This document is a CeRx internal document (no HL7 ballot implications).	
PN502-0002-EN	Business Model	Review as background to overall business practice.	Complete. Multiple CeRx core team reviews and h level review by CeF pCSG in Novembe 2004, December 2(and January 2005.	

Doc #	Title	Review Guidance	Stability	
PN502-0003-EN	Glossary	Review as background information.	Select terms will be included in HL7 submissions as informative materia material push back from HL7 is expect	
PN502-0004-EN	Standards Development Tracking Logs	Review the Assumption Log and Issue Log in detail. For the Assumptions, review the "Must Review" assumptions in column F. Some issues will have issue detail reports (PN502-0005-EN) which should be scanned/reviewed as a completeness measure. The Action Item Log and Decision Log can be scanned, time permitting. **Making Changes:** • Provide comments in Excel under column I (Assumption Log), column K (Issue Log, Action Log), and column H (Decision Log) AND highlight cell using a consistent colour of your choice. • Prefix all comments with "yyyy-mm-dd/name:" in bold. • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	Logs created during CeRx core team re sessions. Will be adjusted wit information from subsequent packag This document is a CeRx internal document (no HL7 ballot implications).	
PN502-0005-EN	Issue Detail Reports	Review all issue papers and provide comments and feedback. **Making Changes:** • Provide comments in Word using revision markers (accept any existing changes first). • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	*N.B.* No issue pape have been distribut as part of this pack	
PN502-0006-EN	Implementation Guide	This document is primarily an outline at this time which should be reviewed mainly for structure. Materials for this document will be added as packages are delivered. **Making Changes:** • Provide comments in Word using revision markers (accept	Multiple CeRx core team reviews. Will be adjusted wit information from subsequent packag	

Doc #	Title	Review Guidance	Stability	
		any existing changes first). • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	Significant new material added sinc previous release.	
PN502-0007-EN	Ballot Strategy	Not yet available.	N/A	
PN502-0008-EN	Scope & Package Tracking Framework	This document comprises 3 major elements: [1] Package overview, [2] Scope of the project and [3] Interaction Models. The scope of each package needs to be reviewed in detail, specifically elements noted as In, CIO-In or CeRx-In in column I in the Transactions tab. The Interactions & Triggers, Message Summary and Application Roles tabs will be used to submit materials to HL7 for ballot. Readers should note that the tabs provide progressively more detail ranging from a package overview ("Package Dashboard" tab), through a Storyboard summary ("Storyboards" tab) to a series of tabs that outline: (1) The transactions which defined the CeRx scope ("Transactions"); (2) The resulting Interactions & Triggers which implement the in-scope transactions ("Interactions & Triggers" tab); (3) The required messages ("Message Summary" tab); and (4) The Application Roles ("Application Roles" tab) involved in the data exchanges. Note that information on transactions assumed necessary for implementation of CeRx based solutions but not in the Rx domain is also provided in the "Non Rx Transactions" tab. **Making Changes:** • Provide comments in Excel under column I (Assumption Log), column K (Issue Log, Action Log), and column H (Decision Log) AND highlight cell using a consistent colour of your choice. • Prefix all comments with "yyyy-mm-dd/name:" in bold. • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the	Multiple CeRx core team reviews. *Infoway* SAG revie Will be adjusted wit information from subsequent packag HL7 tabs have not been put forward to HL7 for feedback.	

Doc #	Title	Review Guidance	Stability	
		CeRx Artifact Feedback Form.		

6.2 Package Artifacts / Documents (n Packages)

This category contains the following deliverables:

- PN502-2001-EN - Package Overview (this document)
- PN502-2002-EN - Storyboards
- PN502-2003-EN - Design Models
- PN502-2004-EN - Interaction Models
- PN502-2005-EN - Message Worksheets
- PN502-2006-EN - Harmonization Proposals

Refer to the *Package-Artifacts* directory for a complete list of these deliverables.

Documents in green below are high priority items that require detailed review.

Doc #	Title	Review Guidance	Stability	
PN502-2001-EN	Package Overview (this document)	Review in detail to understand and confirm message content; use as a guide/roadmap for review of more detailed materials. Key package highlights are noted in this document. **Making Changes:** • Provide comments in Word using revision markers (accept any existing changes first). • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	Initial review of this document by pCSG pending.	
PN502-2002-EN	Storyboards	Each storyboard should be reviewed for accuracy and appropriateness. In addition, scope can be confirmed using storyboards. **Making Changes:** • Provide comments in Word using revision markers (accept any existing changes first). • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	Multiple CeRx core team reviews. May be adjusted wi information from subsequent packag Storyboards have r been put forward to HL7 for feedback.	

Doc #	Title	Review Guidance	Stability	
PN502-2003-EN	Design Models	Design models or message models describe the major categories of information in a particular message (a message is referenced in one or more interactions, which in turn is referenced in one or more transactions). Review should be focussed on the general categories to determine if there are major gaps. Understanding where a message model is used (see below) will help ensure that a complete review is undertaken. Review for this section should be restricted to the model diagrams in section 2. To determine which interaction and/or transaction a message model is used, use PN502-0008 Scope & Package Tracking Framework under Interactions & Triggers tab to find the interaction. Then use the Transactions tab to search for the transaction using the interaction name. **Making Changes:** • Provide comments in Word using revision markers (accept any existing changes first). • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	Initial CeRx core te reviews. May be adjusted wi information from subsequent packag Design Models hav not been put forwa HL7 for feedback.	
PN502-2004-EN	Interaction Models	Interaction Models comprise 3 major components: [1] Interaction Summary Diagrams (blue diagrams) Sample interaction summary diagrams should be reviewed to confirm for business appropriateness and implement ability. [2] HL7 Ladder Diagrams Should be reviewed for completeness. [3] List of Application Roles, Trigger Events, Interactions. Should be reviewed for appropriateness and to determine if the lists of application roles are typical of current and/or planned CeRx implementations. The information for [3] can be found in PN502-0008-EN - Scope & Package Tracking Framework. **Making Changes:**	Multiple CeRx core team reviews. Interaction Models have not been put forward to HL7 for feedback. Application Roles n to be reconciled wit revised view of the EHR currently usec the Interaction Summary Diagrams Also, need to be coordinated with ot standards initiatives	

Doc #	Title	Review Guidance	Stability	
		• For Interaction Summary Diagrams (blue) & HL7 Ladder Diagrams: • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form. • For List of App Roles, Triggers, Interactions • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	such as registries.	

PN502-2005-EN	Message Worksheets	**NOTE: These documents have been included in PN502-2003-EN as section 3.**
		Message worksheets are formally derived from the Design models or message models noted as PN502-2003-EN. Detail review is not required by the CeRx-pCSG other than to build an understanding of the more detailed modelling constructs.
		Each attribute (field) needs to be confirmed, including the appropriateness of the attribute for this particular message. Are there missing attributes?
		A number of key elements need to be confirmed, including:
		• Data type: Only review if you're interested ☺
		• Conformance: Choose between:
		  • Required (Implementers must support, but only populated when data is available),
		  • Populated (Implementers must support and must always send a value, however the value may be a null flavour), or
		  • Mandatory (Value must always be populated (no nulls))
		• Repetitions: How many times can the attribute repeat? For example, a name may repeat to support aliases.
		• Code Strength (for coded attributes): Choose between:
		  • CNE (coded with no extensions; Must be coded using 'official' codeset (no un-coded text or local codes), or
		  • CWE (coded with extensions; allows local extensions; should be discouraged except under special circumstances)
		• Code Domain (for coded attributes): This will be the official
			See PN502-2003-E	

Doc #	Title	Review Guidance	Stability	
		HL7 domain name for the codes (value set) for a particular attribute. In most cases, no formal review is required. This will be a cross reference to the vocabulary spreadsheets that are included in PN502-3004-EN - Vocabulary. • Description: A description of the attribute. Wordsmith as appropriate. • Rationale: Reason why the attribute is included in a message. Wordsmith as appropriate. • Implementation: Notes for implementers of the attribute. Add to attributes where it is missing and adjust existing wording. • Used by: Indicates which standards use a particular attribute.		
PN502-2006-EN	Harmonization Proposals	Not currently available. These proposals are focused for HL7 ballot requirements and formal review by the CeRx-pCSG is not anticipated.	N/A	

6.3 Cross Project Artifacts / Documents

This category contains the following deliverables:

- PN502-3001-EN - Base Models
- PN502-3002-EN - Data Types
- PN502-3003-EN - Publication Database
- PN502-3004-EN - Vocabulary

Refer to the *Cross-Package-Artifacts* directory for a complete list of these deliverables.

Documents in green below are high priority items that require detailed review.

Doc #	Title	Review Guidance	Stability	
PN502-3001-EN	Base Models	Base Models or Domain Models reflect the superset of all of the Message Models. As such, they contain no net-new information and a formal review is not required. Note that with the March 1, 2005 release of the CeRx specifications, these 'base models' include common components from Package #1. **Making Changes:** • Provide comments in Word using revision markers (accept any existing changes first). • Save file name with your initials or name at the end of the file name (just before the file extension). • Highlight areas of concern for the CeRx-pCSG using the CeRx Artifact Feedback Form.	Multiple CeRx core team reviews. Base Models have been put forward to HL7 for feedback.	
PN502-3002-EN	Data Types	Partial document released for information only.	Early draft; expecte evolve between Package 1 and 3.	
PN502-3003-EN	Publication Database	Not currently available. The publication database is a vehicle to getting material into the HL7 ballot. It will be used once a package has been accepted by the CeRx-pCSG. No review is required.	Publication databas have not been put forward to HL7 for feedback.	
PN502-	Vocabulary	At this stage the document summarizes all code domains and	Early draft outlining	

Doc #	Title	Review Guidance	Stability	
3004-EN	Status	provides an initial categorization. Further work remains to be taken to (1) Review and select appropriate external code sets, (2) Devise codes for new code sets and table these for inclusion in HL7 as necessary, and (3) Identify changes to existing code sets (whether HL7 or not).	key code domains a initial categorizatio	

VII HL7 CONTEXT

This section provides a general HL7 context for the package.

7.1 HL7 Engagement Status & Outlook

HL7 Artifacts such as Base Models (*i.e*. DMIM: Domain Information Model), Message Models (*i.e*. RMIM: Refined Message Information Models), Storyboards and Interaction Models (*i.e*. triggers, application roles, interactions), at the time of publication of the package, have not been distributed to the HL7 community informally (for comment) or formally (for ballot/voting/acceptance).

However, at the recent HL7 Pharmacy SIG out-of-cycle meeting in May (Netherlands), extensions to the existing HL7 Inc. models for the Pharmacy and Medication DMIMs required by CeRx were accepted.

- Materials have been published through the CeRx forum although they have received limited scrutiny at this time.
- Materials will be released informally to the HL7 community.
- Materials are expected to be published to HL7 in June/July.
- Materials will be published to HL7 Canada prior to the HL7 Canada meeting in October.

It is anticipated that these publication processes will result in changes. Material adjustments will be reviewed by the CeRx Core Team and, where appropriate, with the CeRx-pCSG.

7.2 HL7 / CeRx Divergence

The following gaps between CeRx models and current HL7 models should be noted:

- Prescription
  - R_AssignedPerson is scoped by a person rather than an organization
  - R_AssignedPerson includes 'license' information for both player and scoper
  - Change CeRx names and classCodes to align with the A_CoverageUniversal CMET
  - CeRx is using "Manufactured" as the role for the administration device instead of "assigned"
  - For the destination of a dispense, CeRx is using "Located Entity" instead of "Service Delivery Location"
  - CeRx is using 'Service Delivery Location' as the performer of a dispense instead of R_AssignedOrganization
- Dispense
  - CeRx collapsed the 'header' and 'content' into a single model. May need to split them apart to be consistent with HL7
  - CeRx has added a "record target" participation to support attaching animal prescriptions to the record of the owner
  - CeRx has added 'origin' and 'destination' participations
  - CeRx has the 'author' of the related prescription
  - CeRx is tracking substitution information (somehow got omitted from HL7 model)
- General
  - Additional effort will be required to update the current NeCST Pharmacy Dispense Billable Act to align with emerging Pharmacy models
  - Wrappers are being constrained for use by Canadian HL7 standards and need to be reviewed by HL7 Canada members.

7.3 New Common Constructs

This section highlights new common constructs that should be considered by other HL7 version 3 message standards initiatives.

7.3.1 CMETS

The following CMETS are being devised and should be used by other initiatives:

- COCT_MT040205CA - Agent (if needed)
- COCT_MT050002CA - Patient
- COCT_MT050003CA - Animal Patient (if needed)
- COCT_MT090103CA - Provider
- COCT_MT240003CA - Service Location
- COCT_MT260001CA - Managed Issue
- COCT_MT260002CA - Detected Issue
- COCT_MT470000CA - Consent

7.3.2 Wrappers

The following Wrappers are being devised and should be used by other initiatives:

- MCAI_RM700210CA - Trigger Event Wrapper for Acts
- MCAI_RM700220CA - Response Trigger Event Wrapper for Acts
- MCCI_RM000100CA - Request Transport Wrapper
- MCCI_RM000200CA - Accept Ack Transport Wrapper
- MCCI_RM000300CA - Application Ack Transport Wrapper

7.3.3 Shared Interactions

The following shared interactions are being established (in Package #2):

- MFMT_IN000003CA - Undo action request
- MFMT_IN000002CA - Undo action refused
- MFMT_IN000001CA - Undo action accepted
- MFMT_IN000006CA - Change item masking request
- MFMT_IN000005CA - Change item masking request rejected
- MFMT_IN000004CA - Change item masking request accepted
- PRCN_IN000003CA - Record consent or override consent
- PRCN_IN000002CA - Consent or override refused
- PRCN_IN000001CA - Consent or override recorded
- PRCN_IN000006CA - Update keyword request
- PRCN_IN000005CA - Update keyword request rejected
- PRCN_IN000004CA - Update keyword request accepted

Appendix A. HL7 METHODOLOGY BACKGROUND

A.1 Specification Component Introductions

Each artifact entered within the HL7 specification has the following basic components:

1. Title Name: Human readable name for the artifact. The Title Name will appear as the artifact title and in all references and hyperlink lists when the database is rendered.
2. Code: Unique code that is used to identify the artifact over time. Format is: UUDD_AAnnnnnnRRVV where;

UU	= Sub-Section code
DD	= Domain code
AA	= Artifact or Document code
nnnnnn	= Six digit zero-filled number
RR	= Realm code. (If not specified, universal assumed)
VV	= Version code. (If not specified, version 1 assumed)

   For example: PORX_AR000001CA01 is version 1 of the Operations Section, Pharmacy Domain, Application Role Artifact number 00001 for the Canadian realm. Because version numbers only apply to artifacts which have completed the HL7 balloting process, they will be omitted from CeRx artifact codes during the standards development and approval process.

   The code will appear after the title name when the specification is rendered.
3. Description: Most (not all artifacts) include a description that may be used to describe the artifact as well as to insert links to other artifacts or images.

The following diagram shows the component artifacts of the HL7 V3 messaging methodology and their interrelationships. Each artifact is described below.

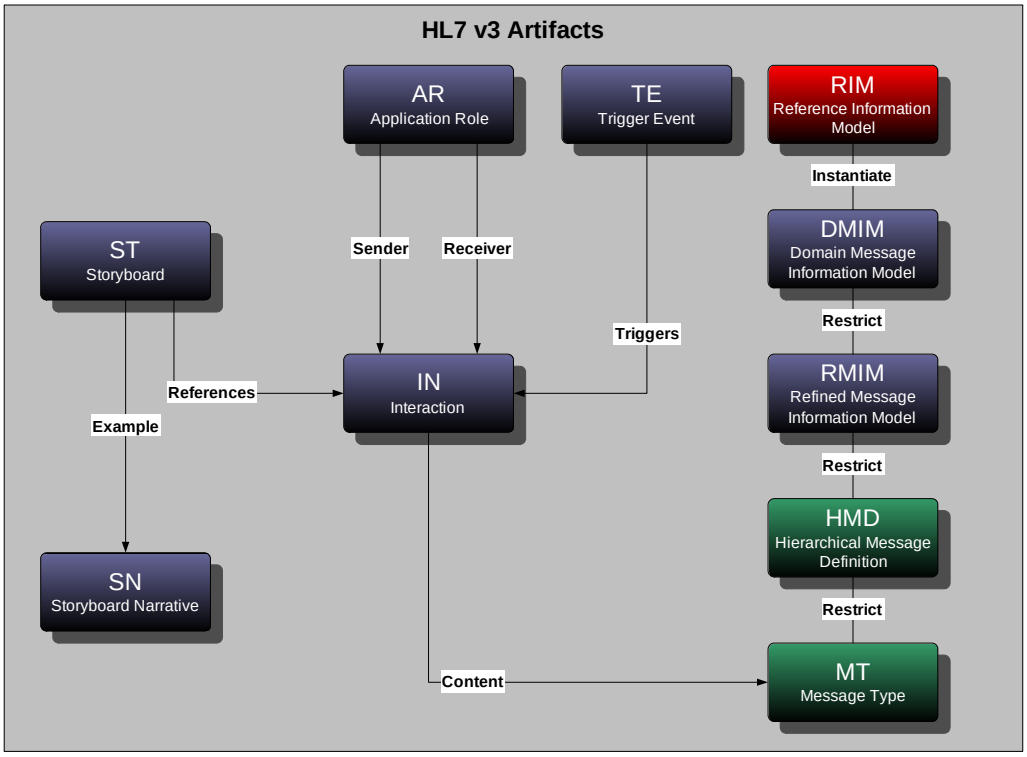

Figure 24 – HL7 v3 Messaging Artifacts

A.2 Specification Components

A.2.1 HL7 Storyboards

Storyboards, are similar to 'Use Cases' and are used to explain the business environment and requirements for the messaging information flow. The storyboards show a direct linkage between the business specifications and the technical messages designed to support them. The process of storyboarding lays the foundation for describing HL7 messages and their content.

The HL7 Storyboards are comprised of the following sections:

- Purpose: The purpose is a short narrative that describes the generic set of actions that the storyboard represents.
- Interaction Diagram: The Interaction Diagram shows the interactions between the application roles. These interactions are depicted using a sequence diagram. In the diagram the boxes at the top and the vertical lines associated with them represent application roles (the types of systems that send and receive the messages). The arrows show the interactions (message instances) between the various application roles. The names and associated artifact codes of those interactions are noted within the arrowed lines.

- Narrative(s): A storyboard narrative is a description of a real-life event that provides the necessary context for the development of a specific interaction described in the storyboard. There may be many narratives for a particular storyboard each explaining a different environment/business that demonstrates the purpose of the storyboard and that results in the interactions being communicated.

A.2.2 Application Roles

Application roles represent a set of communication responsibilities that might be implemented by an application. Thus they describe system components or sub-components that send and/or receive messages.

When an Application Role is defined, it identifies a list of interactions it is capable of sending (initiating) and a set of interactions it is capable of receiving and appropriately processing. In some cases, an Application Role may be capable of both sending and receiving an interaction.

The application roles appear in the Interaction Diagram found in the Storyboard section, the boxes at the top of the diagram and the corresponding vertical lines represent application roles.

A.2.3 Trigger Events

Trigger events are an explicit set of conditions that initiate the transfer of information between system components (application roles). It is a real-world event such as the entry of a provider into a registry or the requesting of a report. The trigger event must able to be systematically recognizable by an automated system. Trigger events are defined as one of three 'types':

- State-Transition Based: Trigger events resulting from a state transition as depicted in the State Transition Model for a particular message interaction. The trigger for adding a provider, for example, may be considered a State Transition Based trigger event
- Environment Based: Trigger events may be based on a user request or some other environmental occurrence such as time of day. For example, the initiation of a query request.
- Interaction Based: Trigger events can be based on another interaction. For example, the event of responding to a query (which is an interaction) is an Interaction Based trigger event.

A.2.4 Static Information Models

A-2.4.1 Models

The **Reference Information Model (RIM)** is a static model of health and health care information as viewed within the scope of HL7 standards development activities. It is the combined consensus view of information from the perspective of the HL7 working group and the HL7 international affiliates. The RIM is the ultimate source from which all HL7 version 3.0 protocol specification standards draw their information-related content.

The **Domain Message Information Model (D-MIM)** is a subset of the RIM that includes a fully expanded set of class clones, attributes and relationships that are used to create messages for any particular domain. For example, the set of classes that are used by the Personnel Management domain is quite different from that used by the Patient Administration domain. The D-MIMs for these two domains, then, will be quite different, although both will be derived from the RIM.

The **Refined Message Information Models (R-MIMs)** are used to express the information content for a group of messages and is a subset of the D-MIM containing only those classes, attributes and associations required to compose the desired set of messages. Classes, attributes and associations that are not required are eliminated and/or constrained as necessary.

The **Hierarchical Message Descriptor (HMD)** is a grouping of specific Message Types. It is tabular representation of the sequence of elements (i.e., classes, attributes and associations) contained in an R-MIM and that define the messages.

A **Message Type (MT)** represents a unique set of constraints applied against the HMD and defines the actual payload (fields, data types, constraints etc) that is communicated in an interaction.

A-2.4.2 Model Representations

The Message Information Model is represented as a diagram that shows the relationships between the classes but it uses diagramming conventions and notations that were developed by HL7 to represent the specific semantic constructs contained in the critical, "back-bone" classes of the RIM. Although D-MIMs and R-MIMs could be represented in UML notation, as the RIM is, the HL7 notation provides more details about the specific constraints and class clones being represented. The HL7 diagramming convention abbreviates some relationship conventions, enabling diagrams to be smaller and more concise and to convey more information visually. Understanding the diagramming conventions and notations is key to understanding how to read D-MIMs and R-MIMs.

A-2.4.3 Interactions

Interactions are a unique association between a specific Message Type (information transfer), a particular Trigger Event that initiates or "triggers" the transfer and the set of communication responsibilities expected of an application which receives the message.

A single Interaction explicitly answers the questions:

1. When should the message be sent (Trigger Event)?
2. What are the responsibilities of the receiving application (Receiver Responsibilities)?
3. What message payload should be sent (Message Type)
4. What wrappers should be applied to the message (Transportation & Control Act wrappers)?
5. What options does a recipient have when it receives the interaction.

Each unique combination of Trigger Event, Message Type, Wrappers and Receiver Responsibilities is represented as a separate interaction.

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