

Acute and Community Clinical Data Repository (acCDR) Input Standard Version 2.6.1



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Document Control

The electronic version of this document is recognized as the only valid version.

Revision History

VERSION NO.	SUMMARY OF CHANGE	CHANGED BY/DATE OF CHANGE
1.0	Initial Release	ConnectingGTA
2.0	- Support for Drugs and Medications added - Allergy information corrected to use standard ADT^A60 message - Support newly required ADT triggers for pre-admit, cancel admit, and merge visit - Add support for recurring outpatient visit	
2.1	- Set IDs have been made optional - MRG-1 and MRG-5 are now listed as non-repeating to be consistent with text description - DG1-3 (Diagnosis code) optionality changed from R to RE - ROL-4 (Role Person Name) optionality changed from R to RE - PV1-2 (Patient Class) optionality changed from R to C - PV1-19 (Visit Number) optionality changed from RE to R - PID-7 (Patient Date of Birth) optionality changed from R to RE (see notes for details) - ORC segment is marked optional in ORU^R01 message structure, as all fields are optional - New entry added to Table 0271 (Document Completion Status) for (P)reliminary - RXE-5 (Give Units) optionality changed from O to R in segment table (in order to match textual description which already reflected this value) - HL7 Table 0007 (Admission Type) has been clarified as a user defined table - Append Mode (OBR-17) has been added - Step parent and foster parent relationship codes have been added to Table 0063 - PID-11.13/14 (Patient Address Effective and Expiration dates) are now supported but optional - Patient de-activation workflow now supported through optional ZPD segment in ADT^A31 - Descriptions added for RXE-1 TQ.4-5 (Encoded Order Start/End Time) - Unnecessary EVN segment removed from ORU^R01 structure	ConnectingGTA

	• Unnecessary PD1 segment removed from structure definition in ADT^A40	
2.2	• RXE-1.1 (Medication Encoded Order Quantity) optionality has been changed from R to RE • CX.1 expanded from 20 characters to 50 characters. This affects the PV1-19 (Visit number) and PID-3 (Patient Id) fields • Clarification to MRG-1 and MRG-5 fields • RXC-3 (whole number or decimal allowed) • RXE-3 and RXE-4 (whole number or decimal allowed) • PID-3 wording has been clarified to indicate that at least one MRN (ID Type MR) must be included in every message • Code added to Patient Class table 0001 ("C" for CCAC Client) • Updated the UC-DRX - Medication Profile • workflow • PID-15 (Primary language) updated to reflect changes made • NK1-3 (Relationship) updated to reflect changes made • Added Draft status "D" to table 0271 • RXE-1-3 (Order Quantity Duration) changed from "R" to "RE" • RXC-1-1-1 (whole number or decimal allowed) • RXE-1-2-1 (repeat pattern) changed from "R" to "RE" • Code added to Telecommunication Use Code Table 0201 ("HRN" for Home Residence Number) • RXA-6 (whole number or decimal allowed)	ConnectingGTA
2.3	• OBR-25 status of "I" removed (HL7 table 0271) • OBR-25 status of "D" removed again (added in v2.2) – please use code 'P' for preliminary or draft documents • Cardinality of ROL segment clarified • RXC segment cardinality clarified to specify a single base, multiple additives • Cardinality of RXR (route) segment clarified • Length restrictions on fields containing OID values have been relaxed (previously 20 characters, now 50 [to accommodate reality of OID lengths]) • Elaboration of the acknowledgement structure in section 3.4 • PV1-7, PV1-8, and PV1-9 cardinality corrected (0..10 consulting providers, but max of 1 admitting and attending provider) • XCN.1 and NDL.1 clarified, ST data type supported • Added US State codes (in addition to province codes) to Table 9003 – also includes code for 'other' for locales outside either country	ConnectingGTA/ HRM

	• Additional documentation regarding transmission of binary content (e.g. scanned documents) – details provided regarding ‘document splitting’ for large files • Additional clarity provided regarding Hospital Report Manager throughout the document • Field PV1-2 clarified to use a fixed code set • MSH-3 length increased to 100 • MSH-4.2 removed	
2.4	• As a result of Novation, rebranded with ConnectingOntario and complementary revisions made throughout the document. Document named changed from cGTA Input Specification to ConnectingOntario Clinical Data Repository Input Specification • Various changes to fields for alignment with eHealth Ontario assets (see below) • 5.3.4 MSH.4 (Sending Facility) – updated to include OIDs used for ADT messages • 5.4.1 EVN.1 (Event Type Code) – Added as required field • 5.4.3 EVN.5 (Operator ID) – added as required field • 5.7.1 PV1.1 (Set ID) – updated to required • 5.12.1 NK1.1 (Set ID) – updated to required • Removed 10.0 Implementing ConnectingOntario CDR Population	ConnectingOntario
2.4.1	• Consolidation of content from CCAC CDR Input Specification Version 10.0 • Minor revisions based on feedback received during SC/BTC Review	eHealth Ontario
2.4.2	• Add Section 1.4 to clarify the support of complete messaging from sending system • 5.3.4 MSH.4 (Sending Facility) – corrected spelling of “ConnectingOntario” • 5.3.6 MSH.6 (Receiving Facility) – updated to fixed value “ConnectingOntario” • 5.4.3 EVN.5 (Operator ID) – updated field format to align with provincial solution • 5.7 PV1 Segment – removed “skip” between PV1-16 and PV1-17 • 5.7.3.4 PV1.3 (Assigned Patient Location) – corrected “facility name” to “facility identifier” in PL.4.2 description • 5.15 OBR Segment – removed “skip” between OBR-19 and OBR-20 • Table 27: expanded HL7 Table 9001 (Provider Namespace IDs) to include more values • Approved by the Ontario EHR Architecture & Standards Governance Strategic Committee	eHealth Ontario

2.5	• Support of complex organizations by adding 9004M, 9004P, and 9004V for MRN, local provider, and patient visit identifier assigning authority OIDs and revised field specification to support these OIDs. • Increased length of various fields to meet requirement of OID and expected values for MSH-3, MSH-4, MSH-10, EVN-5, PID-3, PID-13, PV1-3, PV1-7, PV1-8, PV1-9, PV1-17, PV1-19, MRG-1, MRG-5, DG1-3, ROL-4, IAM-3, ORC-2, ORC-4, OBR-2, OBR-3, OBR-4, OBR-16, OBR-26, OBR-28, OBR-32, OBX-3, OBX-6, RXA-5, RXC-2, RXE-2. Please note that these changes are not currently supported by the ConnectingOntario CDR and HRM solutions, and they will be planned into future releases of the two products. • 2.1 Clinical Data Types – removed “overriding rules” and added clarifications regarding how to send consent directives, and adding three additional clinical data types (mental health reports, surgical reports, coordinated care plans) • 2.5.2 Added Coordinated Care Plans to CCAC use cases (pending MOH confirmation) • 2.5.2.8 Added Coordinated Care Plan workflow for CCAC • 4.1.1 Removed “Domain Consent Block” from available options to reflect the current functionality of the solution • 5.3.17 MSH-21 (Message Profile Identifier) – Updated fixed value to reflect this version • 5.4.3 EVN-5 (Operator ID) – Extended field length in EVN.5-9 and EVN.5-14 • 5.7.10 PV1-16 (VIP Flag/Patient Lock) – added clarification of possible values • 5.9.2 MRG-5 (Prior Visit Number) – added clarification for “primary identifier” • 5.10.2 DG1-3 (Diagnosis Code) – added clarification to reflect the current functionality of the solution • 5.14.4 ORC-9 (Order Date/Time) – added with clarification. Please note the ConnectingOntario CDR will need to schedule this change into future release. • 5.14.5 ORC-12 (Ordering Provider) – added with clarification. Please note the ConnectingOntario CDR will need to schedule this change into future release. • 5.15.4 OBR-4 (Universal Service Identifier) – added length clarification of HRM MR and DI reports	
2.5.1	• Renamed document title to “Acute and Community Clinical Data Repository (acCDR) Input Standard” • Renamed “ConnectingOntario” and “CDR” to “acCDR” throughout the document after rebranding • Renamed OACCAC and CCAC to HSSO and LHIN respectively • 2.1 Clinical Data Types:	eHealth Ontario /OntarioMD

	○ Scope change of DI Reports as ConnectingOntario ClinicalViewer will retrieve DI information from the Diagnostic Imaging Common Service (DI CS) as of Release 10. ○ Consent Directives no longer supported via HL7 interfaces. ● Changed the OID field length to 50 in the following fields: MSH-3, MSH-4, EVN-5, PID-3, PID-13, PV1-3, PV1-7, PV1-8, PV1-9, PV1-17, PV1-19, MRG-1, MRG-5, DG1-3, ROL-4, IAM-3, ORC-2, ORC-4, OBR-2, OBR-3, OBR-4, OBR-16, OBR-26, OBR-28, OBR-32, OBX-3, OBX-6, RXA-5, RXC-2, RXE-2. ● 2.4.1 ADT Use Cases for Hospitals: removed consent directives, add patient, update patient, patient merge and unlink from the Patient Administration workflow for hospitals. ● 2.4.2 ADT Use Cases for LHIN: removed Client Demographics and Client Allergy Information from the ADT use cases. ● 2.5.2.1 Client Assessment – PCC-CHRIS: removed consent directives and added allergy into the LHIN Client Assessment use case. ● 3.1 ADT Message Transactions: deprecated add patient (A28), update patient (A31), patient merge (A40) and unlink (A37) transactions and updated the corresponding message structure definitions. ● 5.3 MSH-10 Message Control ID: changed field length to 50. Please note this change is not currently supported by the acCDR and HRM solutions, and it will be planned into future releases of the two products. ● 5.7 PV1 Segment: deprecated PV1-16 (VIP Status/Patient Lock) ● 5.15.4 (OBR-4 Universal Service Identifier): revised length limit to align with current requirement of HRM, i.e. the combined length of OBR-4.1 and OBR-4.2 cannot exceed 59 characters. ● 5.6 ZPD Segment: removed this segment ● 5.15.5.2 Transmitting Binary Contents (Scanned Images, PDFs, etc.): removed TIFF as a supported binary report type. ● Table 22: HL7 Table 0291 (Data Subtype for Encapsulated Data): deprecated TIFF code. ● Table 34: HL7 Table 9006 (HRM Report Category Code): updated HRM report category codes. ● Renamed Hospital Report Manager to Health Report Manager. ● Other editorial changes.	
2.6	● Added DHIEX regulation content in 1.0 Introduction section ● MSH-10 (message control ID) – updated the notes under 5.3.10 MSH-10. ● MSH-21(Message Profile Identifier) – Updated fixed value to reflect this version ● To improve data consistency and quality, changes were made to these elements: : ○ PV1-3.9 - optionality changed from O to C, value must be from table 9010	Ontario Health (Sep 2023)

	○ PV1-10 – optionality changed from O to C, value must be from table 0069 ○ PV1-14 – new field, optionality: C, value must be from table 0023 ○ PV1-36 - new field, optionality: C, value must be from table 0112 ● To improve HRM experience and report category standardization, added ConnectingOntario LOINC or C-codes in OBR-4 for HRM submission ● Section 4.1.2.4 - Added clarifications and expectations on document invalidation process ● To enhance data contribution for patient’s medication and drug profile, these changes are made: ○ Remove medication order message from acCDR. Medication order will be mandatory in medication administration messages ○ ORC-3 (Filler Order Number): new field required in medication administration messages ○ ORC-14 (Call Back Phone Number) – new field required in medication administration messages ○ New TQ1 segment added for Timing/Quantity. This segment replaces RXE-1, which has been deprecated ○ RXA-5 (Administered Code) – new terminology requirement ○ RXA-10 (Administering Provider) – new required field ○ RXA-20 (Completion Status) – new required field ○ RXA-21 (Action Code) – new required field ○ RXC-2 (Component Code) – new terminology requirement ○ RXC-5 (Component Strength) – new optional field ○ RXC-6 (Component Strength Units) – new optional field ○ RXE-1 (Timing/Quantity) – deprecated and replaced by TQ1 ○ RXE-2 (Give Code) – new terminology requirement ○ RXE-25 (Give Strength) – new required or empty field ○ RXE-26 (Give Strength Unit) – new required or empty field ○ RXE-27 (Give Indication) – new required field ○ Updated Table 13: HL7 Table 0119 (Order Control) – added code “RE” ● 5.15.5.2 Transmitting Binary Contents (Scanned Images, PDFs, etc.): removed RTF as a supported binary report type ● Table 27: HL7 Table 0291 (Data Subtype for Encapsulated Data): deprecated RTF code ● Added Table 4: HL7 Table 0023 (Admit Source) ● Added Table 7: HL7 Table 0069 (Hospital Service) ● Added Table 11: HL7 Table 0112 (Discharge Disposition) ● Added Table 16: HL7 Table 0162 (Route of Administration) ● Added Table 26: HL7 Table 0322 (Completion Status)	
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	• Added Table 27: HL7 Table 0323 (Action Code) • Added Table 28: HL7 Table 0335 (Repeat Pattern) • Added Table 44: HL7 Table 9010 (Bed Type) • Added Table 45: HL7 Table 9011 (Indication for Use) • Added Table 46: HL7 Table 9012 (PrescriptionDoseQuantityUnit)	
2.6.1	• Updated Specification Effective Date to August 31, 2027 in Section 1.2.1 • Updated reference of Local Health Integration Network (LHIN) to “Ontario Health atHome” due to legislation change • Added TQ1-1 (Set ID) – new required field • Removed TQ1-2 (Quantity) • Updated TQ1-6 (Unit) to be consistent with other unit fields • Updated RXA-5 (Administered Code) to support CCDD TM and NTP codes • Updated RXC-2 (Component Code) to support CCDD NTP codes • Updated description and sample data of RXA-6 and RXA-7 • Added RXA-8 (Administered Dosage Form) – new required or empty field • Updated RXA-10 (Administering Provider) – changed cardinality from required to required or empty • Added RXA-13 (Administered Strength) and RXA-14 (Administered Strength Unit) – new required or empty field • Table 11: HL7 Table 0112 (Discharge Disposition) – added new value “90” (Correctional Facility)	Ontario Health (June 2024)

Outstanding Issues

SECTION	ISSUE	TARGET
2.4.4	Ambulatory visit messaging is not capable of capturing appointment scheduling information (SIU).	Unconfirmed/unscheduled
4.1.1	Description of transmitting discrete data in a clinical document does not indicate how to transmit non-result data such as discharge medication list.	Unconfirmed/unscheduled
7.0	Additional sample messages are needed showing a wide range of scenarios. Existing samples are weak.	Unconfirmed/unscheduled.
None	Consider support for MDM^Txx messaging for clinical documents.	Unconfirmed/unscheduled
5.5.2.3	PID-3 CX.4 (Patient Identifier Assigning Authority) currently identifies the HIC and system used to assign Medical Record Numbers. This should be replaced with a scheme to use MRN-authority OIDs as assigned by eHealth Ontario.	Implemented in Release 9
5.14	Ordering (i.e. prescribing) Provider and Order Date/Time are not currently available for Medication messages (to be added in field ORC-11 in future version as XCN data type 'composite ID for provider', as per other provider fields).	Confirmed/unscheduled Added the Ordering Provider in ORC-11 and Order Date/Time in ORC-9 into the Input Specification. However these two fields will not be stored by the acCDR solution until a future release.
8.0 Table 4	The OID used for ICD-10-CA in HL7 Table 0053 is incorrect. The correct coding system OID is 2.16.840.1.113883.6.94.	Corrected in the specification

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1.0 Introduction

This document outlines the input standard for population by organizations contributing data to the Acute and Community Clinical Data Repository (acCDR).

This is a technical standard document, intended to be read by clinical system administrators and interface developers who are building interfaces for the purpose of transmitting data to the acCDR.

1.1 Background

The acCDR is the provincial clinical data repository that stores a record of the care which has been and is currently being provided to clients of the Ontario health system. It supports patients by providing care teams with a central point of access to an up-to-date, integrated care record. The acCDR allows participating health information custodians (HICs) to contribute data using HL7 v2.5. HICs using this version of HL7 must conform to the standard outlined in this document. Currently, the acCDR supports data feeds from hospitals and Home and Community Care Support Services (HCCSS). The viewing of the acCDR data contributed is supported through ConnectingOntario, ClinicalViewer, and ClinicalConnect. The acCDR Input Standard v2.6 introduces a few new data elements and standard value sets to enhance data contribution for medication and drug profile and improve data quality and consistency for some data attributes contributed in Admit, Discharge and Transfer (ADT) and Medication workflows. Please refer to revision history for details. Note that a routing mechanism will be implemented to store medication administration messages in the Digital Health Drug Repository (DHDR) instead of the acCDR.

1.2 Digital Health Information Exchange (DHIEX)

On January 1, 2021, Ontario Regulation 329/04 ("O. Reg. 329/04") under the Personal Health Information Protection Act, 2004 (PHIPA), was amended to provide a regulatory framework for Ontario Health, as directed by the Minister of Health ("the minister"), to establish, maintain and amend interoperability specifications. This regulatory framework, as set out in sections 26 to 34 of O. Reg. 329/04, is referred to by Ontario Health as the Digital Health Information Exchange (DHIEX) framework.

Ontario Health guides and supports the adoption of modern interoperability specifications applicable to digital health assets as defined in s. 26 of O. Reg. 329/04. A health information custodian (HIC) is required to ensure that every digital health asset that it selects, develops or uses complies with every applicable interoperability specification, as it may be amended from time to time, within the time period set out in the specification.

Compliance with the requirements of the DHIEX framework does not relieve a HIC of its obligation to comply with the other provisions of PHIPA and its regulations.

Ontario Health is required to consult with and consider the recommendations of the Information and Privacy Commissioner of Ontario (where a specification relates to the confidentiality of personal health information, the privacy of individuals or the rights of individuals to access or correct records of their personal health information) prior to providing the specification to the Minister of Health for review and approval.

Ontario Health is also required to consult with any health care provider organizations, individuals, stakeholders and other parties as appropriate, in order to inform its decisions concerning the establishment, maintenance or amendment of interoperability specifications.

1.2.1 Applying the acCDR Input Standard

In 2023 the acCDR Input Standard was amended and additional information was added in version 2.6 for it to be established as an interoperability specification under Ontario's Digital Health Information Exchange (DHIEX) framework.

The following information is provided in accordance with section 28 of O. Reg. 329/04 made under the Personal Health Information Protection Act (PHIPA), 2004.

Specification Effective Date ¹	August 31, 2027
Class of Health Information Custodians that must select, develop, or use digital health assets that comply with the specification	Hospitals within the meaning of the Public Hospitals Act; Ontario Health atHome
Types of digital health assets to which the specification applies	The Hospital Information System and/or ancillary systems utilized by the above class(es) of Health Information Custodians
Circumstances, if any, when a Health Information Custodian may be exempted from the requirement to select, develop or use digital health assets that comply with the specification ²	Not applicable

Notes:

- (1) This is the date by which all applicable HICs are required to be compliantly contributing and/or consuming the approved interoperability specification. OH will work with the applicable HICs to establish the implementation plan in order to meet the effective date.
- (2) If the HIC contributes or plans to contribute medication administration data using the Ontario Digital Health Drug Repository HL7 FHIR Implementation Guide, they should exclude the medication and drug profile transactions in their implementation of this specification.

1.2.2 Disclaimer

Pursuant to O. Reg. 329/04, Ontario Health is required to, subject to the review and approval of the Minister, establish, maintain and amend interoperability specifications. The Minister may direct Ontario Health to establish or amend interoperability specifications, and Ontario Health is required to comply with such direction.

In accordance with O. Reg. 329/04, Ontario Health makes the interoperability specification most recently approved by the Minister available to the public by posting it on Ontario Health's website or by such other means as Ontario Health considers advisable.

As the Minister may direct Ontario Health to amend the interoperability specifications from time-to-time, Ontario Health advises the public and any other users of information concerning interoperability specifications to regularly review Ontario Health's website where the interoperability specifications are posted, or such other means Ontario Health considers advisable, in order to confirm that they are accessing the interoperability specifications most recently approved by the Minister.

You understand and agree that:

- (i) This specification is provided "AS IS" without any warranties or representations of any kind, express or implied, in fact or in law;
- (ii) Ontario Health is not responsible for your use or reliance on the information in this specification or any costs associated with such use or reliance; and
- (iii) Ontario Health has no liability to any party for that party's access, use or reliance on this specification or any of the information contained in it.

1.2.3 Privacy and Security

Under PHIPA, Ontario Health (OH) is a Prescribed Organization (PO) with the power and duty to develop and maintain the electronic health record. In doing so, OH manages and integrates personal health information (PHI) it receives from HICs and enables HICs to collect, use and disclose personal health information by means of the EHR.

HICs who contribute records of PHI to OH as a PO are not considered to be disclosing said records to OH, nor is OH as PO considered to be collecting same from the HIC. Despite this, HICs have responsibilities related to this contribution of PHI and are required to complete onboarding processes, comply with OH privacy and security policies, procedures, and standards, and contribute PHI in accordance with interoperability specifications established by OH. These and other requirements are set forth in the EHR Contributor Agreement (ECA) and other OH agreements as applicable, which OH executes with contributing HICs.

This document is an interoperability specification established by OH pursuant to O. Reg. 329/04 subsection 27(1) and referenced under “EHR Data-In Interface Specifications” in the ECA. Accordingly, subject to section 1.2.1 Applying the acCDR Input Standard of this document, the specified HICs who contribute PHI to OH as PO are required to ensure the specified digital health assets comply with this interoperability specification.

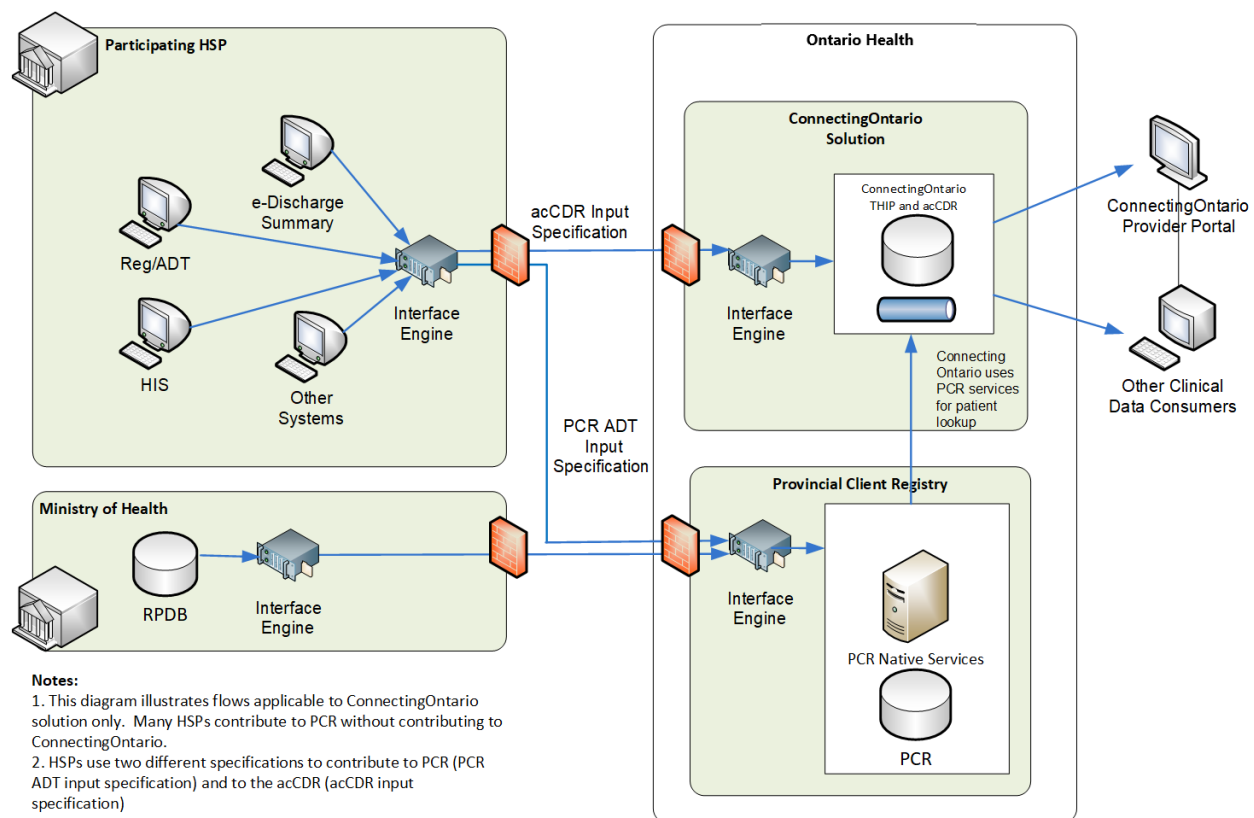
Further to the above, the specified HICs are also required to provide a report to the OH, upon the request by OH that sets out their compliance with the requirement to select, develop or use digital health assets that comply with this interoperability specification. Such reports must be provided by the HIC through the means, in the format, and within the time period determined by OH. These HICs also must co-operate with and assist OH in monitoring their own compliance with the requirements and must provide any information or records (Which must not include PHI) to OH upon request.

Should OH find reasonable grounds to believe that a HIC has contravened or is about to contravene the requirement to select, develop or use digital health assets that comply with this interoperability specification, OH may make a complaint to the Commissioner under Part VI of the Act and may provide to the Commissioner any information and records obtained under O. Reg. 329/04 sections 32 and 33.

Of note, this interoperability specification by itself does not serve to mandate contribution by HICs to the EHR, but rather establishes the business and/or technical requirements applicable to contribution by specified HICs and specified digital health assets. The information herein is to be read in conjunction with the terms and conditions set forth in the ECA. For greater certainty, nothing within this interoperability specification relieves a HIC of its obligation to comply with any provisions of PHIPA and its regulations.

1.3 Architecture

The following diagram illustrates the architecture through which HICs contribute data.



Please note that not all the data elements submitted and stored in the acCDR will be displayed in the ConnectingOntario ClinicalViewer. A subset of these data elements may only be supported depending on the specific viewer application being used. Please consult with proper user manual for details.

1.4 Data Sources

Because the acCDR aims to provide a complete record of care, it is important to consider the appropriate source systems at your HIC. The following are examples of possible integration scenarios:

- If your HIC has a single HIS system which contains all ADT information as well as all documents and results relating to patients at your HIC, it may make sense to create a single feed from this system which contains both ADT messages and other types (e.g. ORU^Ro1).
- If your HIC has ancillary systems which do not contribute their data to a central repository (for example, an Emergency Department Information System) it may make sense to contribute data from this system as well.
- It should be noted that, if material changes are made to your source systems after going live with contributions, you are required to re-test your acCDR feed against the latest version of this specification. Contact your account team at Ontario Health for details when this situation arises.

1.5 Previously Submitted Fields and Null Values in acCDR Feed

Please note that the acCDR does not support “sparse messaging or non-populated RE (required or empty) or O (optional) fields” when submitting update messages (when a message sent to update specific data fields contains a blank value in RE or O fields because a valid value was previously sent in the original message). Therefore, sending systems must resubmit all previously submitted fields in all subsequent messages. Empty fields will be interpreted as being updated as blank (no data) and previously submitted data will be removed from the acCDR.

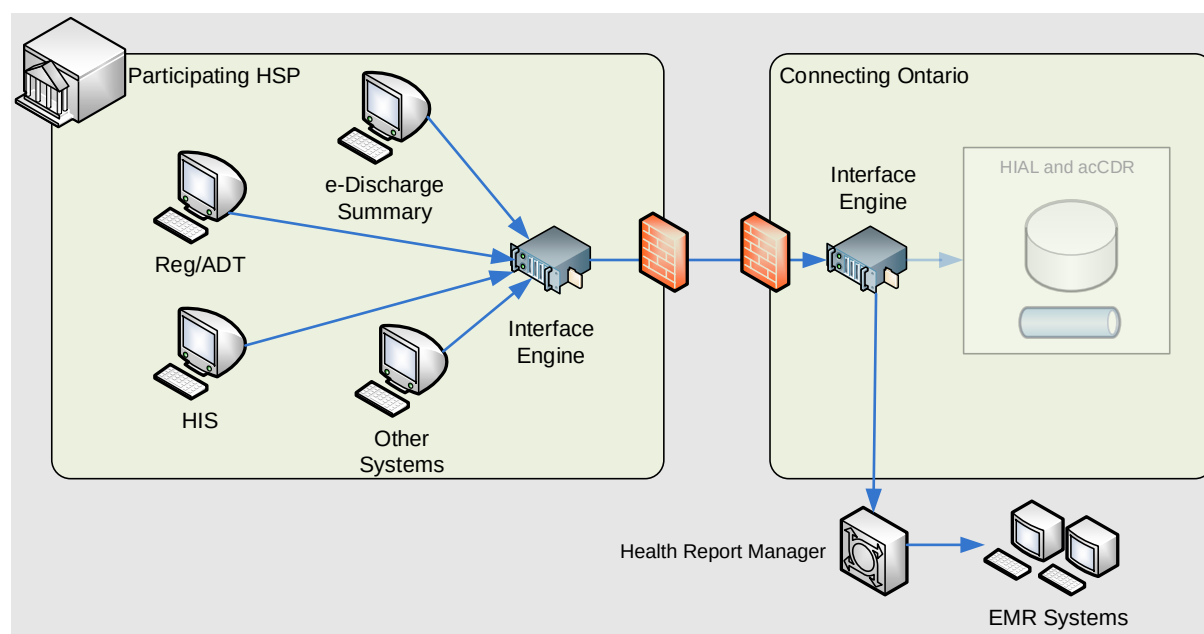
To re-state the above, for most RE (required or empty) or O (optional) fields, if a previous value has been sent to the acCDR and subsequent message is sent with those fields set to blank, the acCDR will replace the previous value with blank. However, four RE fields (PV1-7, PV1-8, PV1-9, PV1-17) support different rules:

- If a previous value is sent in these fields and a subsequent message is sent with those fields set to blank, the solution will preserve the previous value.
- If a previous value is sent in these fields and a subsequent message is sent with those fields set to empty double quotes (|“”|), the solution will replace the previous value with blank.

1.6 Health Report Manager

****Note:** Interaction with Health Report Manager, as described below, is **out of scope for Ontario Health atHome**. However this section has been left in the document for clarity, as multiple tables in the latter sections of the document make reference to HRM. As a rule, if a given piece of data is required only by HRM, Home and Community Care Support Services (HCCSS) need not provide it.

The Acute and Community Clinical Data Repository Input Standard and Health Information Access Layer (HIAL) may also be used by participating Health Information Custodians (HICs) to implement OntarioMD Health Report Manager (HRM). In this case, messages would be transmitted to the acCDR Interface Engine, and would be forwarded to the HRM system as well as the HIAL and acCDR for processing. Note that Diagnostic Imaging (DI) reports that are sent to DI CS have been taken out of scope for acCDR contribution, however, hospitals must continue to support all DI reports for contribution to HRM. Hospitals using an integrated acCDR and HRM feed must pay attention to specific HRM applicable fields (e.g. OBR-20) and make sure they are populated correctly.



2.0 Scope of Data

This document outlines a minimum data set to be transmitted by participating HICs.

2.1 Data Not Covered

The following clinical data types are not covered by this standard:

- Scheduled visits / appointments: This data type is considered low priority and may be added in a future phase of the acCDR.

2.2 Source Systems and Interfaces

Your Service Delivery Partner (SDP) will work with you to determine which sending systems should be transmitting data and which interfaces you will need to build.

It is preferred for all data to be transmitted to acCDR in a single HL7 data feed containing all required data types, as this reduces the complexity involved in maintaining this connection. This is not a mandatory requirement however.

2.3 Supported Functional Use Cases – ADT

2.4.1 ADT Use Cases For Hospitals

The following use cases related to ADT events from hospitals are supported.

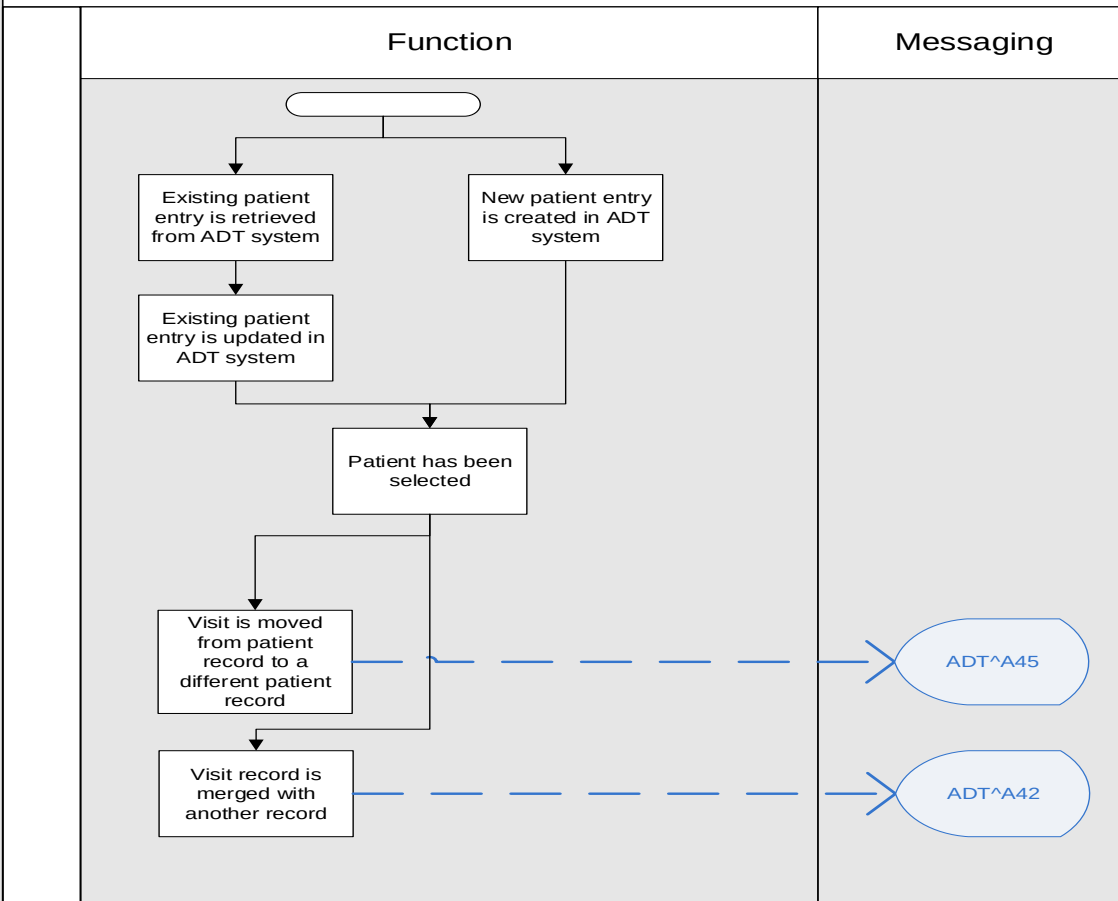
	Use Case	Description	Clinical Data Types	HL7 Messages
UC-APA	Patient Administration	Captures various patient level functions. Note: • Consent updates are no longer supported via the HL7 interface. Please follow the business process as directed by Ontario Health to apply the appropriate consent directives in acCDR. • Add patient, update patient, merge patient information, and unlink patient (also known as unmerge) are no longer required for acCDR contribution as of acCDR Release 9.2 since the HICs are required to have a separate ADT feed to the Provincial Client Registry (PCR) which already covers these functionalities.	• Patient Demographics • Visit / Encounter Details	ADT^A42 ADT^A45 The following transactions have been deprecated: ADT^A28 ADT^A31 ADT^A37 ADT^A40

UC-AIV	Inpatient Visit	Captures details related to an inpatient visit	Visit / Encounter Details	ADT^A01 ADT^A02 ADT^A03 ADT^A05 ADT^A08 ADT^A11 ADT^A13 ADT^A17
UC-AEV	Emergency Visit	Captures details related to an emergency room visit	Visit / Encounter Details	ADT^A02 ADT^A03 ADT^A04 ADT^A06 ADT^A08 ADT^A07 ADT^A13
UC-ACV	Clinic / Procedure Visit	Captures details related to an outpatient visit (i.e. an outpatient procedure, a clinic visit, etc.)	Visit / Encounter Details	ADT^A04 ADT^A06
UC-DAL	Transmit Allergy Information	This use case covers transmitting allergy information	Allergy Information	ADT^A60

2.4.1.1 Workflow: UC-APA – Patient Administration

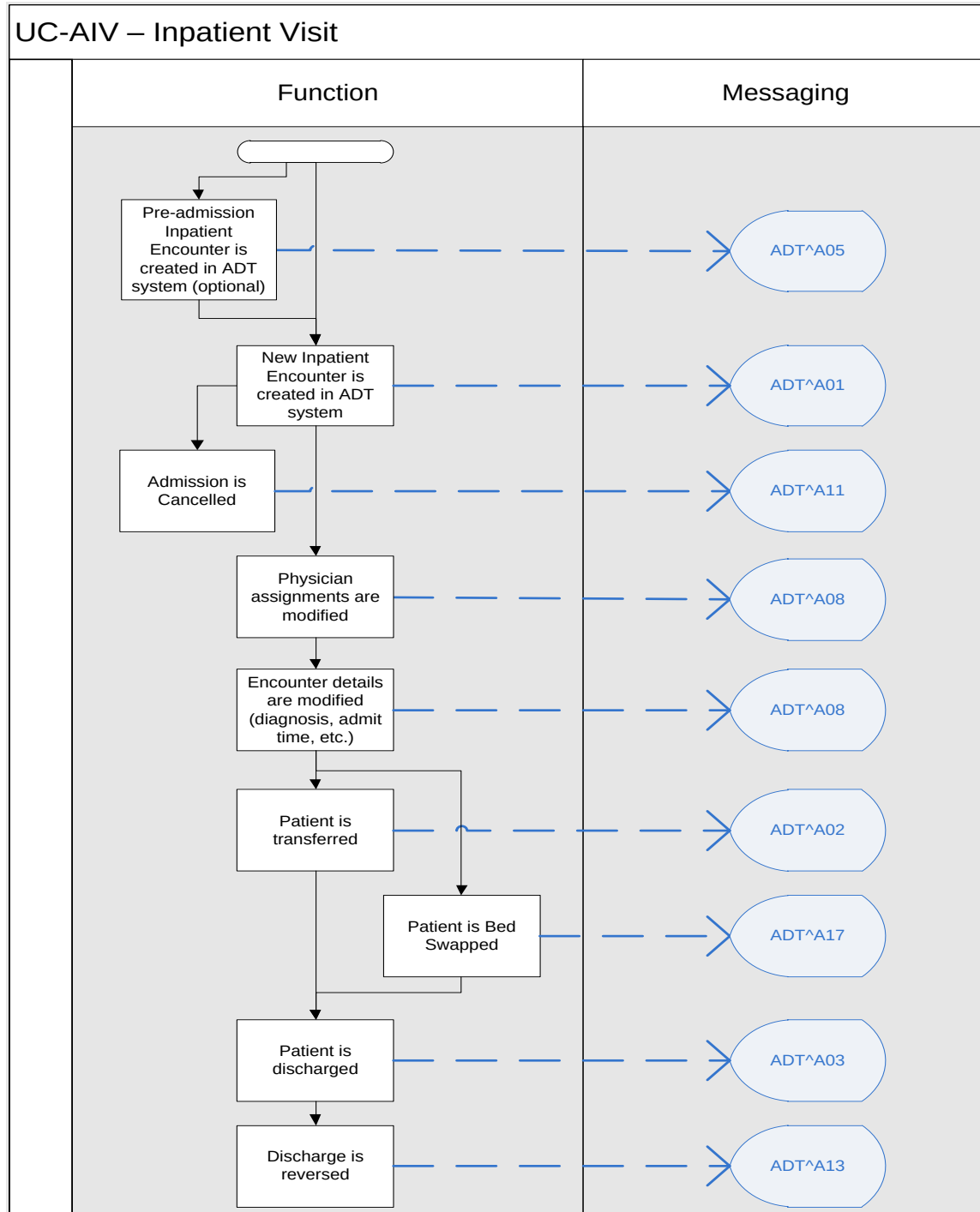
The following diagram illustrates the various transaction steps related to patient and visit administration.

UC-APA - Patient Administration

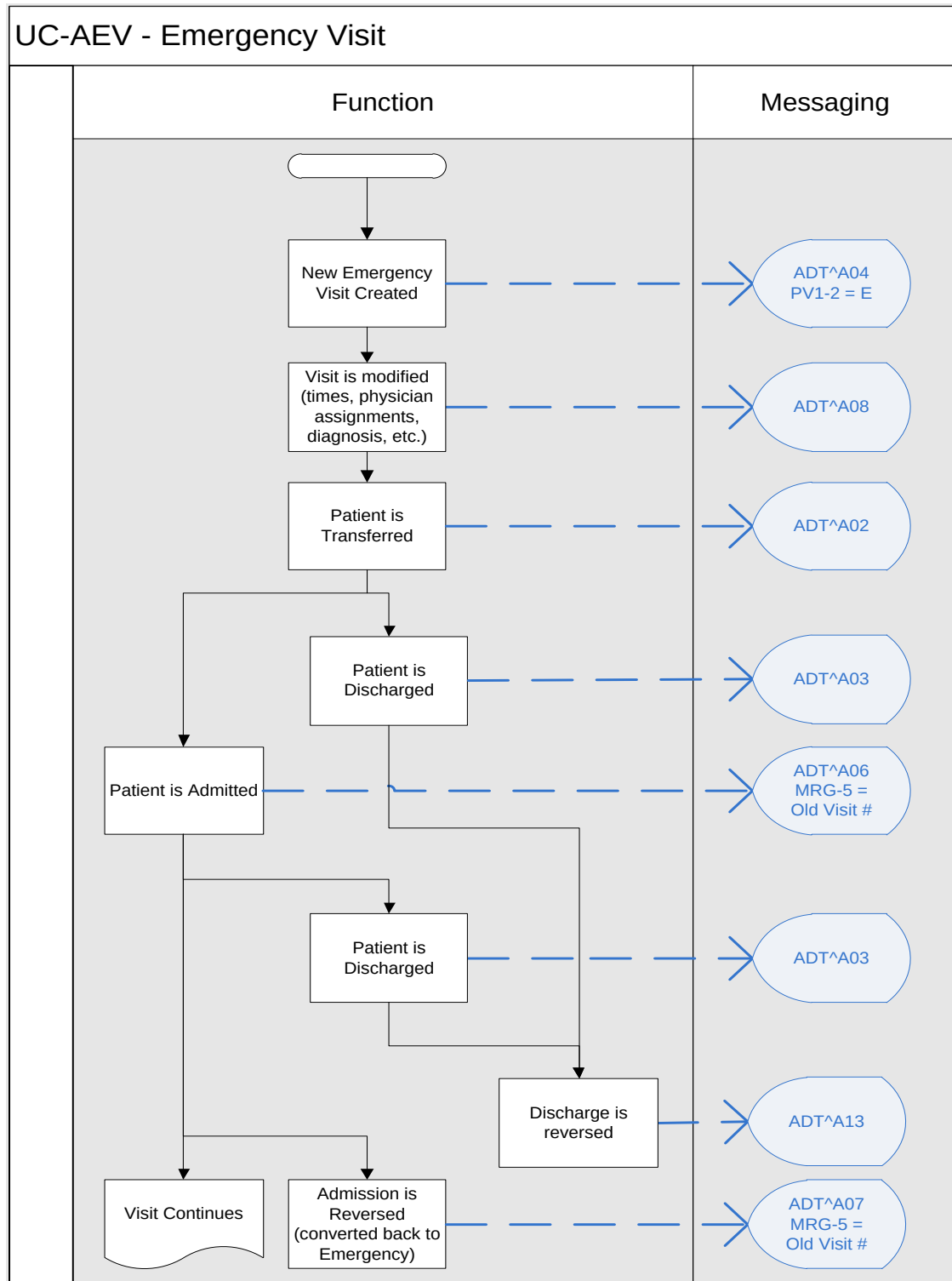


2.4.1.2 Workflow: UC-AIV – Inpatient Visit

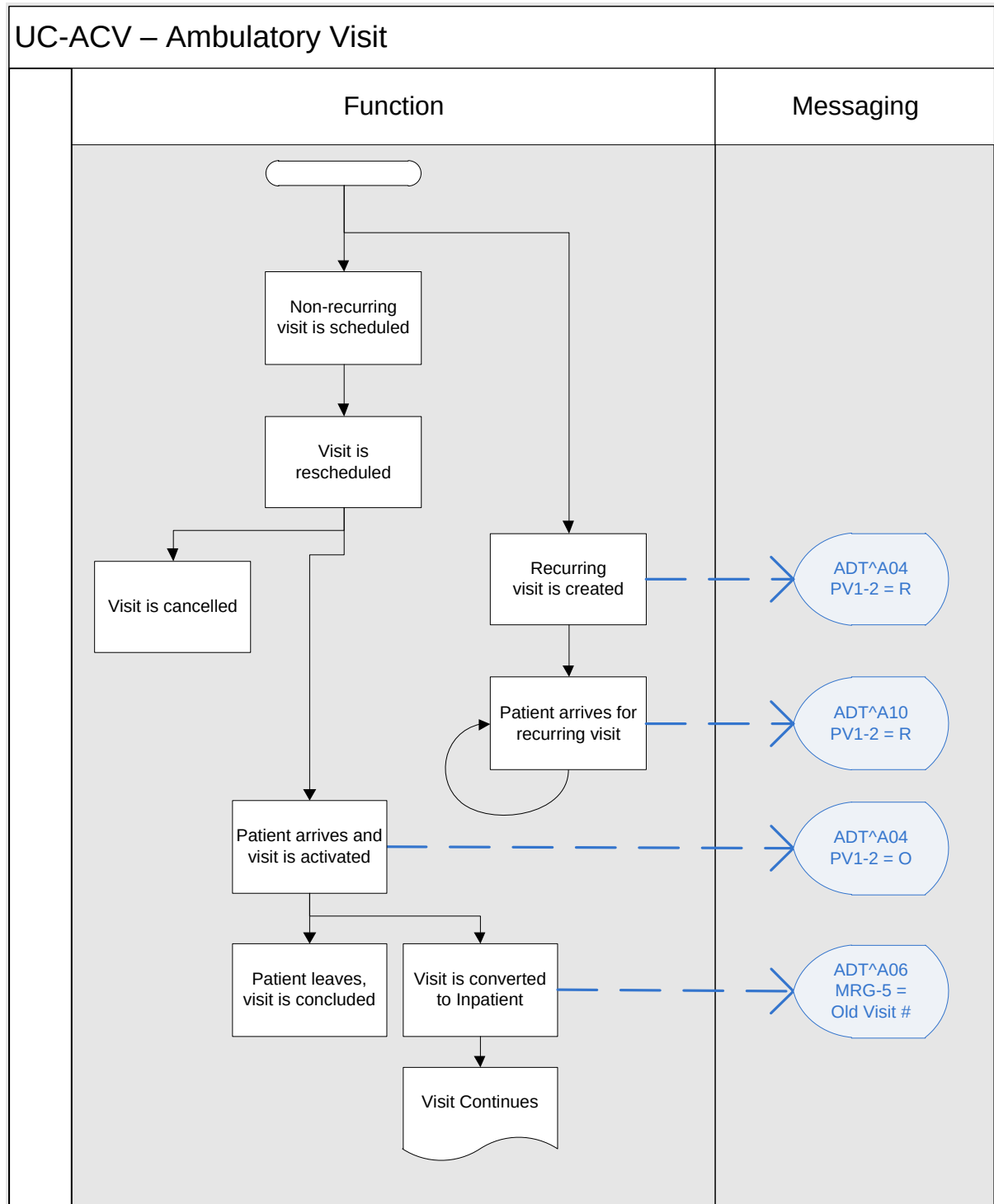
The following diagram outlines the various transactions related to an inpatient encounter, and shows the associated messaging that should be communicated to the HIAL.



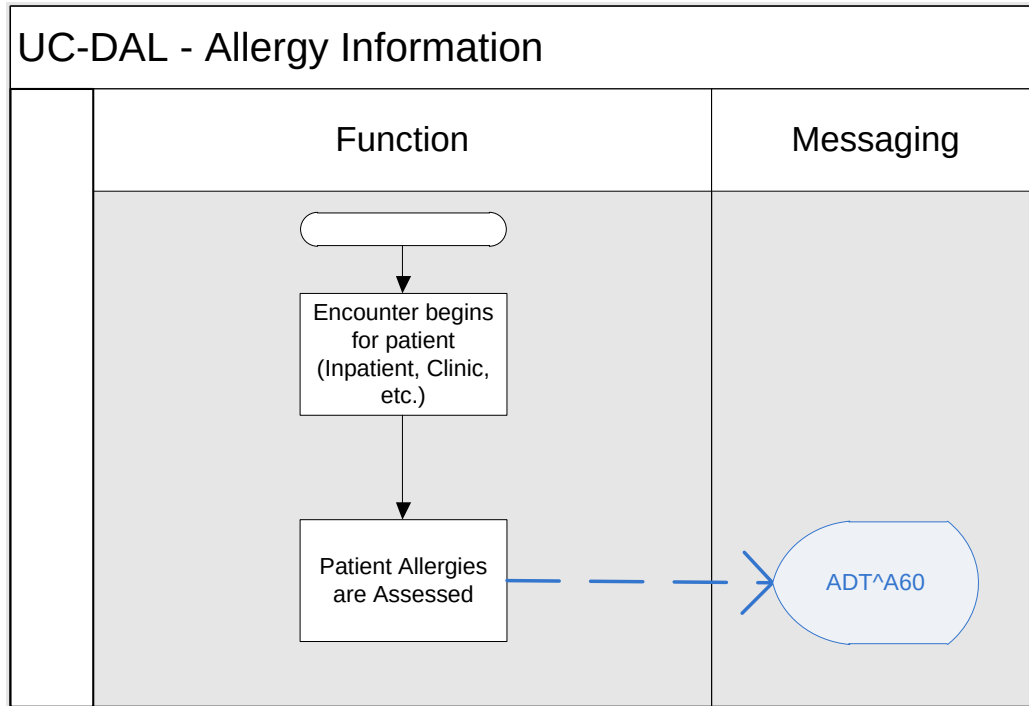
2.4.1.3 Workflow: UC-AEV – Emergency Visit



2.4.1.4 Workflow: UC-ACV – Ambulatory Visit



2.4.1.5 Workflow: UC-DAL – Allergy Information



2.4 Clinical Data Types

The acCDR defines the following priority clinical data types:

From Hospitals	From HCCSS
• Patient demographics • Visit/encounter details • Emergency department reports • Consultation reports • Discharge summaries • Cardiovascular reports • Neurophysiology reports • Respiratory Reports • Diagnostic imaging reports** • Medication and drug profiles • Allergy information • Mental Health Reports • Surgical reports • Infection control information • ~~Consent directives*~~	• Client demographics • Referral Details(ADT/ORU) • Allergy information • ~~Consent directives*~~ Additionally the acCDR defines the following data types that are specific to HCCSS (Formerly CCAC)s: • Client Assessment Details • Client Risk Information • Safety Information/Issue • Referral Details • Service Details • Medical Equipment and Supply Details • Coordinated Care Plans

*Consent directives are no longer supported via the HL7 interface. All patient consent directives related to the disclosure of their personal health information within the acCDR should be sent to

Acute and Community Clinical Data Repository (acCDR) Input Standard v2.6.1

Ontario Health Privacy Office to be applied to the acCDR Consent Registry following the business process as directed by Ontario Health.

**As of acCDR Release 10, the ConnectingOntario ClinicalViewer will integrate with and retrieve Diagnostic Imaging (DI) reports and image manifests from the Diagnostic Imaging Common Services (DI CS) repository, which is the EHR asset that provides a patient's provincial longitudinal digital imaging record. As such, only those DI reports that are not contributed to DI CS should be sent to acCDR. All DI reports will remain in scope for sites sending data using an integrated feed to acCDR and Health Report Manager (HRM).

An HL7 data feed containing these clinical data types should be transmitted to acCDR.

The Clinical Data Repository aims to include any document that would be clinically relevant to a clinician who is subsequently treating the patient at another institution and that can be submitted in an HL7 message that conforms to the acCDR Input Standard.

Clinically relevant reports not identified the table above, will require review and the approval by Ontario Health and any relevant clinical working groups before inclusion to a participating sites' scope of data types contribution. For complete list of document types being submitted by the contributing sites, please refer to the acCDR Terminology Mapping Worksheet in the adopter's toolkit.

The acCDR is designed to be flexible in terms of the formats it can accept. Discrete Data is the preferred approach for submitting data where ever possible. Some sending systems may only be capable of very basic data capture (for example, a dictation capture system). In this case, the system may elect to send an unstructured document consisting of a single "block of text". Other systems may be capable of very complex data capture (for example, an electronic Discharge Summary application). In this case, the system may send a complex document with structured and coded data. Where discrete data is not achievable the acCDR can accept a Base 64-encoded representation of the document. Contribution of clinical information into acCDR intends to align with industry standards to allow future interoperability. If incoming data content results in potential discrepancy with other electronic contributions of similar data, additional directives and analysis will be required prior to acCDR contribution to ensure alignment with respect to standardization.

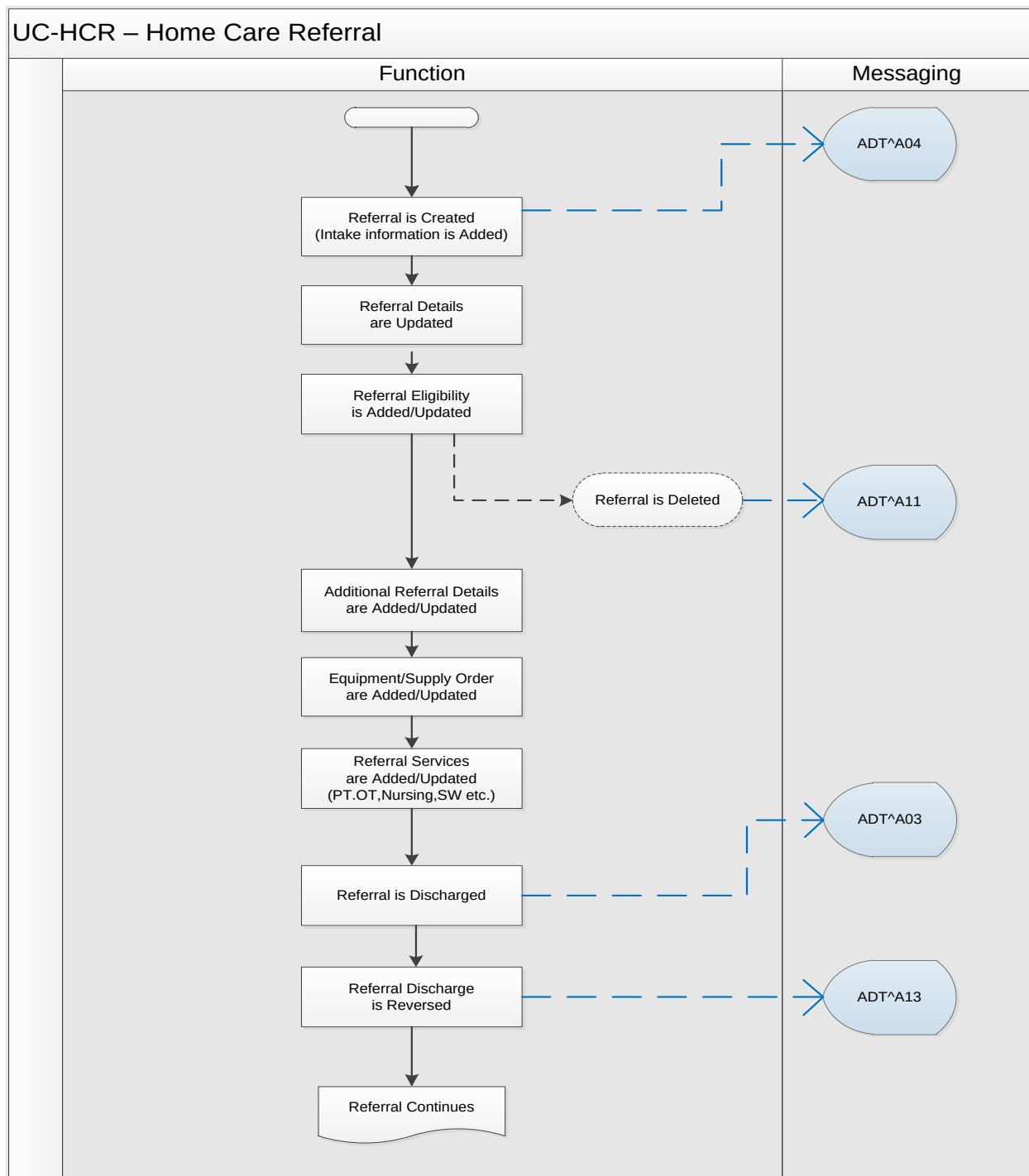
2.4.2 ADT Use Cases for HCCSS (Formerly CCAC)

	Use Case	Description	Clinical Data Types	HL7 Messages
UC-HCR	Referral Details	Captures details related to an overarching referral (i.e. an open referral for home care, etc)	Referral Details	ADT^A03 ADT^A04 ADT^A11 ADT^A13

UC-LSR	LTCH/SSC Referral	Captures details related to an overarching referral (i.e. an open referral for long-term care placement, or complex care, etc)	Referral Details	ADT^A03 ADT^A04 ADT^A11 ADT^A13
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2.4.2.1 Workflow: UC-HCR – Home Care Referrals

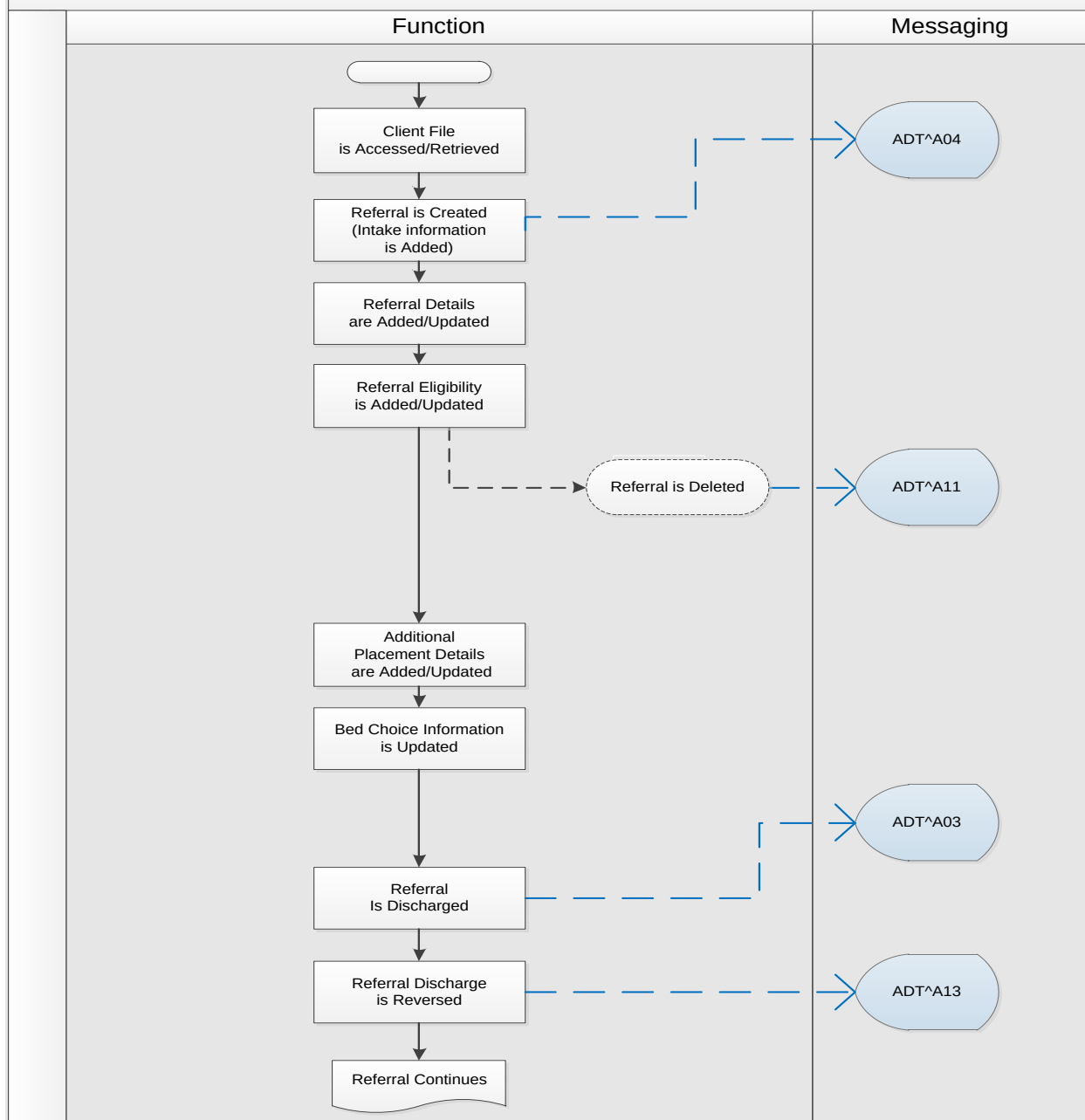
The following diagram outlines the various transactions related to a HCCSS home care referral document, and shows the associated messaging that should be communicated to the HIAL.



2.4.2.2 Workflow: UC-LSR – LTCH/SSC Referral

The following diagram outlines the various transactions related to a HCCSS long term care/short stay care referral document, and shows the associated messaging that should be communicated to the HIAL.

UC-LSR – Long/Short Stay Referral



2.5 Supported Functional Use Cases – Documents and Results

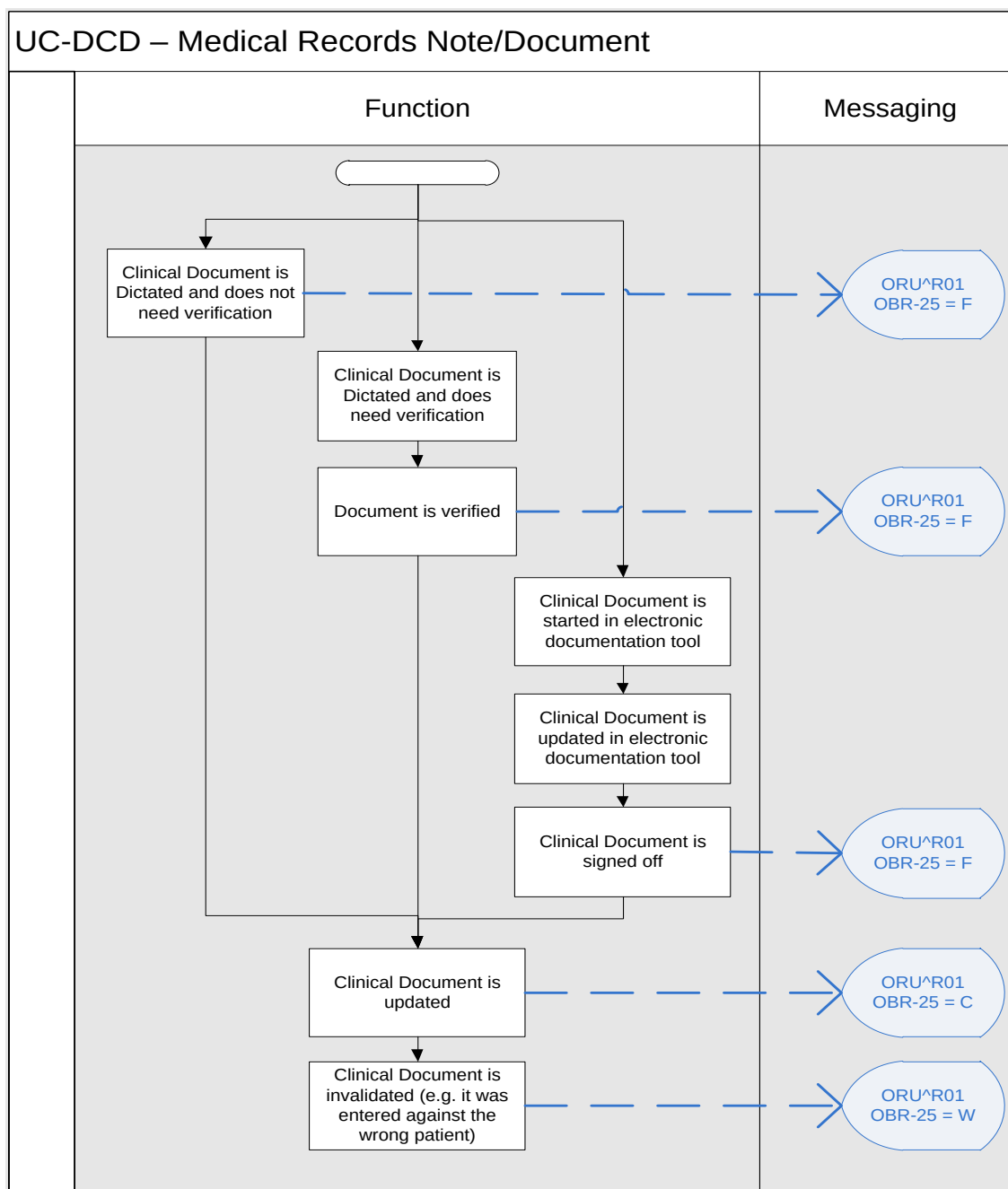
2.5.1 Documents and Results Use Cases for Hospitals

The following use cases relating to results and clinical documents from hospitals are supported. Note that this section specifically excludes lab results, as these are covered by the *OLIS Interface Standard*.

	Use case	Description	Clinical data types	HL7 messages
UC-DCD	Medical Records Create and Update	This use case covers the creation, updating and invalidation of a Medical Records clinical document / note.	• Emergency Department Reports • Consultation Reports • Discharge Summaries • Cardiovascular Reports • Neurophysiology Reports • Respiratory Reports • Mental Health Reports • Surgical Reports	ORU^R01
UC-DDI	DI Report Create and Update	This use case covers the creation, updating, and invalidation of a DI Report. Note: only those DI reports that are not sent to DI CS should be sent to acCDR. All DI reports will remain in scope for contribution to HRM.	• Diagnostic Imaging Reports	ORU^R01
UC-DRX	Transmit Drug Profile	This use case covers transmitting Medication and Drug Profile information. This use case will be elaborated in a future version of this document.	• Medication and Drug Profiles	RDE^O11 RAS^O17
UC-DAL	Transmit Allergy Information	This use case covers transmitting allergy information.	• Allergy Information	ADT^A60
UC-DIC	Transmit Infection Control Information	This use case covers transmitting infection control.	• Infection Control Information	ORU^R01

2.5.1.1 Workflow: UC-DCD - Medical Records

The following diagram outlines the various transactions related to a Medical Records note/document and shows the associated messaging that should be communicated to the HIAL.

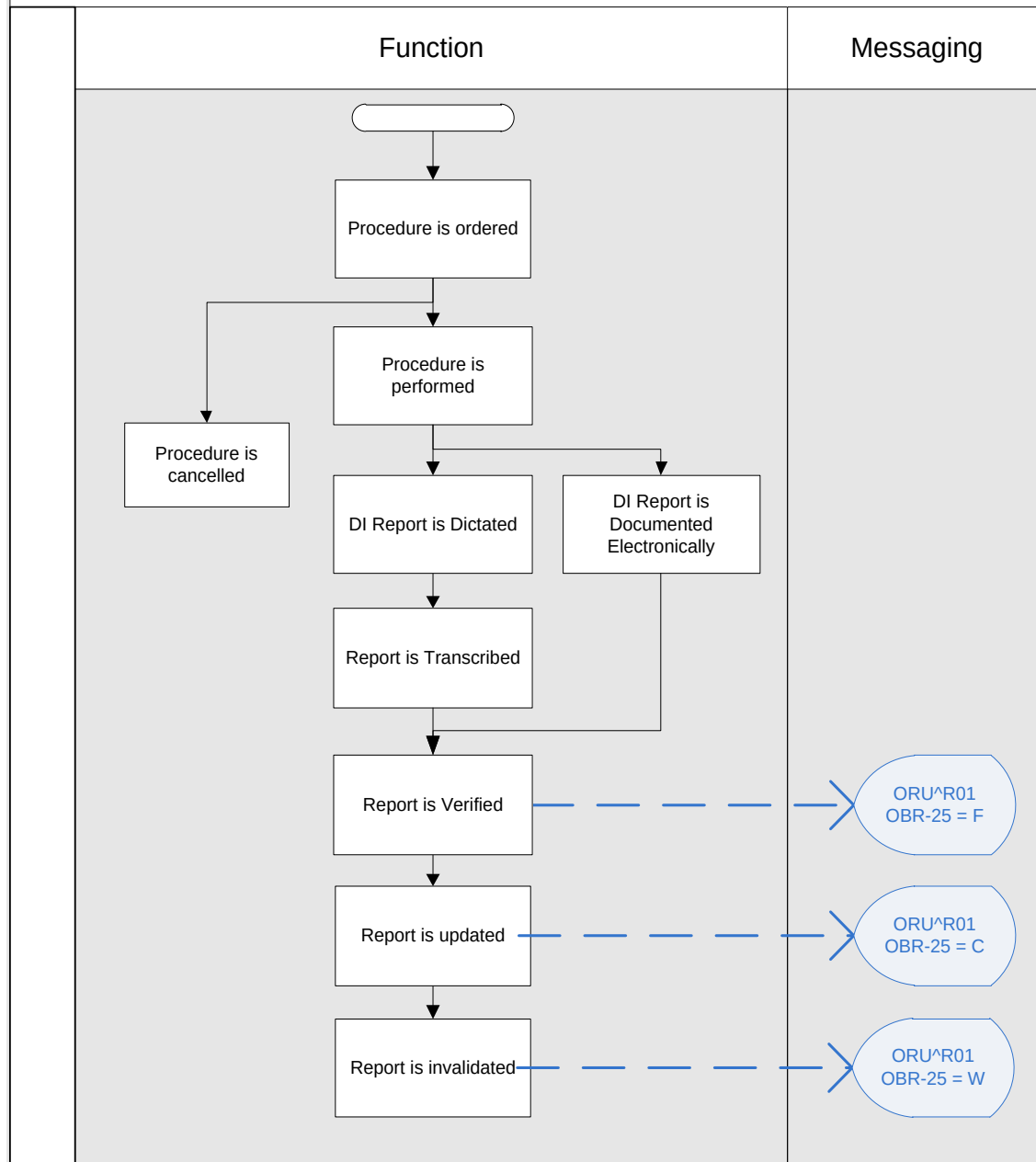


2.5.1.2 Workflow: UC-DDI - Diagnostic Imaging

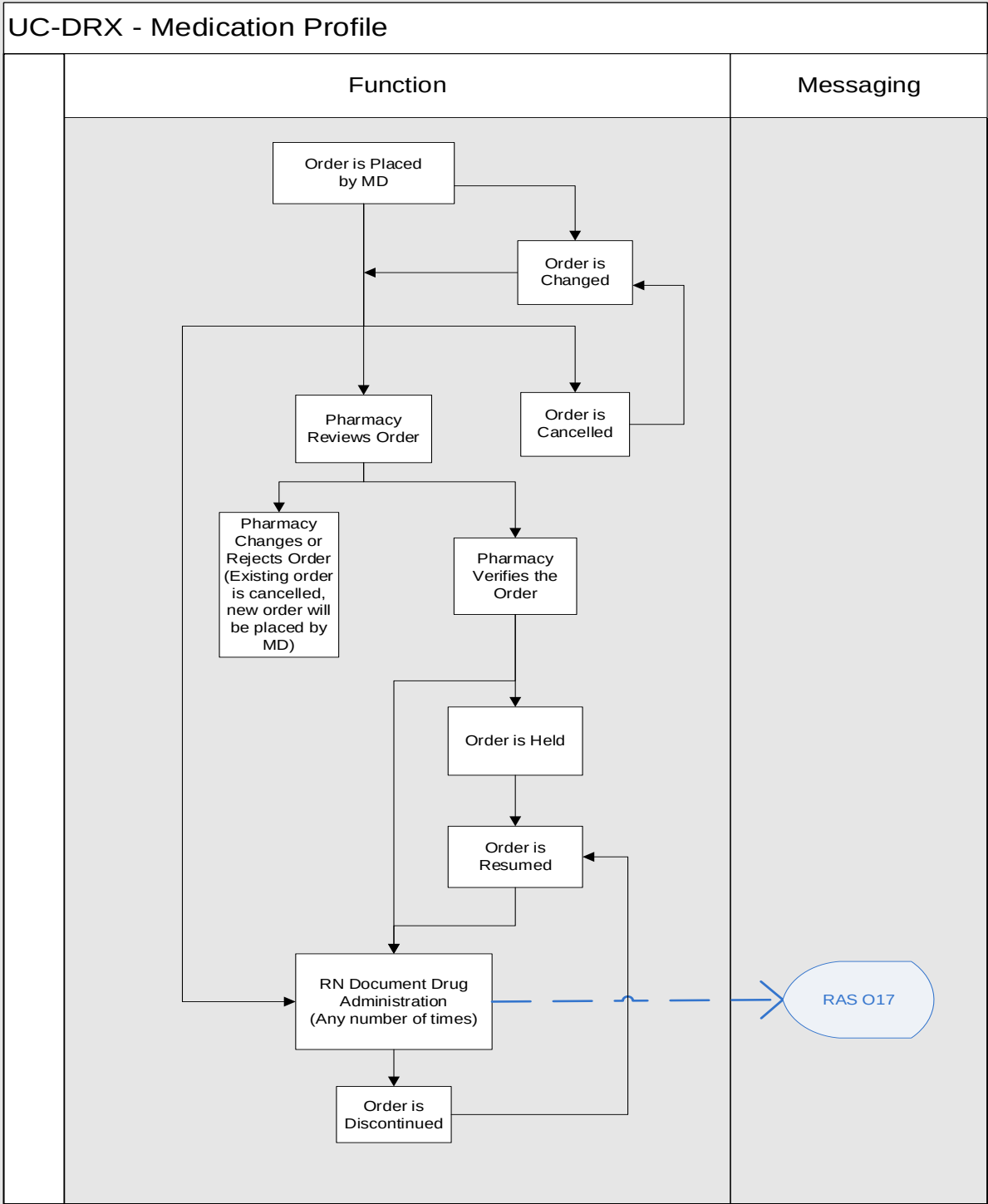
The following diagram outlines the various transactions related to a Diagnostic Imaging report and shows the associated messaging that should be communicated to the HIAL.

Note: only those DI reports that are not sent to DI CS should be sent to acCDR. All DI reports will remain in scope for sites sending data using an integrated feed to acCDR and HRM.

UC-DDI – Diagnostic Imaging Report



2.5.1.3 Workflow: UC-DRX – Medication and Drug Profile



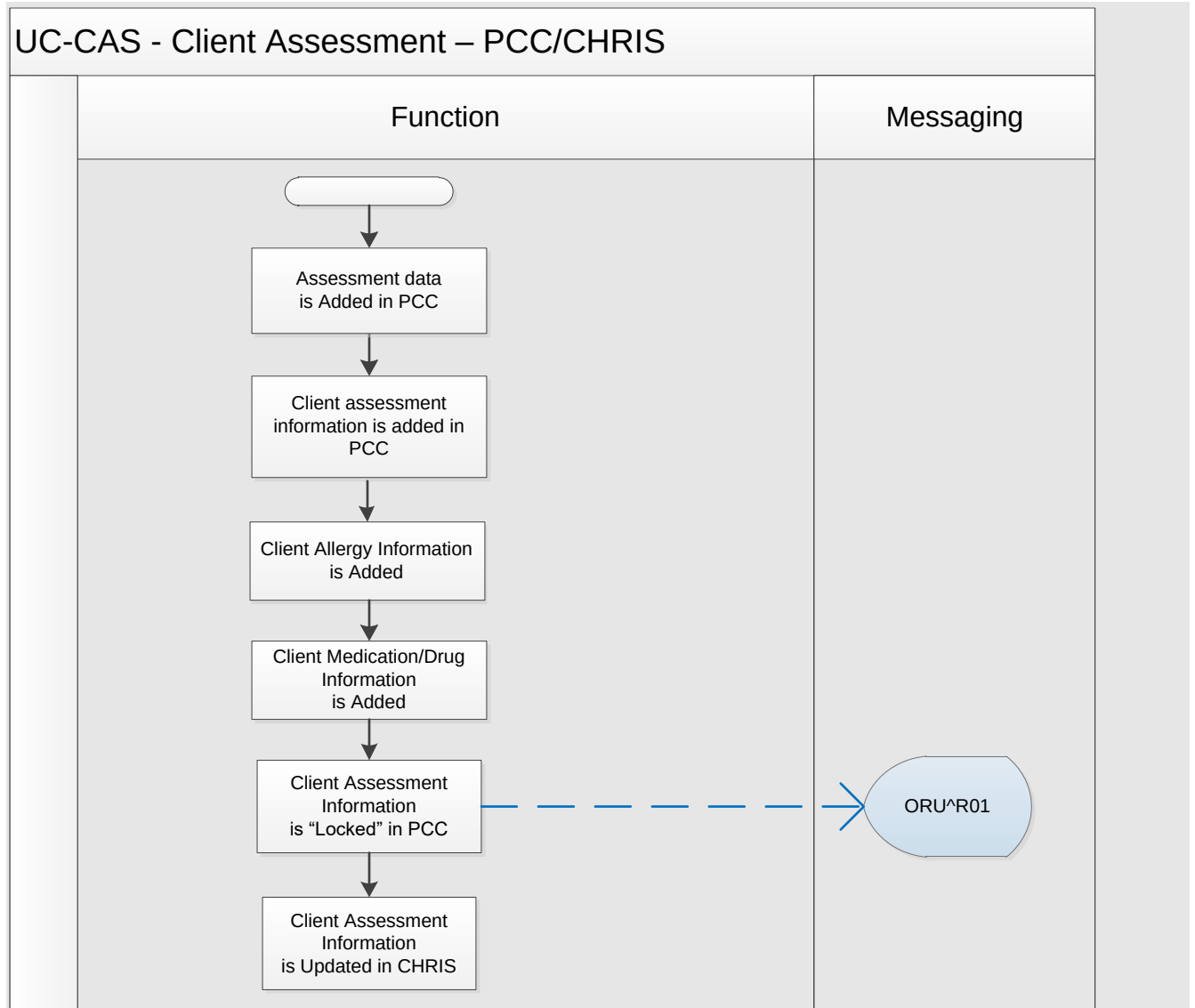
2.5.2 Supported Functional Use Cases – Documents and Results (For HCCSS)

The following use cases relating to results and clinical documents from HCCSS are supported.

	Use case	Description	Clinical data types	HL7 messages
UC-CAS	Client Assessment	Captures details for the client assessment	Client Assessment Lock	ORU^R01
UC-CRI	Client Risk Information	Captures details for the client risk information	Client Risk Information	ORU^R01
UC-SII	Safety Information/Issue	Captures details for the safety information/issues	Safety Information/Issue	ORU^R01
UC-CCP	Coordinated Care Plans	This use case covers the creation, updating and complete of a document / note containing detailed information on a coordinated care plan	Coordinated Care Plans	ORU^R01
UC-HCR	Home Care Referral Details	Captures details within an overarching referral (i.e. a home care referral is updated, is discharged, etc.)	Referral Details	ORU^R01
UC-LSR	Long Term Care/Short Stay Care Referral Details	Captures details within an overarching referral (i.e., a long term care referral is updated, is discharged, etc.)	Referral Details	ORU^R01
UC-SDE	Service Details	This use case covers the creation, updating and invalidation of a document / note containing detailed information on a service	Service Details	ORU^R01
UC-MES	Medical Equipment and Supply	This use case covers the creation, updating and complete of a document / note containing detailed information on a medical equipment or supply	Medical Equipment and Supply Details	ORU^R01

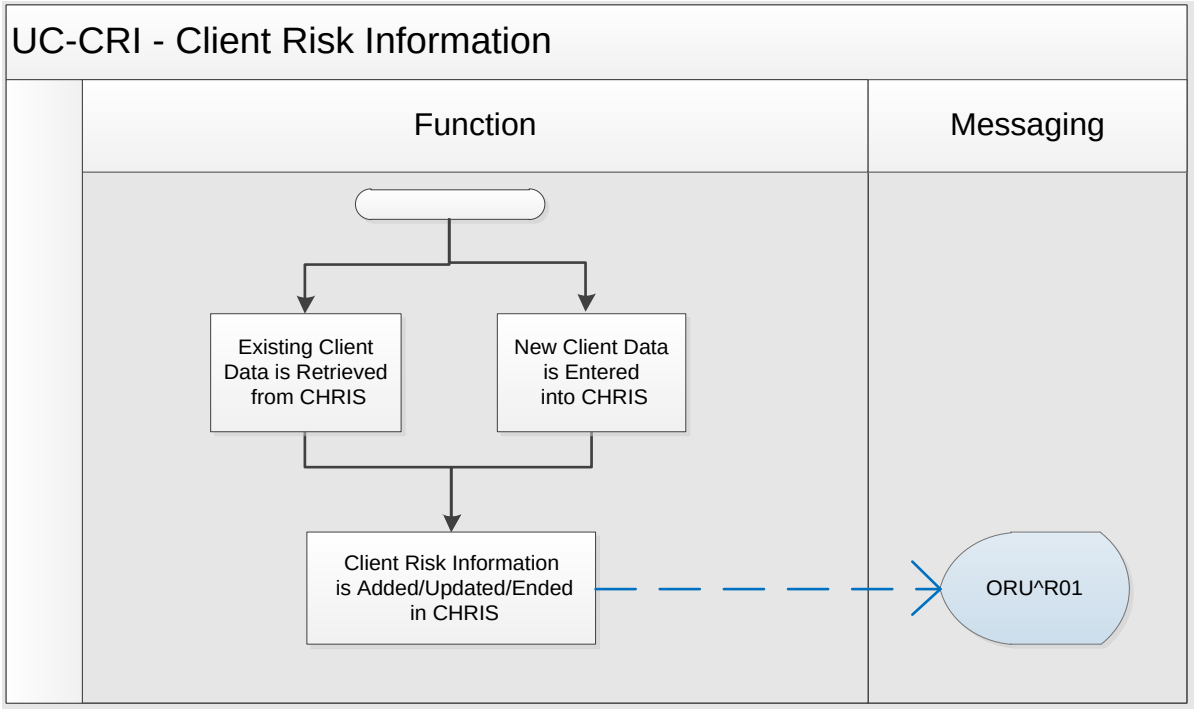
2.5.2.1 Workflow: UC-CAS – Client Assessment – PCC-CHRIS

The following diagram outlines the various transactions related to a HCCSS client assessment and shows the associated messaging that should be communicated to the HIAL.



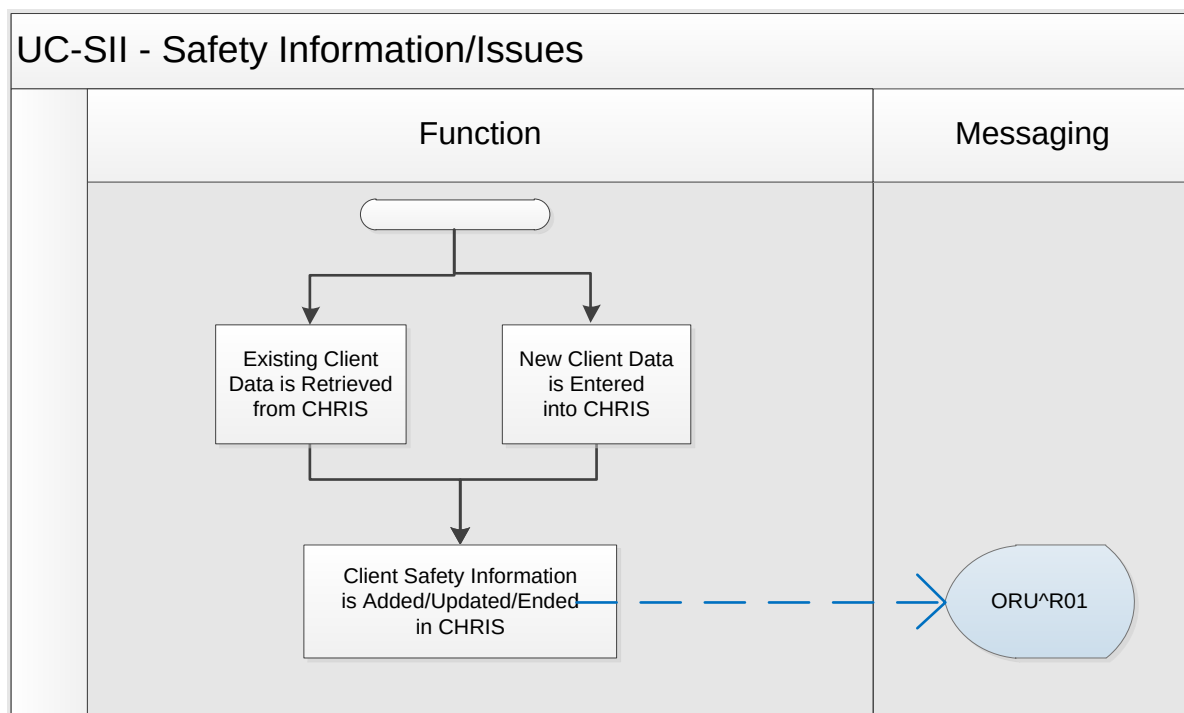
2.5.2.2 Workflow: UC-CRI – Client Risk Information

The following diagram outlines the various transactions related to a HCCSS client document and shows the associated messaging that should be communicated to the HIAL.



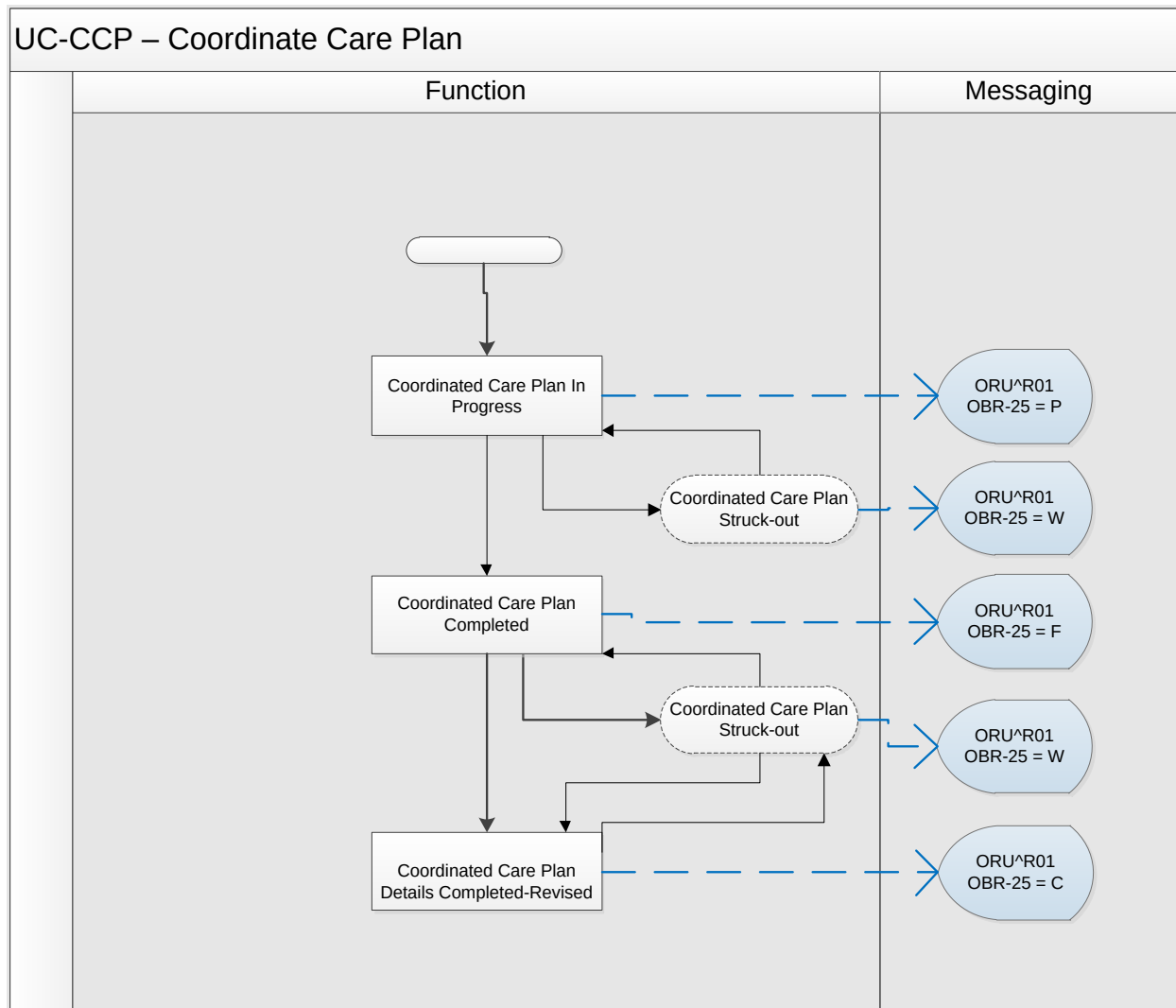
2.5.2.3 Workflow: UC-SII – Safety Information/Issues

The following diagram outlines the various transactions related to a HCCSS safety document and shows the associated messaging that should be communicated to the HIAL.



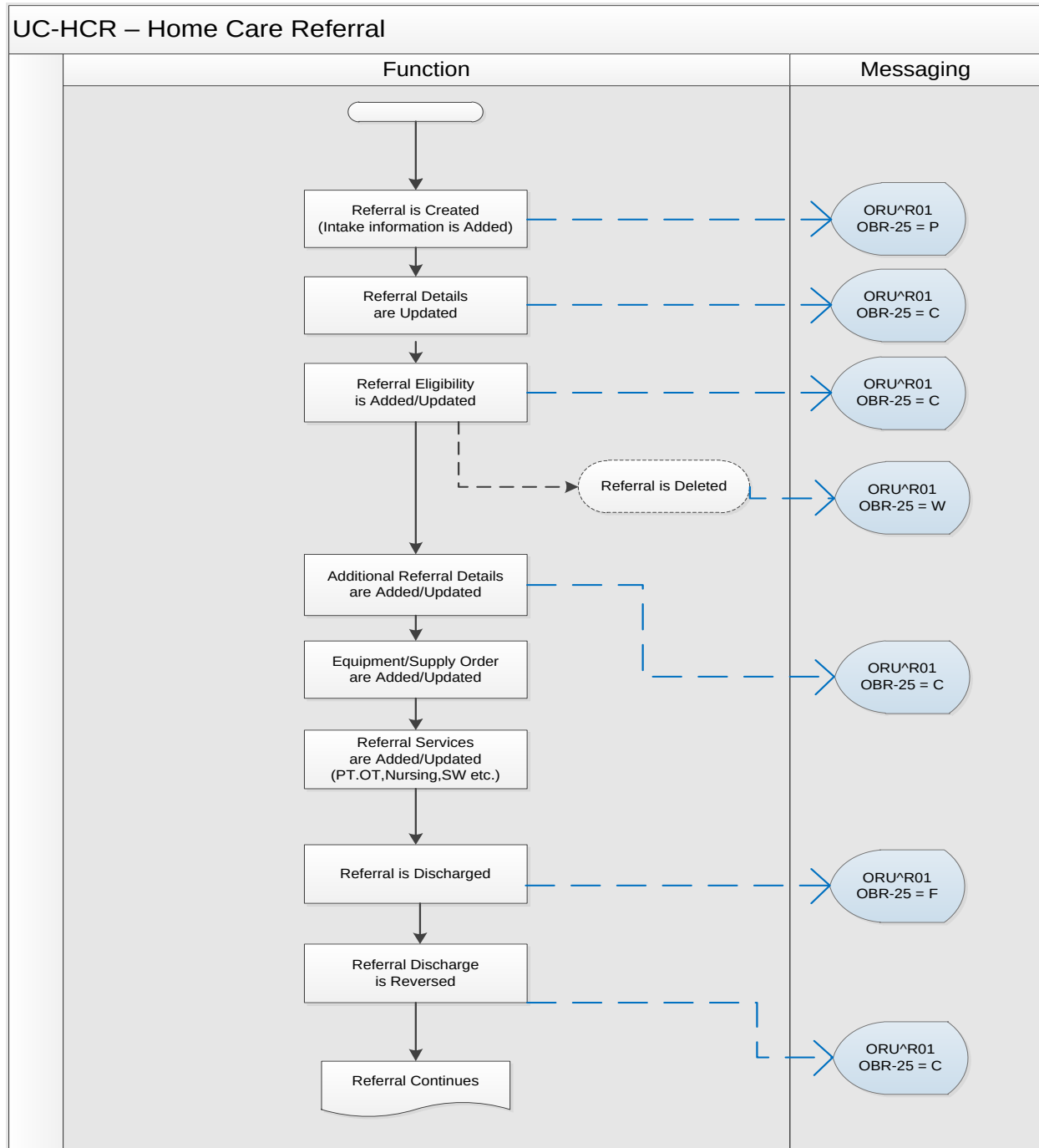
2.5.2.4 Workflow: UC-CCP – Coordinated Care Plans

The following diagram outlines the various transactions related to a HCCSS coordinated care plan document and shows the associated messaging that should be communicated to the HIAL.



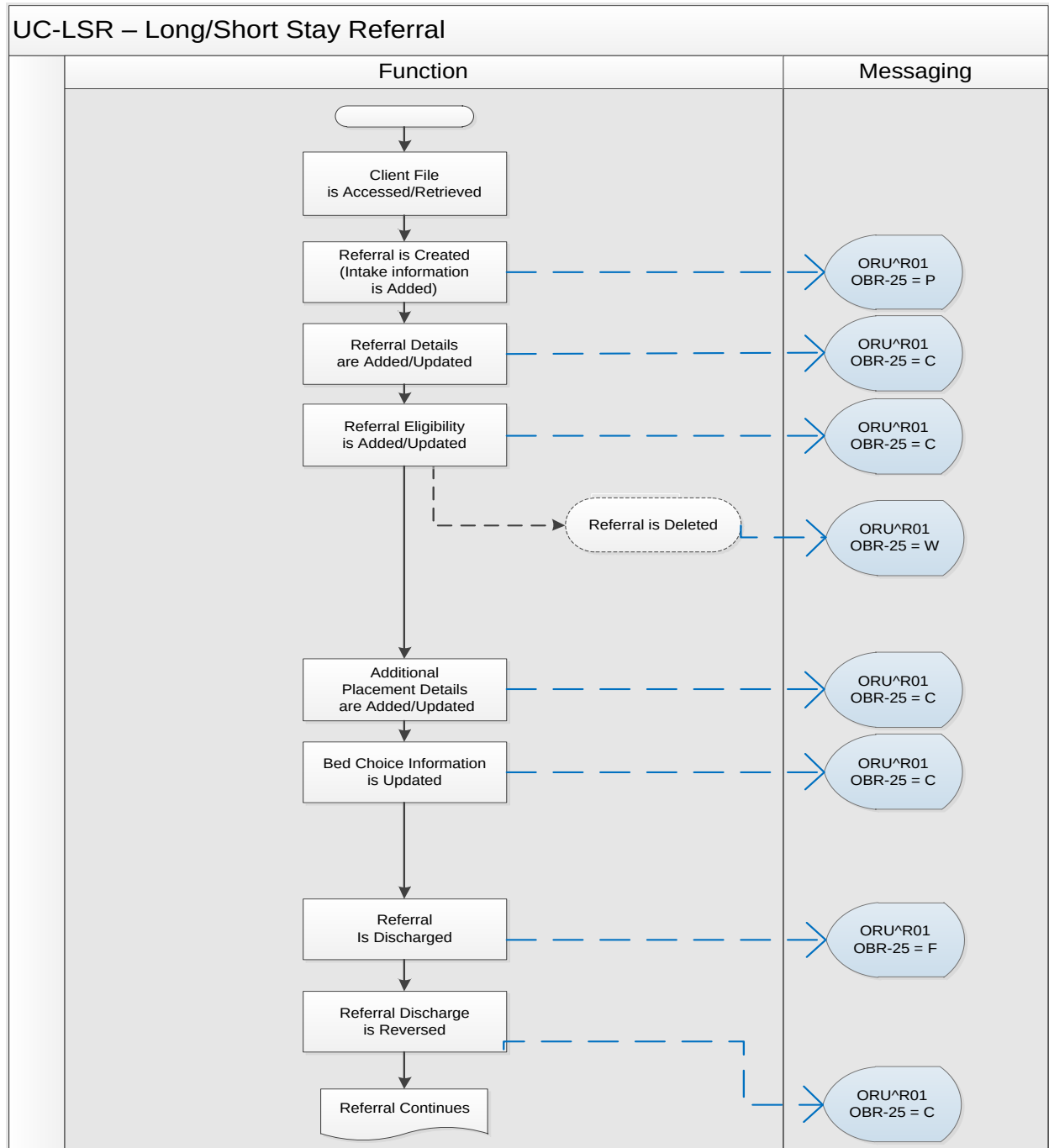
2.5.2.5 Workflow: UC-HCR – Home Care Referrals Detail

The following diagram outlines the various transactions related to a HCCSS home care referral document and shows the associated messaging that should be communicated to the HIAL. The document is linked to a Referral created by an ADT transaction via the PV1-19 entry and displays in the Community portlet associated with the referral.



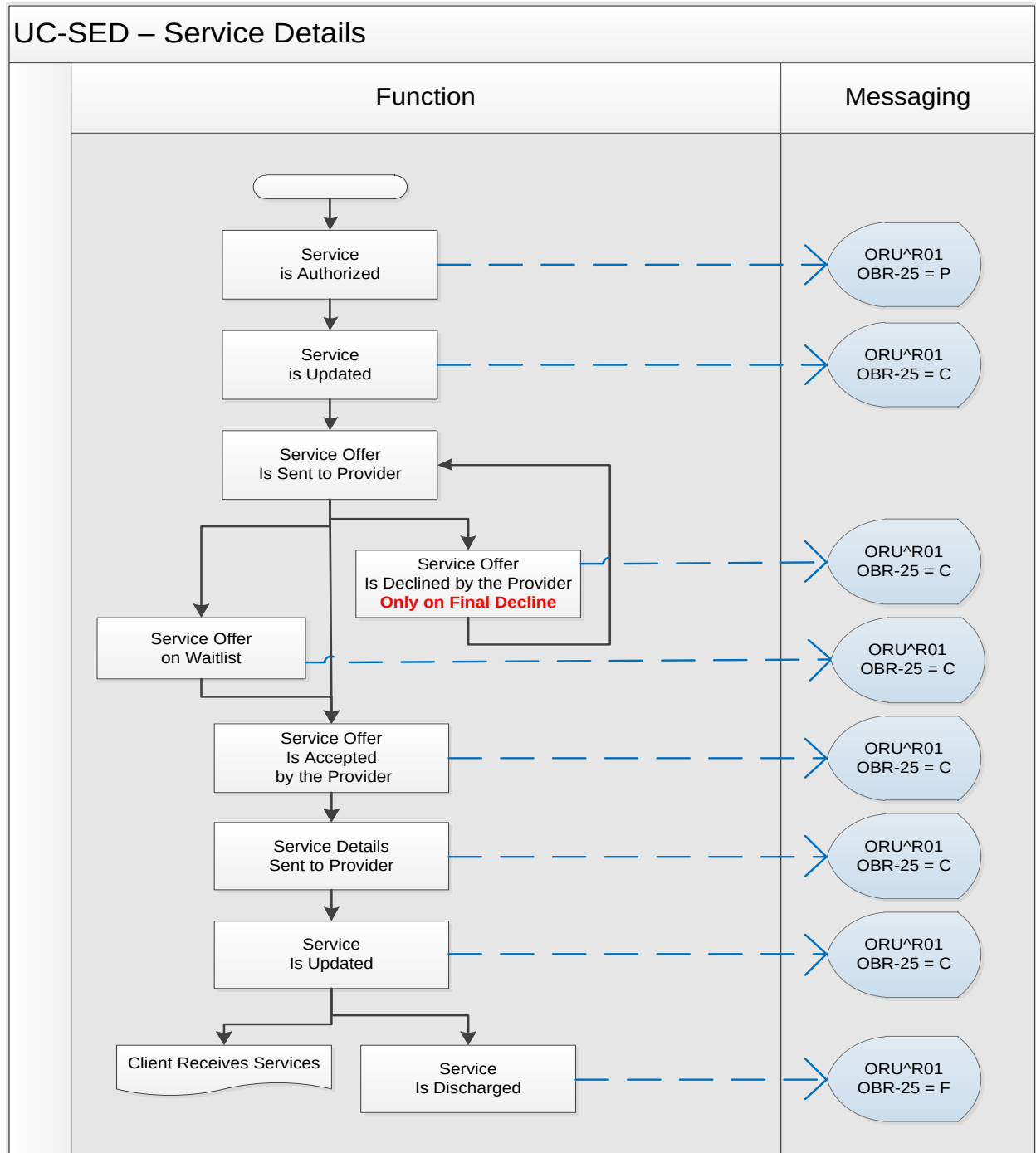
2.5.2.6 Workflow: UC-LSR – LTCH/SSC Referral Details

The following diagram outlines the various transactions related to a HCCSS long term care/short stay care referral document and shows the associated messaging that should be communicated to the HIAL. The document is linked to a Referral created by an ADT transaction via the PV1-19 entry and displays in the Community portlet associated with the referral.



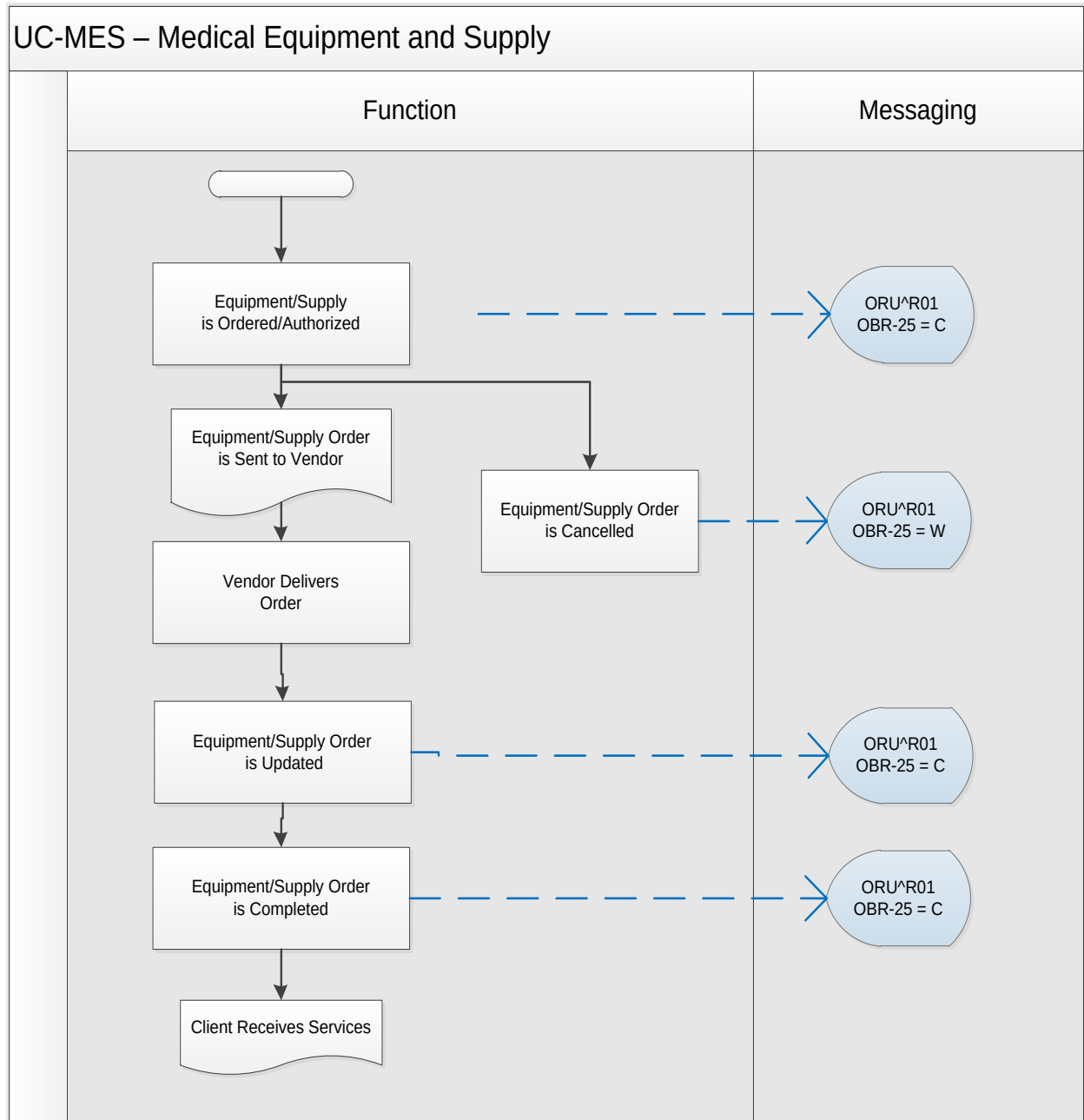
2.5.2.7 Workflow: UC-SDE – Service Details

The following diagram outlines the various transactions related to a HCCSS service details document and shows the associated messaging that should be communicated to the HIAL. The document is linked to a Referral created by an ADT transaction via the PV1-19 entry and displays in the Community portlet associated with the referral.



2.5.2.8 Workflow: UC-MES – Medical Equipment and Supply

The following diagram outlines the various transactions related to a HCCSS medical equipment/supply details document and shows the associated messaging that should be communicated to the HIAL. The document is linked to a Referral created by an ADT transaction via the PV1-19 entry and displays in the Community portlet associated with the referral.



3.0 Message Structure Definitions

3.1 ADT Message Transactions

	Use Case	Usage	Description
ADT^A01	Activate Inpatient Visit	Hospitals	Inpatient visit has been started for a patient
ADT^A02	Transfer a Patient	Hospitals	Patient has been transferred from one location to another
ADT^A03	Discharge/End Visit (Hospitals)	Hospitals	Visit is being discharged/ended (hospitals)
	Discharge/End Referral (HCCSS)	HCCSS	Referral is being discharged/ended (HCCSS)
ADT^A04	Activate Outpatient or Emergency Visit (Hospitals)	Hospitals	Outpatient or Emergency visit has been started for a patient (Hospitals)
	Activate Client Referral (HCCSS)	HCCSS	Visit has been started for a client (HCCSS)
ADT^A05	Pre-Admit	Hospitals	Pre-Admission visit is started for a patient
ADT^A06	Convert OP to IP	Hospitals	Visit is being converted from Outpatient to Inpatient
ADT^A07	Convert IP to OP	Hospitals	Visit is being converted from Inpatient to Outpatient
ADT^A08	Update visit information	Hospitals	Visit information has changed
		HCCSS	
ADT^A10	Patient Arrives	Hospitals	Patient has arrived for a recurring outpatient Visit
ADT^A11	Cancel Admit (Hospitals)	Hospitals	Admit is being reversed (Hospitals)
	Cancel Referral (HCCSS)	HCCSS	Referral is being cancelled (HCCSS)
ADT^A13	Cancel Discharge	Both	Discharge is being reversed
ADT^A17	Swap patients	Hospitals	Two patients are swapping beds
~~ADT^A28~~	~~Add Person or Patient~~	Hospitals	A new person or patient/Client record is being created
	~~Add Person or Client~~ (deprecated)	HCCSS	
~~ADT^A31~~	~~Update Person or Patient~~	Hospitals	A person or patient/client record is being updated See note above
	~~Update Person or Client~~ (deprecated)	HCCSS	
~~ADT^A37~~	~~Unlink Person or Patient~~ (deprecated)	Hospitals	Unlink a person or patient record (also known as “unmerge”) See note above

ADT^A40	Merge Patient Information (deprecated)	Hospitals	A person or patient record is being merged into another See note above
ADT^A42	Merge Visit Information	Hospitals	A visit is merged with another visit (only the visit number is combined)
ADT^A45	Move Visit Information	Hospitals	A visit is moved from one person or patient record to another
ADT^A60	Update Allergy Information	Hospitals	Allergy information is being updated for a specific patient/client record

3.1.1 General ADT Structure

The following table outlines the structure for most ADT domain HL7 messages. Note that not all segments will apply to all triggers.

3.1.1.1 ADT Structure for Hospital Events

ADT^xxx^ADT_xxx	ADT Message
MSH	Message Header
EVN	Event Type
PID	Patient Identification
[{ ROL }]	Role (e.g. Family Provider)
[MRG]	Merge Information (Mandatory for A06 and A07 triggers)
[{ NK1 }]	Next of Kin / Associated Parties
[PV1]	Patient Visit (Mandatory for triggers pertaining to visits)
[PV2]	Patient Visit - Additional Info.
[{ IAM }]	Adverse Reaction (A60 Trigger only)
[{ DG1 }]	Diagnosis Information

3.1.1.2 ADT Structure for HCCSS Events

ADT^xxx^ADT_xxx	ADT Message
MSH	Message Header
EVN	Event Type
PID	Client Identification
[{ ROL }]	Role (e.g., Family Provider)
[{ NK1 }]	Next of Kin / Associated Parties
PV1	Client Visit
[PV2]	Client Visit - Additional Info.

[{ IAM }]	Adverse Reaction (A60 Trigger only)
[{ DG1 }]	Diagnosis Information

3.1.2 ADT Merge and Move Structure (A42, A45)

Note: This is not applicable for HCCSS.

Merge and Move Patient account or visit information must adhere to the following generic HL7 ADT structure:

ADT^xxx^ADT_xxx	ADT Message
MSH	Message Header
EVN	Event Type
	-- PATIENT Begin
PID	Patient Identification
MRG	Merge Information
PV1	Patient Visit
	-- PATIENT End

3.1.3 ADT Swap Patient Structure (A17)

Note: This is not applicable for HCCSS.

ADT^xxx^ADT_xxx	ADT Message
MSH	Message Header
EVN	Event Type
PID	Patient (1) Identification
PV1	Patient (1) Visit
PID	Patient (2) Identification
PV1	Patient (2) Visit

3.2 Documents and Results Message Transactions

Use Case	Description	acCDR Priority Data Types
----------	-------------	---------------------------

ORU^R01	Unsolicited Result	Document or result is being transmitted to acCDR	For Hospitals: • Emergency Department Reports • Consultation Reports • Discharge Summaries • Cardiovascular Reports • Neurophysiology Reports • Respiratory Reports • Diagnostic Imaging Reports (required for HRM only) • Infection Control Information • Mental Health Report • Surgical Report For HCCSS: • HCCSS Data, aside from client demographics information, will all be transmitted to acCDR as “documents” • In the context of HL7, a document is any aggregation of data sent as a single greater unit, and can be structured or unstructured • Client Assessments • Client Risk Information • Client Safety Information • Medical Equipment and Supply Details • Referral Details • Service Details • Coordinated Care Plan
---------	--------------------	--	--

3.2.1 Document / Result Structure (ORU^R01)

ORU^R01^ORU_R01	ORU Message	Ontario Health atHome Description
MSH	Message Header	
[{	-- PATIENT_RESULT begin	-- CLIENT_RESULT begin
PID	Patient Identification	Client Identification
[	-- VISIT begin	-- Referral/Encounter begin
PV1	Patient Visit	Client Referral/Encounter
[PV2]	Visit Additional Info	Referral/Encounter Additional Info
]	-- VISIT end	-- Referral/Encounter end
{	-- ORDER_OBSERVATION begin	
[ORC]	Order Common	
OBR	Observations Request	
[{ NTE }]	Order Notes and comments	

[{	-- OBSERVATION begin	
OBX	Observation related to OBR	
[{ NTE]]	Observation Notes and comments	
}]	-- OBSERVATION end	
}	-- ORDER_OBSERVATION end	
[ZDR]	HRM Provider Identifier	
}]	-- PATIENT_RESULT end	-- CLIENT_RESULT end

3.3 Medication and Drug Profile Transactions

**Note: Medication and drug profile messages are out of scope for HCCSS.

	Use Case	Description	acCDR Priority Data Types
~~RDE^011~~ (deprecated)	Pharmacy Order	~~A medication/drug order has been created, updated, verified, etc.~~	~~Medication and Drug Profiles~~ Note: Medication order messages have been deprecated in the acCDR Input Standard v2.6. Medication order will be mandatory in medication administration (RAS^017) messages.
RAS^017	Pharmacy Administration	A medication/drug has been administered	Medication and Drug Profiles

3.3.1 Pharmacy Administration Message Structure (RAS^017)

RAS^017^RAS_017	RAS Message
MSH	Message Header
PID	Patient Identification
PV1	Patient Visit
{	-- ORDER begin
ORC	Order Common
{	-- ENCODING begin
RXE	Pharmacy Encoded Order
{ TQ1 }	Timing/Quantity
RXR	Pharmacy Route
[{ RXC]]	Component (for RXE) (Required or empty for compound medications)
}	-- ENCODING end
{	-- ADMINISTRATION begin
{ RXA }	Pharmacy Administration
RXR	Pharmacy Route

}	-- ADMINISTRATION end
}	-- ORDER end

3.4 Acknowledgements and Acknowledgement Structure (ACK)

The HIAL accepts messages using HTTP transport, rather than the Minimal Lower Layer Protocol (MLLP) more commonly used for HL7 v2 transmissions. When the HIAL receives an HL7 message, it will attempt to parse and understand the message.

Messages will be acknowledged with a positive acknowledgement (code AA) as long as they meet security restrictions identifying the message as authorized traffic and meet a very minimal level of HL7 compliance. This two-level compliance is required to include:

- A valid mutually authenticated SSL handshake for the HTTPS transmission (see the Connectivity Guide for [environment name] Environment for more detailed instructions on certificate generation/installation and HTTPS message transmission, which will not be further discussed in this standard document)
- A non-null HTTP payload
- A well-formed MSH segment inside the payload, including valid values for MSH-1, MSH-2, MSH-3, MSH-9, MSH-11, and MSH-12

All these factors must be in place before a positive acknowledgement (ACK with code AA) is generated.

After the message has been acknowledged, the HIAL will perform more detailed semantic analysis on the message. If problems are found which prevent the message from being interpreted and saved, these will be logged to a site specific error queue, and alerts may potentially be generated. This error queue will be available for review by individual sites. Errors identified by additional integration points to which the acCDR may forward messages, such as HRM, will also be listed in the site error queue.

Broadly speaking, message errors logged in the error queue can fall in three logical categories:

1. Message conformance errors. These messages fail because one or more semantic elements inside the message do not adhere to the format defined in this standard. For example, text data might appear in a field marked as numeric only, a field length restriction might be exceeded, or required message segments may be missing altogether. There are many permutations and combinations of such errors, each represented by its own error code and description.
2. Business logic violations. These messages fail because the business activity described by the message is not allowed. For example, a complex medication may be described in a message as consisting of several “base” components, which is impossible (a

- multi-component medication would have at most *one* base component by definition, and potentially multiple additives, as described later in this standard).
3. Solution errors. These are errors generated by the HIAL solution itself, resulting in an inability to process messages correctly. These could relate to infrastructure failures, system connectivity issues, exceptions generated by faulty processing logic, and so on. The acCDR's normal approach to these errors is to cease processing, and resume processing when the underlying issue is corrected; thus these errors should be infrequently observed by sending organizations.

The structure of the Acknowledgement (ACK) message is as follows:

ACK^XXX	ACK Message
MSH	Message Header
MSA	Message Acknowledgement
[{ ERR }]	Errors

4.0 How to Implement this Standard

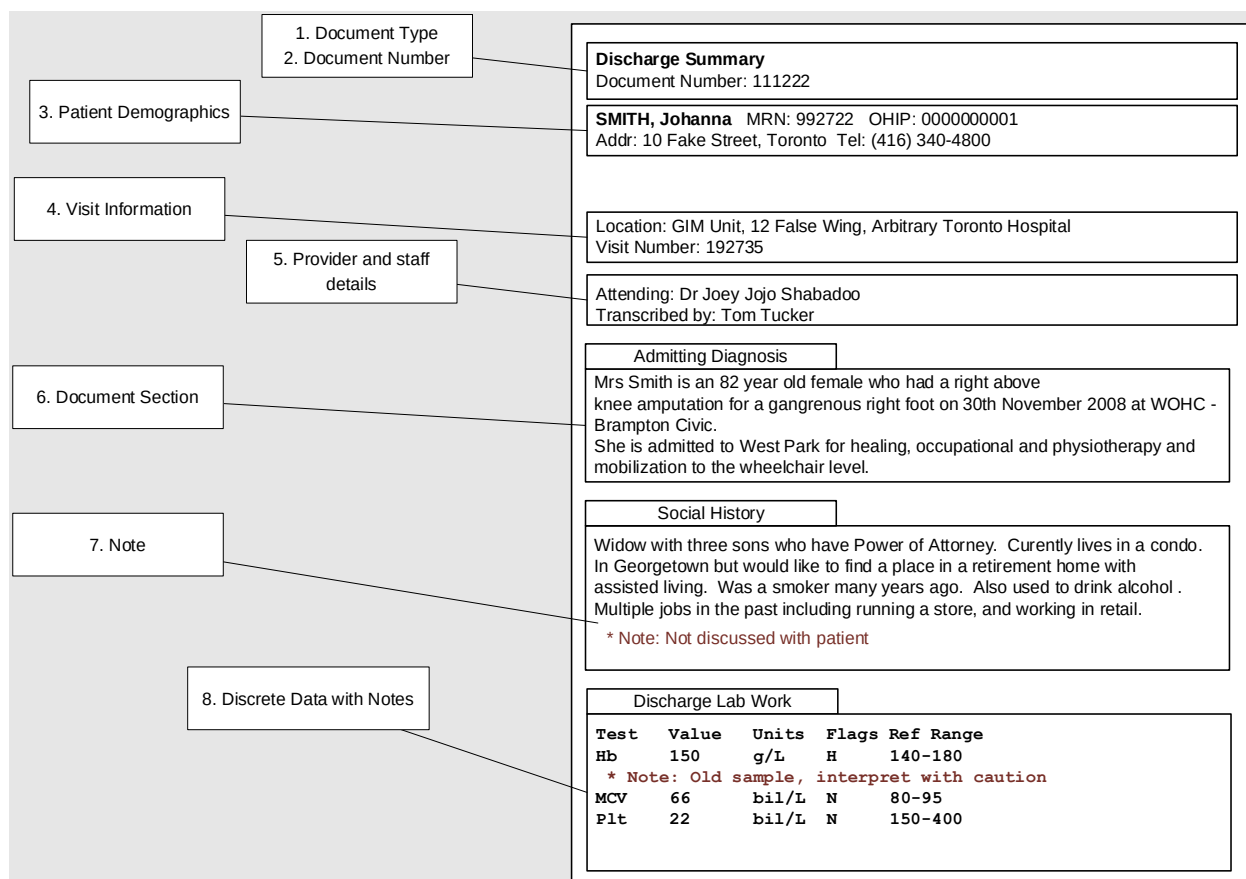
4.1 Transmitting Clinical Documents

When a result or document is transmitted using an ORU^R01 message, the clinical content is conveyed in the ORDER_OBSERVATION and OBSERVATION groups. The following section explains how these segments relate with each other.

Within a message can be found one or more ORDER_OBSERVATION blocks, which form a single logical result. An example of a logical result might be a Discharge Summary Note, an MRI Study Report, or an infection control Surveillance Report.

A logical result (or document) is identified uniquely by [OBR-2 \(Placer Order Number\)](#). A group of documents may be identified as being inter-related (generally because they are as a result of the same order) using [ORC-4 \(Placer Group Number\)](#), but it is not expected this latter feature will be of special relevance to the HCCSS.

The following figure illustrates the components of a clinical document, and outlines how they can be fit into an ORU^R01 message according to this standard.



4.1.1 Important Clinical Document Fields

Document Type: Every document (or result, note, etc.) will have a document type associated with it. This type consists of both a code identifying the document, as well as a textual description. This element is found in [OBR-4 \(Universal Service Identifier\)](#).

OBR|..|..|10560^Discharge Summary^1.3.6.1.4.1.12201.2.1

Patient Demographics: Each document will identify one person subject. That subject (often a patient) must have at least one identifier which must be patient's medical record number (MRN). If patient's province health card number such as Ontario health card number is available, it must be sent as well. The subject will also have a number of demographics including address, phone number, primary language, etc. These demographics are found in the PID Segment.

PID|1||7007473^^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1^MR||Roo^Polka^^^^^L||19710101|U|||Land of

Visit/Referral Information: Each document will identify one visit or encounter which is associated with that document. This encounter includes details such as the most responsible / attending physician, the patient's location within the facility, **and a visit or encounter number.**

PV1|1|I|ES13 G
MED^407^1^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.3.1|||13546^Generic^Physician^Moe^^Dr.^MD^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1|42705^Jones^Karen^Eva^^Dr.^MD^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1|||D||13546^Generic^Physician^Moe^^Dr.^MD^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1|IP|11010000650^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1^VN|||N|101103011033|||V|

Document Section: Discrete Data is the preferred approach for submitting clinical documents wherever possible. A document may have one or more sections in it. It is preferred for the document to be composed of sections of discrete results. Where discrete data is not achievable, it is acceptable for the document to have one section containing the entire document, or multiple sections. A section receives its title from [OBX-3 \(Observation Identifier\)](#). The section text will then be placed within one or more repetitions of [OBX-5 \(Observation Value\)](#).

The text within a section of a document is treated as pre-formatted text, and the sending system is responsible for ensuring that sensible line lengths are adhered to where appropriate. Each repetition of OBX-5 is treated as a new line, and text may be indented or aligned by placing spaces at the start of an individual line. The following example text shows a report section which will look as follows:

Mr Jones is a 100 year old man who was diagnosed with several problems. The patient underwent a procedure.

OBX|7|TX|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|| Mr Jones is a 100 year old man who was diagnosed with~several problems. The patient underwent a procedure.||||F|

Alternately, if it is not possible or convenient to transmit the entire section within repetitions of a single OBX segment, the text may also be placed in subsequent repetitions of OBX-5. In this case each repetition will be treated as a separate line.

OBX|7|TX|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2||Mr Jones is a 100 year old man who was diagnosed with |||||F|

OBX|8|TX|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2||several problems. The patient underwent a procedure.|||||F|

Notes: Sections may also have notes. These will be displayed below the section content in a way that visually distinguishes them from the content itself.

OBX|7|TX|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2||Multiple jobs in the past have included running a store and working retail|||||F|

NTE|1||Not discussed with patient|

Discrete Data: It is preferred for documents to be submitted with discrete data, and that data can also have notes. A future version of this standard will detail how to transmit other types of discrete data, such as discharge medications in a discharge summary.

OBX|1|NM|01711^Hb^1.3.6.1.4.1.12201.2.2||150|g/L^HL70396|120 - 160|N|||F|||201201141044|

OBX|2|NM|03212^WBC^1.3.6.1.4.1.12201.2.2||10.0|x10e9/L^HL70396|4.0 - 11.0|N|||F|||201201141044|

OBX|3|NM|02521^Plt^1.3.6.1.4.1.12201.2.2||200|x10e9/L^HL70396|150 - 400|N|||F|||201201141044|

NTE|1||Specimen was very old, interpret with caution|

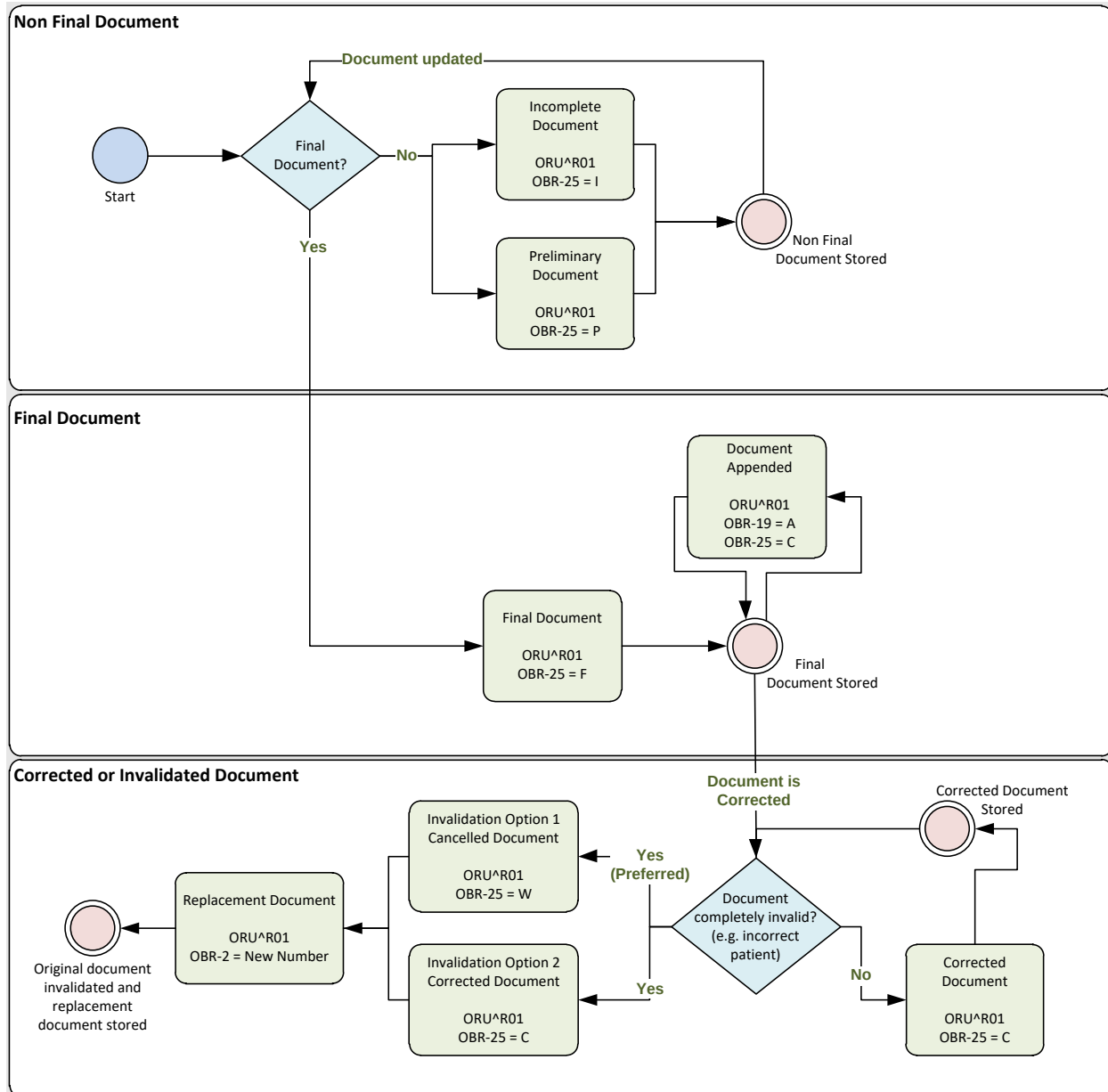
OBX|4|NM|04050^MPV^1.3.6.1.4.1.12201.2.2||12.0|fL^HL70396|N|||F|||201201141044|

OBX|5|NM|02712^RBC^1.3.6.1.4.1.12201.2.2||5.00|x10e12/L^HL70396|3.9 - 5.6|N|||F|||201201141044|

OBX|6|NM|01729^Hct^1.3.6.1.4.1.12201.2.2||0.450|L/L^HL70396|0.330 - 0.470|N|||F|||201201141044|

4.1.2 Clinical Document Lifecycle

The following diagram illustrates the lifespan of a clinical document within the acCDR.



4.1.2.1 Final Document

If a document is being transmitted once, and is considered complete and valid for clinical use, it must be transmitted to acCDR in Final state. This is done by transmitting the document with a status code (OBR-25) of “F”.

4.1.2.2 Appends

Document appends are a supported, but uncommon workflow. If a sending system transmits updates to a document by supplying only new content, which is to be appended to the end of any existing content (but not replacing any existing content), a message may be transmitted which sets the append mode to “A”. See [5.14.8 OBR-19 \(Append Mode\)](#) for more information.

4.1.2.3 Corrections

If the document is valid, but it is being changed or added to in some way, this is a **correction**.

Corrections are transmitted using a standard ORU^R01 message with [OBR-25 \(Result Status\)](#) set to “C” (corrected). If possible, it is preferable for the value of [OBX-11 \(Observation Result Status\)](#) to be set to “C” as well, only for the individual sections of the document which have changed, but this is not mandatory.

4.1.2.4 Invalidations

If the document is invalid and should be entirely disregarded (for example, it was entered against the wrong patient), this is an **invalidation**.

Invalidation of a document may be required for the following reasons:

- The document submitted was not applied to the correct patient.
 - In this scenario the patient information for the patient brought into context does not align with the patient information in the content of the document. This can result in patient risk (where the information is used to produce a care plan for the wrong patient), and / or can create privacy breaches (where clinical data belonging to the wrong patient has been viewed).
- The document content submitted is not correct for the patient.
 - In this scenario the patient information for the patient brought into context and the patient information in the document align. However, the document content is not correct for the patient.

Invalidating a document is a two-step process.

The first step is (1) ensuring that the document is marked as no longer valid for clinical use. The second step is (2) the submission of the document containing the correct content and/or for the correct patient.

In ensuring the document is marked as ‘no longer valid for clinical use’, there are a couple of Mechanisms that can be used, with the preferred mechanism offering the greatest assurance that the invalid document is no longer viewable.

Step 1: **Preferred Invalidation Mechanism**

The preferred mechanism for invalidating is to transmit a new ORU^R01 message with [OBR-25 \(Result Status\)](#) set to “W” (withdrawn). The contents of the document should contain an explanation of why the document is being invalidated (example: ‘Document submitted against wrong patient’).

If it is not possible to replace the contents of the document with an explanation of why the document is being invalidated, the contents of the document should be updated to include an addendum with an explanation of why the document is being invalidated.

In submitting a message with [OBR-25 \(Result Status\)](#) set to “W” (withdrawn), the option to view the document is no longer presented to users, in the current ConnectingOntario Clinical Viewer.

Alternate Invalidation Mechanism

If the sending system does not support the concept of a withdrawn or cancelled document, but rather an addendum workflow / or / if the workflow at the sending HIC does not support the transmission of invalidations as outlined above, the following workaround may be used:

- A new ORU^R01 may be transmitted with [OBR-25 \(Result Status\)](#) set to “C” (corrected).

In this case, it is mandatory for the corrected document to contain a **prominent explanation before the previous contents** that states the document was invalid and should be disregarded.

Depending on the organization, the previous contents may be completely removed and replaced with this explanation or kept for historical comparison/traceability purposes. The only requirement is that the explanatory text for the invalidation appears prominently, and before those previous contents, if any.

NOTE: In scenarios where the content of the document contains incorrect patient demographic data, meaning the invalidation is the result of the documentation filed against the wrong patient; the content of the document should be removed in its entirety, and a prominent explanation for the invalidation replacing the previous contents.

Step 2: Replacement Document

If the document was invalidated, a new document may now be transmitted using a new ORU^R01 message.

This replacement document must have a new identifier in [OBR-2 \(Placer Order Number\)](#).

5.0 Message Segment Definitions

5.1 How to Read this Section

The following section contains definitions on the contents of the individual segments and fields within the messaging standards.

5.1.1 Segment Tables

The following columns are found within each segment table.

- **Seq:** Denotes the sequence within the message (e.g. PID-5 is the 5th field within PID)
- **Use:** Indicates fields which are required by acCDR or HRM.

acCDR (cO)	To be developed by HIC contributing data to the HIAL
HRM	To be developed by HIC contributing data to HRM
All	To be developed by HIC contributing data to both acCDR and HRM

- **Opt:** Indicates the optionality of the field. The following values may be found:

R	Required. A value must always be provided
RE	Required or Empty. Systems must be capable of transmitting a value in this field but may transmit no value.
O	Optional. Systems should transmit data in this field if they support it, but this is not required.
C	Conditionally required please see field description.

- **Len:** Indicates the maximum length of the field.
- **DT:** Indicates the HL7 data type associated with this field (see HL7 Specification, Chapter 2)
- **RP:** Indicates that the field may repeat, and if so, indicates the minimum and maximum number of repetitions.
- **Vocab Tbl#:** If the field is a coded type (IS, ID), indicates the HL7 table from which values must be drawn. Table definitions are found in Section [8.0 Vocabulary Tables](#).
- **Field Description:** Contains a description of the field.
- **Sample Data:** Shows an example of the data that may be found in this field.

5.2 Data Type Notes

5.2.1 Dates with Times (TS)

Note that when a date and time is transmitted to the acCDR using a TS data type, the time zone offset must be noted.

The standard way to do this is to include a GMT offset to the time. This offset will vary during the year due to daylight savings. For example, a time in the summer (in Eastern Standard Time) and a time in the winter would appear as:

```
20120802220800-0400  
20120126220800-0500
```

If the sending system is not able to provide the offset due to technical limitations, and it can be guaranteed that times always reflect the appropriate offset during daylight savings time within a single time zone, the sending system may indicate the time zone using a custom value within [MSH-17 \(Country Code and Optional Time Zone\)](#).

For instance, if times being transmitted always represent offsets within Eastern Standard Time, an MSH-17 value of “CAN_EST” may be provided. In that case, the sending system can omit the offset in any TS data types it transmits.

5.3 MSH Segment

Seq	Use	Opt	Len	DT	RP/ #	Vocab Tbl#	Field Description	Sample Data
MSH-1	All	R	1	ST			Field Separator	<i>(Fixed Value)</i>
MSH-2	All	R	4	ST			Encoding Characters	^~\& <i>(Fixed Value)</i>
MSH-3	cO	R	100	HD			Sending Application	`
MSH-4	All	R	100	HD			Sending Facility	For ORU messages: 4265 <i>This value will be assigned to your sending facility by acCDR</i> For ADT messages: 1.3.6.1.4.1.12201.3.1^Toronto East General Hospital (acCDR Provided) Note: HCCSS will send the individual HCCSS Organization OID in this field for ADT and ORU messages.
MSH-5	cO	R	20	HD			Receiving Application	ConnectingOntario <i>(Fixed Value)</i>

MSH-6	HRM	R	20	HD			Receiving Facility	<i>This value will be assigned to your sending facility by acCDR</i>
MSH-7	All	R	26	TS			Date/Time Of Message	YYYYMMDDhhmm-XXXX
MSH-8	cO	R	40	ST			Security	<i>Security (Fixed Value)</i>
MSH-9	All	R	15	MSG			Message Type	ORU^R01^ORU_R01
MSH-10	All	R	50	ST			Message Control ID	PKG1-UC1-2-1
MSH-11	All	R	3	PT			Processing ID	T <i>(Refers to data. T=Test, P=Production)</i>
MSH-12	All	R	8	ID			Version ID	2.5 <i>(Fixed Value)</i>
..skip..								
MSH-15	cO	R	2	ID			Accept Acknowledgment Type	NE <i>(Fixed Value)</i>
MSH-16	cO	R	2	ID			Application Acknowledgment Type	AL <i>(Fixed Value)</i>
MSH-17	All	R	7	ID			Country Code	CAN
MSH-18	cO	R	16	ID			Character Set	8859/1 <i>(Fixed Value)</i>
MSH-21	All	R	20	EI			Message Profile Identifier	cO_CDR_INPUT_2_6 <i>(Fixed Value)</i>

5.3.1 MSH-1 (Field Separator)

This field must define the character that serves as the field separator for the entire message. The HIAL accepts only the “pipe” as a field separator.

5.3.2 MSH-2 (Encoding Characters)

This field must contain the four characters used as component separator, repetition separator, escape character and subcomponent separator. The HIAL accepts only the following characters, in this exact sequence: “^~\&”. If these characters are used in any text within the message (in other words, in any context other than as an HL7 separator), they must be represented using the escape sequences defined below:

HL7 Supported Message Delimiter Escape Sequences	
Character	Escape Sequence
&	T
^	S
	F
~	R
\	E

5.3.3 MSH-3 (Sending Application for acCDR)

This field must identify the unique application sending the message.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
HD.1	c0	R	50	IS	9004	Namespace ID	1.3.6.1.4.1.12201 <i>(acCDR Provided)</i>
HD.2	c0	R	50	ST	9008	Universal ID	1.3.6.1.4.1.12201.1 <i>(acCDR Provided)</i>

5.3.3.1 MSH-3 HD.1 (Namespace ID)

This field must be populated with an identifier assigned by acCDR which identifies the HIC transmitting the message.

5.3.3.2 MSH-3 HD.2 (Universal ID)

This field must contain the identifier of the system within the HIC which is being used to generate this message and is considered to be the “source of truth”. Note that this component must contain only uppercase letters, numbers, and the underscore character (_). Spaces are not permitted.

5.3.4 MSH-4 (Sending Facility)

This field contains different values between ORU and ADT messages for hospital organizations. For HCCSS organizations, this field should contain the individual HCCSS organization OID.

For hospital ORU messages:

The sending facility for HRM is the legal HIC that takes full responsibility for sending the ORU^Ro1 message. The source for this unique identifier is the ambulatory number assigned to your facility by the MoHLTC Master Numbering System.

For ORU only: Ontario MD will inform your sending facilities that do not have a MoHLTC Master Number what to populate this field with.

Seq	User	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
HD.1	HRM	R	4	NM		Namespace ID	4263 <i>For HRM only: Ontario MD will inform your sending facilities that do not have an MoHLTC Master Number what to populate this field with</i>

For hospital ADT and RAS messages only:

Seq	User	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
HD.1	c0	R	50	ST	9005	Sending Facility code	1.3.6.1.4.1.12201.3.1 <i>(acCDR Provided)</i>
HD.2	c0	R	50	ST		Facility Description	Toronto East General Hospital (Name of Hospital Site)

For HCCSS ADT and ORU messages:

Seq	User	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
HD.1	c0	R	50	ST	9004	Namespace ID	2.16.840.1.113883.3.239.23.1 <i>(acCDR Provided)</i>
HD.2	c0	R	50	ST	9005	Universal ID	2.16.840.1.113883.3.239.23.1.100.3 <i>acCDR Provided</i>

5.3.5 MSH-5 (Receiving Application)

This field must contain the text “ConnectingOntario”.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
HD.1	c0	R	20	IS	0300	Namespace ID	ConnectingOntario <i>(Fixed Value)</i>

5.3.6 MSH-6 (Receiving Facility)

The purpose of this segment is to denote the intermediary systems. This field must contain the text “ConnectingOntario”

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
HD.1	HRM	R	20	IS		Namespace ID	<i>ConnectingOntario (Fixed Value)</i>

5.3.7 MSH-7 (Date/Time of Message)

This field must contain the date/time the message was created, including GMT offset.

See [5.2.1 Dates with Times \(TS\)](#) for a description of time zone offset requirements in this and other fields.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
-----	-----	-----	-----	----	------------	-------------------	---------------------

TS.1	All	R	24	DTM		Time	201201250101-0400
------	-----	---	----	-----	--	------	-------------------

5.3.8 MSH-8 (Security)

Please be advised that although the MSH.8 field is no longer in use in the solution, it is still a required field and the acCDR solution validates that a value is being sent. In order for messages to be compliant and file within the acCDR sites will need to populate this field with the following string value: ‘Security’.

5.3.9 MSH-9 (Message Type)

This field must contain the message type, trigger event and message structure ID. It may be used to recognize data segments and route messages to specific applications. For queries with more than one single response type, this field may contain the response event type.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
MSG.1	All	R	3	ID	0076	Message Code	ORU
MSG.2	All	R	3	ID	0003	Trigger Event	R01
MSG.3	All	R	7	ID	0354	Message Structure	ORU_R01

5.3.10 MSH-10 (Message Control ID)

This field must contain the unique message identifier that is echoed back to the sending system in the message acknowledgement segment (MSA).

It is expected that for each unique message, a new unique control ID will be generated. If a report is updated and a new version is transmitted, a new control ID would be expected in this field. If an identical message is being retransmitted (e.g. for troubleshooting purposes) the sending system is expected to generate a new control ID.

Note: Since acCDR Release 12 and HRM Release xxx, MSH-10 supports up to 50 characters. If the MSH-10 value contains more than 50 characters, it will result in a high severity error in acCDR, while the message will be rejected by HRM.

5.3.11 MSH-11 (Processing ID)

This field must contain the character “P” for production or “T” otherwise. The acCDR systems that are expecting production data will reject messages with a value of “T” in this field, and vice versa.

5.3.12 MSH-12 (Version ID)

This field must contain the string “2.5”.

5.3.13 MSH-15 (Accept Acknowledgement Type)

This field must contain the string “NE”.

5.3.14 MSH-16 (Application Acknowledgement Type)

This field must contain the string “AL”.

5.3.15 MSH-17 (Country Code and Optional Time Zone)

This field must contain the country where the message originated. Under all current acCDR sources this would be “CAN”.

This field may additionally be used to indicate the time zone which applies to this message. If a value which implies a time zone is provided, any times which are provided may omit the time zone. Values must be drawn from [Table 0399](#).

5.3.16 MSH-18 (Character Set)

This field must contain the character set for the message. The HIAL currently only supports ISO-8859-1 encoding, so this field must be fixed to “8859/1”. Note that it is important to ensure that your system is actually transmitting using this encoding; it is not sufficient to simply fix the string to “8859/1”.

5.3.17 MSH-21 (Message Profile Identifier)

This field must contain an identifier which indicates which version of the acCDR Clinical Data Repository Input Standard is being transmitted by the sending system. As of this version of the standard, this must be hard coded to “cO_CDR_INPUT_2_6”, which indicates that the current major version of the standard is being targeted. When the standard undergoes major revisions in future, it will be necessary to edit this field to indicate the version a site is adhering to, for example “cO_CDR_INPUT_3_0”. Further instructions will be provided to participating organizations should revisions of this type become necessary.

A future release of this standard may allow new values to be transmitted in this field.

5.4 EVN Segment

The EVN segment applies only to ADT messages.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
EVN-1	c0	R	3	ID		0003	Event Type Code	A01
EVN-2	c0	R	24	TS			Recorded Date/Time	200612011617
..skip..								
EVN-5	c0	R	117	XCN			Operator ID	

5.4.1 EVN-1 (Event Type Code)

This field contains the events corresponding to the trigger events described in this section, e.g., admission, transfer, or registration. It should contain the trigger event value used in MSH-9.

5.4.2 EVN-2 (Recorded Date/Time)

This field usually contains the default system date/time when the transaction was entered. It should contain as much precision as is stored in the source system.

5.4.3 EVN-5 (Operator ID)

This field identifies the individual responsible for triggering the event. Operator ID is used for audit purposes. For this field, include the Hospital User ID that triggered or generated the message. Note that for this field, the mandatory fields are specified below.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
XCN.1	c0	R	15	ST		ID Number	12345
..skip..							
XCN.9	c0	R	50	HD		Assigning Authority	^1.3.6.1.4.1.12201^
..skip..							
9.2	c0	R	50	ST	9004	Universal ID	1.3.6.1.4.1.12201
..skip..							
XCN.13	c0	R	2	ID		Identifier Type Code	Fixed value "EI"
XCN.14	c0	R	50	HD		Assigning Facility	^1.3.6.1.4.1.12201.3.1^
..skip..							
14.2	c0	R	50	ST	9005	Universal ID	1.3.6.1.4.1.12201.3.1

..skip..							
----------	--	--	--	--	--	--	--

5.5 PID Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data (Notes)
PID-1	All	O	4	SI			Set ID — PID	1 <i>(Fixed Value)</i>
..skip..								
PID-3	All	R	387	CX	1..10		Patient ID	7005728^^^2.16.840.1.113883.3.239.18.148&1.3.6.1.4.1.12201.1^MR <i>(Only patient identifiers should be placed here, not visit identifiers)</i>
..skip..								
PID-5	All	R	211	XPN	1..10		Patient Name (Legal Name)	ABIDI^Muhammad^^^^^L
PID-6	cO	O	51	XPN			Mother's Maiden Name	SMITH^^^^^^L
PID-7	All	RE	26	TS			Date/Time of Birth	YYYYMMDDhhmm-XXXX <i>(mandatory for RAS message)</i>
PID-8	All	R	1	ID		0001	Administrative Sex	M
..skip..								
PID-11	All	RE	293	XAD	0..10		Patient Address	17 PARK RD^^Toronto^CANON^M5G1H1^CAN^C <i>(Both home and business addresses are placed in PID-11)</i>
..skip..								
PID-13	All	RE	466	XTN	0..10		Phone Number	<i>(Both home and business phone numbers are placed in PID-13. HRM only uses home number)</i>
..skip..								
PID-15	cO	O	226	CE			Primary Language	ENG^English^HL70296
..skip..								
PID-29	All	RE	26	TS			Patient Death Date and Time	YYYYMMDDhhmm-XXXX
PID-30	All	RE	1	ID		0136	Patient Death Indicator	N

5.5.1 PID-1 (Set ID)

This field may be hard coded to “1”.

5.5.2 PID-3 (Patient ID)

This field must contain at least one repetition identifying the patient. These repetitions must follow these rules:

- All messages must contain at least one repetition of PID-3 with an identifier type code of MR (MRN).
- If the HIC assigns any local secondary identifiers (such as alternate MRNs, clinic patient numbers, etc.) these should be provided if it is convenient to do so.
- If the HIC collects a provincial health number (e.g. OHIP number or other province health card number) this must be sent.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CX.1	All	R	50	ST		Identifier	12345 <i>(HRM to accept a maximum length of 20 in this field)</i>
CX.2	All	C	5	ST		Check Digit	AA
..skip..							
CX.4	cO	C	100	HD		Assigning Authority	<i>(See Below)</i>
4.1	cO	R	50	IS	9004M (MRN only) 9004 (MRS, PI)	Namespace ID	For MRNs, 2.16.840.1.113883.3.239.18.148 (UHN MRN OID) <i>(acCDR Provided)</i> For secondary identifiers (e.g., MRS, PI), 1.3.6.1.4.1.12201 (UHN HIC OID) <i>(acCDR Provided)</i>
4.2	cO	R	50	ST	9008	Universal ID	1.3.6.1.4.1.12201.1 <i>(acCDR Assigned)</i>
CX.5	All	R	5	ID	0203	Identifier Type Code	MR <i>HRM to use codes:</i> – MR – JHN (If JHN is present, provide CX.2 if available)
..skip..							
CX.7	cO	O	8	DT		Effective Date	20110101
CX.8	cO	O	8	DT		Expiration Date	20120101

CX.9	All	C	211	CWE		Assigning Jurisdiction	
9.1	All	R	5	ST	0363	Identifier	CANON (<i>acCDR Provided</i>)
9.2	c0	O	199	ST		Text	Ontario Canada
9.3	c0	R	7	ID		Name of Coding System	HL70363 (<i>Fixed Value</i>)

5.5.2.1 PID-3 CX.1 (Identifier)

This component must contain the identifier associated with the patient, e.g, MRN or OHIP number.

5.5.2.2 PID-3 CX.2 (Check Digit)

This component must contain the check digit for the identifier, if one exists. If the identifier is an OHIP number, this field must contain the version code, if one is present.

5.5.2.3 PID-3 CX.4 (Assigning Authority)

If the identifier is a local identifier assigned by an HIC (such as an MRN) this component must contain the identity of the identifier assigning authority. If present, it must contain the following subcomponents:

- CX4.1 (Namespace ID):** This field must contain the assigning authority identifier of the HIC which assigns this identifier. The correct value for this field will be provided by the acCDR.
 - If Identifier Type Code is “MR”, this identifier should be the MRN assigning authority from Table 9004M.
 - If Identifier Type Code is a secondary local identifier type (e.g. MRS, PI), this identifier should be the HIC identifier from Table 9004.
- CX4.2 (Universal ID):** This field must contain the identifier of the system within the HIC which is being used to generate this identifier and is considered to be the “source of truth” for it. For example, if the HIC has a Reg/ADT system or an EMR which generates local MRNs, then this identifier should identify that system even if it is not the one transmitting the HL7 message. The correct value for this field will be provided by the acCDR.

5.5.2.4 PID-3 CX.5 (Identifier Type Code)

This component must identify which type of identifier this field repetition contains. Values must be drawn from [Table 23: HL7 Table 0203 \(Identifier Type Code\)](#).

5.5.2.5 PID-3 CX.7 (Effective Date)

If this identifier is effective only from a specific date, and that date is known, this field may contain that date.

5.5.2.6 PID-3 CX.8 (Expiration Date)

If this identifier is effective only until a specific date, and that date is known, this field may contain that date.

5.5.2.7 PID-3 CX.9 (Assigning Jurisdiction)

If the identifier is a regional or jurisdictional identifier (such as an OHIP number) this component must contain the identity of the jurisdiction. If present, it must contain the following subcomponents:

- **CX9.1 (Identifier):** This field must contain the identifier of the jurisdiction which assigns this identifier. Values for this field must be drawn from [Table 0363](#).
- **CX9.2 (Text, Optional):** This field may a textual description of the jurisdiction.
- **CX9.3 (Name of Coding System):** This field must contain the string “HL70363”.

5.5.2.8 PID-3 Examples

The following is an example of PID-3, containing three repetitions showing different scenarios:

```
7005728^^^2.16.840.1.113883.3.239.18.148
&1.3.6.1.4.1.12201.1^MR~
0000000000^AA^^^JHN^^^CANON&Ontario&HL70363~
```

- In the first repetition, an MRN (7005728) for the hospital University Health Network (which has been assigned MRN OID “2.16.840.1.113883.3.239.18.148”) is found. This hospital uses an HIS as the MRN authority, so it has assigned a code of “1.3.6.1.4.1.12201.1” to identify it.
- In the second repetition, an OHIP number (0000000000) with a version code of AA.

5.5.3 PID-5 (Patient Name)

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
XPN.1	All	R	50	ST		Family Name	
FN.1		R	50	ST		Surname	Smith
XPN.2	All	RE	50	ST		Given Name	John
XPN.3	All	RE	50	ST		Second and Further Names	Joseph
XPN.4	cO	O	20	ST		Suffix	Sr.
XPN.5	cO	O	20	ST		Prefix	Mr.
XPN.6	cO	O	20	ST		Degree	MD
XPN.7	All	R	1	ID	0200	Name Type Code	L

5.5.3.1 PID-5 Examples

The following example shows two repetitions of PID-5. First, a legal name with all components represented. Second, an alias name with only two components represented.

```
Smith^Joseph^John^Junior^Mr^MD^L~  
Smith^Joe^^^^^A
```

5.5.4 PID-6 (Mother's Maiden Name)

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
XPN.1	cO	R	50	ST		Family Name	
FN.1	cO	R	50	ST		Surname	Smith
..skip..	cO						
XPN.7	cO	R	1	ID	0200	Name Type Code	L

5.5.5 PID-7 (Date/Time of Birth)

This field must contain the date/time of birth if it is known. It is acceptable to leave this field blank only in cases where the date of birth is not known at the time that the message is being transmitted, such as with emergency patients.

This field should contain as much precision as is stored in the source system. If the source system stores only a date, it is acceptable to pad the time with zeros, e.g. “20121224000000”.

Note that HRM requires this field to be populated in all cases. Also this field is required in RAS messages.

5.5.6 PID-8 (Administrative Sex)

This field must contain the administrative sex. Values must be drawn from [Table 1: HL7 Table 0001 \(Administrative Sex\)](#).

5.5.7 PID-11 (Patient Address)

This field may contain one or more repetitions of patient address. The first instance is considered the primary address.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
-----	-----	-----	-----	----	------------	-------------------	---------------------

XAD.1	All	RE	50	SAD		Street Address	
SAD.1		RE	50	ST		Street or Mailing Address	201-123 Fake Street
XAD.2	All	RE	50	ST		Other Designation	Clark Building
XAD.3	All	RE	80	ST		City	Toronto
XAD.4	All	RE	50	ST	9003	Province or State	CANON
XAD.5	All	RE	12	ST		Postal Code	M5A 1A1
XAD.6	All	RE	50	ID		Country	Canada <i>(Not validated)</i>
XAD.7	All	R	1	ID	0190	Address Type	H <i>(HRM will only use address type H)</i>
..skip..							
XAD.13	c0	0	19	TS		Effective Date	20120301120000-0400
XAD.14	c0	0	19	TS		Expiration Date	20140101 <i>(Time information optional)</i>

5.5.7.1 PID-11.4 (Province or State)

If the address is for a Canadian province or US state, the value should be drawn from [Table 34: HL7 Table 9003 \(Province and State Codes\)](#).

5.5.7.2 PID-11.5 (Postal Code)

Note that any spaces and punctuation will be ignored in this value. As such, the following are equivalent: “A8A 8A8”, “A8A8A8”, and “A8A-8A8”.

5.5.7.3 PID-11.13 (Effective Date)

This component may be used to indicate an effective date for this address. No specific level of precision is required.

5.5.7.4 PID-11.14 (Expiration Date)

This component may be used to indicate an expiration date for this address. No specific level of precision is required.

5.5.7.5 PID-11 Examples

The following example shows two repetitions of PID-11, one for a home address and one for a mailing address.

```

6 RIVINGTON AVE^^Goderich^CANON^N7A3Y2^CAN^H~
7 WOODPLUMPTON ROAD^^Port Stanley^CANON^N0L2A0^CAN^M

```

5.5.8 PID-13 (Phone Number)

This field must contain the patient's personal telephone numbers, with their primary personal number listed first.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
XTN.1	All	C	25	ST		Telephone Number	1(416)340-4800 x 4357
XTN.2	All	R	3	ID	0201	Telecommunication Use Code	PRN (<i>HRM supports PRN code only</i>)
XTN.3	c0	0	10	ID	0202	Telecommunication Equipment Code	PH
XTN.4	c0	0	199	ST		Email Address	test@example.com
XTN.5	c0	0	3	NM		Country Code	1
XTN.6	c0	0	5	NM		Area Code	416
XTN.7	c0	0	9	NM		Local Number	3404800
XTN.8	c0	0	10	NM		Extension	4357
XTN.9	c0	0	199	ST		Any Text / Notes	Do not call after 5

5.5.8.1 PID-13 Examples

The following is an example for a phone number:

```
| (416) 340-4800^PRN^PH^1^416^3404800^^Do not call after 5
```

The following is an example for an email address:

```
| ^NET^Internet^test@example.com^^^^
```

5.5.9 PID-15 (Primary Language)

This field may contain the client's primary language. ISO table 639-3 is recommended for the User-Defined Table 0296 – Primary Language, but this is not required. If a textual description is provided using CE.2, an Identifier must be supplied in CE.1 as well.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	0	20	ST		Identifier	ENG
CE.2	c0	0	199	ST		Text	English
CE.3	c0	R	7	ID		Name of Coding System	HL70296 (<i>Fixed Value</i>)

5.5.10 PID-29 (Patient Death Date and Time)

If recorded in the sending system, this field must contain the date and time of the patient's death with as much precision as is known.

For further information, please refer to [Section](#) Dates with Times (TS) [5.2.1](#).

5.5.11 PID-30 (Patient Death Indicator)

If recorded in the sending system, this field must indicate if the patient is deceased. Valid values are “Y”, “N”, and blank.

5.6 PV1 Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
PV1-1	All	R	4	SI			Set ID - PV1	1
PV1-2	c0	C	1	ID		0004	Patient Class	I
PV1-3	c0	RE	519	PL			Assigned Patient Location	
PV1-4	c0	RE	10	IS		0007	Admission Type	
..skip..								
PV1-6	c0	RE	919	PL			Prior Patient Location	
PV1-7	c0	RE	525	XCN			Attending Doctor	
PV1-8	c0	RE	525	XCN			Referring Doctor	
PV1-9	c0	RE	525	XCN	0..10		Consulting Doctor	
PV1-10	c0	C	310	CNE		0069	Hospital Service Name	12^Cardiology
..skip..								
PV1-14	c0	C	50310	CNE		0023	Admit Source (Added in the acCDR Input Standard v2.6)	D^Direct
..skip..								
~~PV1-16~~	~~c0~~	~~RE~~	~~1~~	~~IS~~			~~VIP Status (Patient Lock)~~ (deprecated)	
PV1-17	c0	RE	525	XCN			Admitting Doctor	

..skip..								
PV1-19	All	R	155	CX			Visit Number	<i>(Only visit numbers are allowed here, not patient identifiers)</i> <i>** NOTE: This field is required for hospitals.</i>
..skip..								
PV1-36	c0	C	100	CNE		0112	Discharge Disposition (Added in acCDR Input Standard v2.6)	30^Residential Care
..skip..								
PV1-44	c0	RE	26	TS			Admit Date/Time	200611291617-0400
PV1-45	All	RE	26	TS	0..10		Discharge Date/Time	YYYYMMDDhhmm-XXXX

5.6.1 PV1–1 (Set ID)

This field should contain the default value of “1”.

5.6.2 PV1–2 (Patient Class)

This field must contain a category or class of patients for ADT messages. For expected values, please refer to [Table 2: HL7 Table 0004 \(Patient Class\)](#).

For non-ADT messages, this field is optional.

5.6.3 PV1–3 (Assigned Patient Location)

This field must contain the current location of the patient, if applicable, as it is stored in the sending system.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
PL.1	c0	RE	50	IS		Point of care	JS12 <i>(Jones Wing South, 12 floor)</i>
PL.2	c0	RE	50	IS		Room	123 <i>(Room 123)</i>
PL.3	c0	RE	50	IS		Bed	4 <i>(Bed 4)</i>
PL.4	c0	R	100	HD		Facility	
4.1	c0	R	50	IS	9004	Namespace ID	2.16.840.1.113883.3.59.3: 0947 <i>(acCDR Provided)</i>

4.2	c0	C	50	ST	9005	Universal ID	1.3.6.1.4.1.12201.3.2
..skip..	c0						
PL.7	c0	0	50	IS		Building	Q Building
PL.8	c0	0	20	IS		Floor	12
PL.9	c0	C	199	CNE	9010	Location Description	ACUTE - Combined Medical/Surgical&ACUTE - Combined Medical/Surgical

5.6.3.1 PL.1 (Point of Care)

This is the most general classification for a specific location. It will generally refer to a floor number and possibly a wing name and/or direction. It might instead refer to a specific clinic or department code.

5.6.3.2 PL.2 (Room)

This is the second most general classification for a specific location. It refers to a specific room within the point of care identified in PL.1.

5.6.3.3 PL.3 (Bed)

This is the most specific classification for a specific location. It refers to an individual bed, seat, or other subdivision within the room identified in PL.2.

5.6.3.4 PL.4 (Facility)

This component must contain the identity of the facility and will be provided by the acCDR.

- **PL.4.1** (Namespace ID) must contain the acCDR assigned identifier for the HIC organization providing the data.
- **PL.4.2** (Universal ID) must contain the facility identifier if the HIC is a multi-facility entity (such as a multi-site hospital). If HIC is a single facility entity, this value can be skipped.

5.6.3.5 PL.7 (Building)

This component may contain a building identifier, if appropriate.

5.6.3.6 PL.8 (Floor)

This component may contain a floor identifier, if appropriate.

5.6.3.7 PL.9 (Description)

Prior to version 2.6, this was an optional field that may contain a description of the patient location in the hospital. Contributing HICs could provide a description from their local terminology.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CNE.1	c0	R	60	ST	9010	Identifier	ACUTE - Combined Medical/Surgical
CNE.2	c0	R	250	ST		Text	ACUTE - Combined Medical/Surgical

As of acCDR Input Standard version 2.6, this field must contain a description of the type of bed the patient is occupying within the hospital if the message pertains to an inpatient visit. If this field is provided, CNE.1 must contain a bed type code from Table 9010. CNE.2 must contain the meaning for that code.

5.6.3.8 PV1-3 Examples

The following is an example for a specific bed within an inpatient unit.

```
JS12^123^4^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.3.1^^^Q  
Building^12^ACUTE - Medical&ACUTE - Medical
```

The following is an example for a clinic with no further location information available.

```
Sleep Clinic^^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.3.1
```

5.6.4 PV1-4 (Admission Type)

This field must contain the admission type, if appropriate and available. Codes are defined by individual HICs and are not restricted solely to the suggested values in table 0007.

5.6.5 PV1-6 (Prior Patient Location)

This field should contain the prior location in the event that the location is changing. The format should be exactly as in PV1-3.

For non-ADT messages, this field is optional.

PV1-3 (Assigned Patient Location)

5.6.6 PV1-7 (Attending Doctor)

This field must contain the identity of the attending doctor for the patient visit, if appropriate and available.

This field must follow the format outlined in 6.2 below, [XCN: Composite ID for Provider](#).

5.6.7 PV1-8 (Referring Doctor)

This field must contain the identity of the referring doctor for the patient visit, if appropriate and available.

This field must follow the format outlined in 6.2 below, [XCN: Composite ID for Provider](#).

5.6.8 PV1-9 (Consulting Doctor)

This field must contain the identity of the consulting doctor for the patient visit, if appropriate and available.

This field must follow the format outlined in 6.2 below, [XCN: Composite ID for Provider](#).

5.6.9 PV1-10 (Hospital Service)

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CNE.1	c0	R	60	ST	0069	Identifier	12
CNE.2	c0	R	250	ST		Text	Cardiology

Prior to acCDR Input Standard version 2.6, contributing HICs could send a description of the hospital service from their local terminology. As of acCDR Input Standard version 2.6, contributors are required to send a code and meaning in Table 0069 if the message pertains to an inpatient visit. If this field is provided, CNE.1 must contain a code from Table 0069. CNE.2 must contain the meaning for that code.

5.6.10 PV1-14 (Admit Source)

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CNE.1	c0	R	60	ST	0023	Identifier	D
CNE.2	c0	R	250	ST		Text	Direct

This is a new field added in Version 2.6.

This field indicates the last point of entry prior to being admitted as an inpatient to the reporting facility when applicable. If this field is provided, CNE.1 must contain a code from Table 0023. CNE.2 must contain the meaning for that code.

5.6.11 PV1-16 (VIP Status / Patient Lock)

This field is deprecated. All patient consent directives related to the disclosure of their personal health information within the acCDR should be sent to Ontario Health Privacy Office to be applied to the acCDR Consent Registry following the business process as directed by Ontario Health.

5.6.12 PV1-17 (Admitting Doctor)

This field must contain the identity of the admitting doctor for the patient visit, if appropriate and available.

This field must follow the format outlined in 6.2 below, [XCN: Composite ID for Provider](#).

5.6.13 PV1-19 (Visit Number)

This field must contain one or more unique identifiers for the patient visit/encounter.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CX.1	All	R	50	ST		Identifier	123453545
..skip..							
CX.4		C	100	HD		Assigning Authority	
4.1	cO	R	50	IS	9004V	Namespace ID	1.3.6.1.4.1.12201.2 (<i>acCDR Provided</i>)
4.2	cO	R	50	ST	9008	Universal ID	1.3.6.1.4.1.12201.1 (<i>acCDR Provided</i>)
CX.5	All	R	5	ID	0203	Identifier Type Code	VN

5.6.13.1 PV1-19 CX.1 (Identifier)

This component must contain the identifier associated with the visit/encounter.

5.6.13.2 PV1-19 CX.4 (Assigning Authority)

This component must contain the identifier of the visit number assigning authority. It must contain the following subcomponents:

- **CX4.1 (Namespace ID):** This field must contain the identifier of the visit number assigning authority of the HIC. The correct value for this field will be provided by the acCDR.
- **CX4.2 (Universal ID):** This field must contain the identifier of the system within the HIC which is being used to generate this identifier and is considered to be the “source of truth” for it. For example, if the HIC has a Reg/ADT system or an EMR which generates local MRNs, then this identifier should identify that system even if it is not the one transmitting the HL7 message. The correct value for this field will be provided by the acCDR.

5.6.13.3 PV1-19 CX.5 (Identifier Type Code)

This component must identify which type of identifier this field repetition contains. Values must be drawn from [Table 23: HL7 Table 0203 \(Identifier Type Code\)](#).

5.6.14 PV1-36 (Discharge Disposition)

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CNE.1	c0	R	60	ST	0112	Identifier	30
CNE.2	c0	R	250	ST		Text	Residential Care

This is a new field added in Version 2.6.

This field must be populated in ADT discharge ADT^AO3 event and must contain the disposition of a patient at time of discharge. Contributing HICs shall send one of the codes listed in HL7 Table 0112 in CNE.1, and CNE.2 must contain the meaning for that code.

5.6.15 PV1-44 (Admit Date/Time)

This field contains the admit date and time and is used for retroactive updates to the original admit date and time. This field is also used to store the registration date and time of an outpatient or emergency patient.

5.6.16 PV1-45 (Discharge Date/Time)

This field contains the discharge date and time and is used for retroactive updates to the discharge date and time. Similarly to the PV1-44, it is also used for the discharge date and time of an outpatient or emergency patient.

5.7 PV2 Segment

The PV2 segment is only used for Emergency (E) Visits.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data (Notes)
PV2-3	c0	0	310	CWE			Admit Reason for Emergency Visit	SOB^Shortness of Breath
..skip..								
PV2-40	c0	0	310	CWE		0432	Admission Level of care code for Emergency Visit	5 (CTAS Code 5)

5.7.1 PV2-3 (Admit Reason for Emergency Visit)

For an emergency visit activation or update, this field may contain a presenting complaint if it is captured and available. If a coded value is available (e.g. CEDIS, ICD-10) it should be transmitted, otherwise a local identifier must be provided.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CWE.1	c0	R	60	ST		Identifier	SOB
CWE.2	c0	R	250	ST		Text	Shortness of Breath

5.7.2 PV2-40 (Admission Level of Care Code)

For an emergency visit activation or update, this field may contain the patient triage score if it is captured and can be transmitted. This field must contain a code from table 0432.

5.8 MRG Segment

Seq	Use	Opt	Len	RP/#	Vocab Tbl#	Field Description	Sample Data
MRG-1	c0	C	255	0..1		Prior Patient Identifier List	
..skip..							
MRG-5	c0	CE	255	0..1		Prior Visit Number	

5.8.1 MRG-1 (Prior Patient Identifier List)

In the event that a patient record is being merged, PID-3 must contain a repetition containing the type of “MR” for the “Correct Patient Identifier” and must be the Primary Identifier. In most cases this is normally the correct MRN number of the patient.

MRG-1 must contain the “Incorrect Patient Identifier” and must be the Primary Identifier. In most cases this is normally the incorrect MRN number of the patient, which is being merged into the primary record. The table below is required for the following messages: A45.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CX.1	c0	R	50	ST		Incorrect Patient Identifier	12345
..skip..							
CX.4	c0	C	100	HD		Assigning Authority	
4.1	c0	R	50	IS	9004M	Namespace ID	1.3.6.1.4.1.12201 <i>(acCDR Provided)</i>
4.2	c0	R	50	ST	9008	Universal ID	1.3.6.1.4.1.12201.1 <i>(acCDR Provided)</i>
CX.5	c0	R	5	ID	0203	Identifier Type Code	MR <i>(HRM to use the codes JHN and include CX.2 if JHN is present, and MR only)</i>

5.8.2 MRG-5 (Prior Visit Number)

In the event that a visit/encounter record is being merged, PV1-19 must contain the “Correct Visit Number” and must be used as the primary identifier of the correct visit. In most cases this is normally the correct visit number of the patient.

MRG-5 must contain the “Incorrect Visit Number” and must be used as the primary identifier of the incorrect visit, which is being merged into the primary record. The table below is required for the following messages: A06, A07, A42 and A45.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CX.1	c0	R	50	ST		Incorrect Visit Number	123453545
..skip..							
CX.4		C	100	HD		Assigning Authority	
4.1	c0	R	50	IS	9004V	Namespace ID	1.3.6.1.4.1.12201 <i>(acCDR Provided)</i>
4.2	c0	R	50	ST	9008	Universal ID	1.3.6.1.4.1.12201.1 <i>(acCDR Provided)</i>
CX.5	c0	R	5	ID	0203	Identifier Type Code	VN

5.9 DG1 Segment

Note: This segment is used within ADT messages only.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
DG1-1	c0	0	4	SI			Set ID	1

..skip..								
DG1-3	c0	RE	275	CE			Diagnosis Code	

5.9.1 DG1-1 (Set ID)

This field may contain an integer that identifies the sequence of segments.

5.9.2 DG1-3 (Diagnosis Code)

This field must contain a code indicating the diagnosis related to the visit or encounter.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	C	20	ST		Identifier	J01.1
CE.2	c0	R	200	ST		Text	Acute frontal sinusitis
CE.3	c0	C	50	ID	0053	Name of Coding System	2.16.840.1.113883.11.6.94(ICD-10-CA)

Note that currently CE.3 (Name of coding system) is not supported as coding system OID and is out of scope for use or validation in the acCDR solution. This will be assessed for future release. If the diagnosis is not stored using coded values (e.g. it is captured in free text only) it is acceptable to populate only CE.2 and leave CE.1 and CE.3 blank.

5.10 ROL Segment

Note: This segment is used within ADT messages only. At this time it is only used to identify the primary care provider for the patient.

Note that although the structure of the ROL segment permits up to 10 repetitions, at this time it is only possible to identify the primary care provider (PCP) for the patient. A patient can have at most **one** primary care provider.

This segment may be expanded to support additional role affiliations in future.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
..skip..								
ROL-3	c0	R	250	CE		0443	Role	
ROL-4	c0	RE	525	XCN	1..10		Role Person Name	
..skip..								

ROL-11	c0	0	250	XAD	0..10		Address	
ROL-12	c0	0	451	XTN	0..10		Phone Number / Email	

5.10.1 ROL-3 (Role)

This field must contain a code indicating the role for this provider.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	R	20	ST	0443	Identifier	PP <i>(Fixed Text)</i>
CE.2	c0	0	200	ST		Text	Primary Care Provider
CE.3	c0	R	30	ID		Name of Coding System	HL70443 <i>(Fixed Text)</i>

5.10.2 ROL-4 (Role Person)

This field identifies the person. Values in this field must follow the format outlined in [XCN: Composite ID for Provider](#). Note that for this field, **it is not mandatory for an ID to be provided**.

5.10.3 ROL-11 (Address)

This field may contain the address for the given person. Values in this field must follow the same format as [PID-11 \(Patient Address\)](#).

5.10.4 ROL-12 (Phone Number / Email)

This field may contain contact information such as phone number, pager, email address, etc. for the person. Values in this field must follow the same format as [PID-13 \(Phone Number\)](#).

5.11 NK1 Segment

Note: This segment is used within ADT messages only.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
NK1-1	c0	R	4	SI			Set ID	1
NK1-2	c0	RE	211	XP	0..10		Name	SMITH^Jane^^^^^L
NK1-3	c0	R	211	CE		0063	Relationship	

NK1-4	c0	0	293	XAD			Address	
NK1-5	c0	0	451	XTN			Phone Number / Contact Information	

5.11.1 NK1-1 (Set ID)

This field may contain a sequential numeric identifier identifying the sequence of the repetition of the NK1 segment (1, 2, 3, etc)

5.11.2 NK1-2 (Name)

This field must contain the name of the associated party, if it is known. Values in this field should follow the same format as [PID-5 \(Patient Name\)](#).

5.11.3 NK1-3 (Relationship)

This field must indicate the relationship or role of the associated party. If CE.1 is provided, the meaning for that identifier will be placed in CE.2 (based on table 0063). If the desired relationship is not in table 0063, it should be supplied in CE.2 and CE.1 should be left empty.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	5	ST	0063	Identifier	SPO
CE.2	c0	0	199	ST		Text	Spouse
CE.3	c0	R	7	ID		Name of Coding System	HL70063

5.11.4 NK1-4 (Address)

This field may contain the address of the associated party. Values in this field should follow the same format as [PID-11 \(Patient Address\)](#).

5.11.5 NK1-5 (Phone Number / Contact Information)

This field may contain the phone number of the associated party. Values in this field should follow the same format as [PID-13 \(Phone Number\)](#).

5.12 IAM Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data (Notes)
-----	-----	-----	-----	----	------	------------	-------------------	---------------------

IAM-1	c0	0	4	SI			Set ID – IAM	1
IAM-2	c0	0	250	CE		0127	Allergen Type Code	DA^Drug Allergy^HL70127
IAM-3	c0	R	270	CE			Allergen Code / Mnemonic / Description	1123-1^Corn Meal^1.3.6.1.4
IAM-4	c0	0	250	CE		0128	Allergy Severity Code	SV^Severe^HL70128
IAM-5	c0	0	60	ST	1..10		Reaction	Sneezing
..skip..								
IAM-11	c0	0	8	DT			Onset Date	20111211
IAM-12	c0	0	60	ST			Onset Text	Childhood
IAM-13	c0	0	19	TS			Reported Date/Time	20120401
..skip..								
IAM-15	c0	0	250	CE			Relationship to Patient Code	SEL^Self^HL70063

5.12.1 IAM-1 (Set ID – IAM)

This field may contain a numerical sequence.

5.12.2 IAM-2 (Allergen Type Code)

This field contains the high-level category of allergy (e.g. drug, food, animal).

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	R	5	ST	0127	Identifier	DA
CE.2	c0	0	199	ST		Text	Drug Allergy
CE.3	c0	R	7	ID		Name of Coding System	HL70127 <i>(Fixed Text)</i>

5.12.3 IAM-3 (Allergen Code/Mnemonic/Description)

This field identifies the allergen, using an identified standard coding system, local mnemonic or description.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	20	ST		Identifier	1123-1
CE.2	c0	R	199	ST		Text	Corn Meal
CE.3	c0	R	50	ID	9007	Name of Coding System	1.3.6.1.4.1.12201.2.4 <i>(c0 Provided)</i>

5.12.4 IAM-4 (Allergy Severity Code)

This field may contain a code that indicates the severity of the allergy.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	R	5	ST	0128	Identifier	SV
CE.2	c0	O	199	ST		Text	Severe
CE.3	c0	R	7	ID		Name of Coding System	HL70128 <i>(Fixed Text)</i>

5.12.5 IAM-5 (Symptom)

This field may contain the symptom associated with this allergy

5.12.6 IAM-11 (Onset Date)

This field may contain a date of the first reaction.

5.12.7 IAM-12 (Onset Text)

This field may contain a textual description of the first reaction if an exact date is not known, such as “Childhood” or “Summer 2003”.

5.12.8 IAM-13 (Reported Date/Time)

This field may contain a timestamp describing when this allergen was first reported. Note that there is no minimum precision required for this field, so valid values might include “2001”, “20110123”, and “20110123123400-0400”.

5.12.9 IAM-15 (Relationship to Patient Code)

This field may contain a code identifying the relationship of the person who reported the allergy to the patient. Values in this field must follow the same format as [NK1-3 \(Relationship\)](#). For example, if the patient’s spouse reported the allergy, this field should be populated as

“SPO^Spouse^HL70063”. If the patient reported the allergy himself/herself, this field should be populated as “SEL^Self^HL70063”.

5.13 ORC Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data (Notes)
ORC-1	c0	C	2	ID		0119	Order Control	NW
ORC-2	c0	C	175	EI			Placer Order Number	
ORC-3	c0	C	175	EI			Filler Order Number	12345^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1
ORC-4	c0	O	175	EI			Placer Group Number	2233^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1
..skip..								
ORC-9	c0	C	26	TS			Order Date/Time	200611291617-0400
..skip..								
ORC-12	c0	C	525	XCN			Ordering Provider	
ORC-14	c0	C	50	XTN			Call Back Phone Number	

5.13.1 ORC-1 (Order Control)

This is a required field for drug/medication administration messages. It is not used for documents/results.

For drug/medication administration messages, this field identifies the trigger event associated with this order group. It must contain a code from HL7 Table 0119.

5.13.2 ORC-2 (Placer Order Number)

Use of this field depends on context:

- For **medication administration (UC-DRX)**, this field must contain a unique number identifying the medication order generated by the order entry system.
- For **documents and results (UC-DCD, UC-DDI)**, this field must be empty or match the value found in [5.14.2 OBR-2 \(Placer Order Number\)](#).

This field must follow the format outlined in [6.1 below](#), **EI: Entity Identifier for Document and Medication Order Numbers**.

5.13.3 ORC-3 (Filler Order Number)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field is conditional and only used for medication administration messages. It must contain the order ID assigned by eMAR (Electronic Medication Administration Record) system.

This field must follow the format outlined in [6.1 below, EI: Entity Identifier for Document and Medication Order Numbers](#).

5.13.4 ORC-4 (Placer Group Number)

This field may contain a placer group number identifying the group identity that the document or result is a part of.

This field must follow the format outlined in [6.1 below, EI: Entity Identifier for Document and Medication Order Numbers](#).

5.13.5 ORC-9 (Order Date/Time)

This field is required only for drug/medication administration messages. It is not used for documents/results.

For drug/medication administration messages, this field must contain the date and time of the medication order, if available.

5.13.6 ORC-12 (Ordering Provider)

This field is required only for drug/medication administration messages. It is not used for documents/results.

For drug/medication administration messages, this field must contain the identity of the ordering provider for the medication order, if available.

This field must follow the format outlined in [6.2 below, XCN: Composite ID for Provider](#).

5.13.7 ORC-14 (Call Back Phone Number)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field should be populated if data is available and should only be populated in medication administration messages.

This field contains the telephone number to call for clarification of the medication prescription.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
XTN.1	All	R	25	ST		Telephone Number	1(416)340-4800 x 4357
XTN.2	All	O	3	ID	0201	Telecommunication Use Code	WPN
XTN.3	cO	O	10	ID	0202	Telecommunication Equipment Code	PH
XTN.4	cO	O	199	ST		Email Address	test@example.com
XTN.5	cO	O	3	NM		Country Code	1
XTN.6	cO	O	5	NM		Area Code	416
XTN.7	cO	O	9	NM		Local Number	3404800
XTN.8	cO	O	10	NM		Extension	4357
XTN.9	cO	O	199	ST		Any Text / Notes	Do not call after 5

5.14 OBR Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data (Notes)
OBR-1	All	O	4	SI			Set ID	1
OBR-2	All	R	175	EI			Placer Order Number	2233^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1
OBR-3	cO	O	175	EI			Filler Order Number	
OBR-4	All	R	8200	CNE	1..10		Universal Service Identifier	5049^Procedure Note^1.3.6.1.4.1.12201.2.1^28570-0^Procedure note^LN
..skip..								
OBR-7	All	R	19	TS	1..10		Observation Date/Time	YYYYMMDDhhmm-XXXX
OBR-8	cO	RE	19	TS			Observation End Date/Time	
..skip..								
OBR-16	All	RE	525	XCN	0..10		Ordering Provider	
..skip..								
OBR-19	cO	O	1	ID		9009	Append Mode	N <i>(Normal)</i>

OBR-20	HRM	C	3	ST		9006	HRM Category	"MR", "DI", or "CRT" <i>(Only required for HRM population)</i>
..skip..								
OBR-25	All	R	1	ID		0271	Result Status	F
OBR-26	cO	O	175	PRL			Parent Result	2222&1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1
..skip..								
OBR-28	cO	O	525	XCN	0..10		Result copies to	
..skip..								
OBR-32	All	RE	525	NDL			Principal Result Interpreter	

5.14.1 OBR-1 (Set ID)

This field may contain the correct sequential set ID.

5.14.2 OBR-2 (Placer Order Number)

This field contains a number which uniquely identifies this document or result in the ordering application. Note that it is not a requirement for this field to contain a "true" order number, only for it to contain a unique identifier for this document or result. If a sending system creates just a filler order number (in OBR-3), it is acceptable to copy that value into OBR-2.

If a document is retransmitted with a new version, the OBR-2 value must remain the same. This number must not be reused at any time for any other document or result.

This field must follow the format outlined in [6.1 below, EI: Entity Identifier for Document and Medication Order Numbers](#).

5.14.3 OBR-3 (Filler Order Number)

This field may contain a number which uniquely identifies this document or result in the filling application.

This field must follow the format outlined in [6.1 below, EI: Entity Identifier for Document and Medication Order Numbers](#).

5.14.4 OBR-4 (Universal Service Identifier)

This field must contain a local identifier code, description (text) and code system for the type of document or result in CNE1, 2, 3. The corresponding LOINC codes, descriptions and code systems are provided in CNE4, 5, 6. For DI reports, this field may repeat, as it may for example contain sub-procedures associated with the procedure. The example below contains a result for a routine thyroid scan and first transit with blood pool:

```
THYSAN^THYROID SCAN^1.3.6.1.4.1.12201.2.1^30695-1^NM Thyroid
gland Views^LN^NM~BLDPOL^FIRST TRANSIT W BLOOD
POOL^1.3.6.1.4.1.12201.2.1^81563-9^NM Heart First pass and Blood
pool^LN^NM
```

This field must follow the following format:

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CNE.1	All	R	60	ST		Identifier	DSUM <i>(HIC Defined)</i> 1. Please provide local code for the hospital report type 2. If possible, a LOINC or ConnectingOntario-C code should also be included in CE.4 3. For HRM only - The combined length of OBR-4.1 and OBR-4.2 cannot exceed 59
CNE.2	All	R	200	ST		Text	Discharge Summary <i>(HIC Defined)</i>
CNE.3	All	R	50	ID	9007	Name of Coding System	1.3.6.1.4.1.12201.2.1 <i>(acCDR Provided)</i>
CNE.4	All	RE	60	ST		LOINC or ConnectingOntario C-Code	LOINC Code or C-code from the ConnectingOntario Terminology corresponding to the local code provided in CNE.1 Example:18842-5
CNE.5	All	RE	200	ST		Text description for CNE.4	Discharge Summary

CNE.6	All	RE	50	ID		Name of Coding System	<i>If a LOINC code is sent in CNE.4, this field must be "LN".</i> <i>If a ConnectingOntario C-code is sent in CNE.4, this field must be "2.16.840.1.113883.3.239.22.1.37.239.22.1.4"</i>
..skip							
CNE.9	HRM	C	200	ST		DI Modality for HRM	<i>Condition: used ONLY for DI reports sent to HRM</i> <i>e.g. RAD, US, XRAY, BMD (HIC defined)</i>

5.14.4.1 OBR-4 CNE.1 (Identifier)

OBR-4 CE1 must contain the HIC-defined local code identifying the type of document. **These user defined codes are case-sensitive and should not contain any wildcards characters such as the asterisk (*).**

Contributing HICs are strongly encouraged to include a LOINC code or ConnectingOntario C-code in CNE.4 in addition to the local code provided in CNE.1 in their data contribution.

Contributing HICs will still be required to provide a mapping between local codes identified in OBR-4.1 and the standard ConnectingOntario terminology code set, through the acCDR terminology mapping registry.

5.14.4.2 OBR-4 CNE.2 (Text)

This field must contain an HIC-defined textual description of this document. The value here must be appropriate for display to an end user as a label for this document.

5.14.4.3 OBR-4 CNE.3 (Name of Coding System)

This field must contain an identifier for the coding system used in CNE.1. This identifier shows from which code table the code in CNE.1 is drawn. For local codes, values must be drawn from Table 9007, and new values will be assigned by Ontario Health as required.

5.14.4.4 OBR-4 CNE.4 (Alternate Identifier)

OBR-4 CNE.4 should contain a LOINC or ConnectingOntario C-code corresponding to the local code identified in OBR-4.1. Contributing HICs are strongly encouraged to include the LOINC or ConnectingOntario C-code in CNE.4 in addition to the local code in CNE.1 in their data contribution.

Contributing HICs will still be required to provide a mapping between the local code identified in OBR-4.1 and the standard ConnectingOntario code set, through the acCDR terminology mapping registry. (The ConnectingOntario code set contains LOINC document codes and

temporary C-codes defined by Connecting Ontario when appropriate LOINC codes do not yet exist).

5.14.4.5 OBR-4 CNE.5 (Alternate Text)

OBR-4 CNE.5 should contain the description for the code provided in CNE.4.

5.14.4.6 OBR-4 CNE.6 (Name of Alternate Coding System)

OBR-4 CNE.6 should identify the coding system for the code provided in CNE.4. If a LOINC code is provided in CNE.4, then CNE.6 must be "LN". If a ConnectingOntario C-code is provided in CNE.4, CNE.6 must be "2.16.840.1.113883.3.239.22.1.37.239.22.1.4".

5.14.4.7 OBR-4 CNE.9 (HRM DI Modality)

For DI reports being transmitted to HRM, this field must contain a code that represents the DI Modality e.g., US, XR, BMD etc.

5.14.4.8 OBR-4 Notes for HRM Medical Record Reports (MR)

OBR-4 enables HICs to provide granular content to HRM to identify a report type (e.g. Discharge Summary). Granular Local identifiers are sent in CNE.1 to CNE.3 and the equivalent LOINC or ConnectingOntario C-codes are sent if possible in CNE.4 to CNE.6. The OBR-4 format for documents is:

- CNE.1 represents local code/mnemonic/abbreviation for the report type e.g., DS;
- CNE.2 represents the local description for the Report e.g. Discharge Summary.
- CNE.3 represents the code system. The value of the code system for local codes must be drawn from [Table 9007](#). The combined length of CNE.1 and CNE.2 cannot exceed 59.
- CNE.4 represents the LOINC or ConnectingOntario C-Code equivalent for the local code in CNE.1
- CNE.5 represents the text description of the code in CNE.4
- CNE.6 represents the coding system identifier. If a LOINC code is provided in CNE.4, then CNE.6, must be "LN". If a ConnectingOntario C-code is provided in CNE.4, CNE.6 must be "2.16.840.1.113883.3.239.22.1.37.239.22.1.4".

Example:

```
DS^DISCHARGE SUMMARY^1.3.6.1.4.1.12201.2.1^18842-5^Discharge  
summary^LN
```

5.14.4.9 OBR-4 Notes for HRM Diagnostic Imaging / Diagnostic Test Reports (DI)

OBR-4 enables HICs to provide granular content to HRM to specify key details about Diagnostic Imaging/Diagnostic Tests (DI) where there may be one or more modalities and their corresponding procedure(s) reported.

For HRM Only: This information is passed on to the recipient EMRs to assist them in categorizing reports received from the HICs.

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In this case DI reports will use the format:

- CNE.1 representing the DI Procedure mnemonic/abbreviation e.g., LLT;
- CNE.2 representing the corresponding DI Procedure Description e.g., Left Lung Top View.
- CNE.3 representing the code system (Value of the code system for local codes must be drawn from [Table 9007](#)).
- CNE.4 represents the LOINC code for the local code in CNE.1.
- CNE.5 represents the LOINC description.
- CNE.6 represents the coding system identifier "LN".
- The maximum length of CNE.1 and CNE.2 is 60 and 200, respectively. The maximum length of CNE.1, CNE.2 and CNE.4 is 370.
- CNE.9 represents the DI Modality e.g., US, XR, BMD etc (HIC Defined)

If there is more than one procedure for the same DI Report, it would be recorded as a repetition of CNE.1 to CNE.9 separated by "~". Example:

```
LLT^LEFT LUNG TOP VIEW^1.3.6.1.4.1.12201.2.1^30737-1^XR  
Chest Left oblique^LN^^^XR~RLT^RIGHT LUNG TOP  
VIEW^1.3.6.1.4.1.12201.2.1^ 37010-6^XR Chest Right  
oblique^LN^^^XR
```

In the event that a single DI report contains more than one modality then the same format will be used. Example:

```
LLT^LEFT LUNG TOP VIEW^1.3.6.1.4.1.12201.2.1^30737-1^XR  
Chest Left oblique^LN^^^XR~  
  
RLT^RIGHT LUNG TOP VIEW^1.3.6.1.4.1.12201.2.1^37010-6^XR  
Chest Right oblique^LN^^^XR~  
  
THYSAN^THYROID SCAN^1.3.6.1.4.1.12201.2.1^ 30695-1^NM  
Thyroid gland Views^LN^^^NM~  
  
BLDPOL^FIRST TRANSIT WITH BLOOD POOL^1.3.6.1.4.1.12201.2.1^  
81563-9^NM Heart First pass and Blood pool^LN^^^NM
```

5.14.5 OBR-7 (Observation Date/Time)

This field must be filled in if the OBR is part of a report message or if a specimen was sent as part of the request. It contains the most relevant date/time for reports, observations and specimens.

For Medical Record Document Types (e.g. Consult Reports), it contains the dictated date/time. If a Medical Record report is being corrected, it contains the time that the document was last corrected.

For diagnostic images in HRM submission, it contains the dates and times of when the observations were taken and corresponds directly with the procedures and sub-procedures listed in OBR 4. For specimens, it contains the time when the specimen was collected.

For further information, please refer to [Section 5.2.1](#)

5.14.5.1 OBR-7 Examples

This is an example message for a dictated Consult Report which is an HRM Medical Record (MR) report type.

```
OBR|||CON^CONSULT^1.3.6.1.4.1.12201.2.1^11488-4^Consult note^LN|||200910141545-0400|||
```

A sample message for a Diagnostic Image (DI) report to HRM is included below. The OBR-4 field lists the DI procedure for a “Cervical Spine X-ray”, with associated sub-procedures of “routine thyroid scan” and “first transit with blood pool”. The OBR-7 field contains three repeated time stamps in the order provided corresponding to the cervical spine x-ray procedure, the routine thyroid scan and the first transit with blood pool sub-procedures.

```
OBR|||CSP5^CERV SP 5 VIEWS OP-ROUTINE^1.3.6.1.4.1.12201.2.1^24846-6^XR Cervical spine Views^LN^^^XR ~THYSAN^THYROID SCAN^1.3.6.1.4.1.12201.2^30695-1^NM Thyroid gland Views^LN^^^NM ~BLDPOL^FIRST TRANSIT WITH BLOOD POOL^1.3.6.1.4.1.12201.2.1^81563-9^NM Heart First pass and Blood pool^LN^^^NM |||200910141545-0400~200910141550-0400~200910141600-0400|200910141610-0400|||
```

In the event that a HIC can only provide a single date/time for all DI procedures, this will indicate that the same date/time applies to each and all of the procedures reported in OBR-4

5.14.6 OBR-8 (Observation End Date/Time)

This field contains the end date/time of an observation period or timed specimen collection. It will be null for single-point observations.

5.14.7 OBR-16 (Ordering Provider)

This field contains the identity of the health care practitioner who ordered this result, if applicable.

This field must follow the format outlined in [6.2 below](#), [XCN: Composite ID for Provider](#).

5.14.8 OBR-19 (Append Mode)

** Note: This field is not used by HCCSS.

This field may be used by sending systems to indicate an “append mode”.

By default (i.e., if this field is not set), the contents of the document or result are completely replaced by the contents which are transmitted in the OBX segments which follow. This is commonly referred to as “snapshot mode”. This mode may be communicated explicitly using the value “S”, but this is not required.

When a value of “A” is used in this field, any existing contents in the acCDR will be preserved, and any new contents in the current message will be appended at the end of the document. This is a non-standard workflow and should only be used if the sending system does not support snapshot mode. Note that in append mode, order notes are replaced and not appended. Only observations (OBX) are appended.

Values in this field must be drawn from [HL7 Table 9009 \(Append Mode\)](#).

5.14.9 OBR-20 (Filler Field 1 / HRM Category)

This field has the value of “MR”, “DI”, or “CRT” and is required only for Health Report Manager data population. The value must be drawn from [Table 34: HL7 Table 9006 \(HRM Report Category Code\)](#). Please note “CRT” was added as of acCDR Input Standard v2.5.1. While this code is supported in HRM, it is not yet supported in acCDR and will be planned in a future release. Until then hospitals using an integrated feed for acCDR and HRM will receive a medium severity error when sending “CRT” however the reports will still be filed in acCDR.

5.14.10 OBR-25 (Result Status)

A required field that indicates the current completion state of the document / result. This field must contain a value drawn from [Table 24: HL7 Table 0271 \(Document / Result Completion Status\)](#). Please refer to [Section 4.1.2](#) for a visual depiction of various stages in the document/result status workflow.

5.14.11 OBR-25 HRM Notes

HRM will translate the acCDR codes in OBR-25 from:

- “F” (Final) to “S” (HRM defines this code as Signed & Final)
- “C” (Corrected) to “S” (HRM defines this code as Signed & Final)
- “W” (Withdrawn) to “C” (HRM defines this code as Cancelled)

EMR vendors using the HRM codes are required to distinguish between Final and Corrected/Updated documents by comparing the entire newly received document to the previous report dated document to determine if there was a change.

5.14.12 OBR-26 (Parent Result)

This field may contain a reference to the identifier of a parent result, if one exists. This identifier must refer to the identifier which was used in OBR-2 (Placer Order Number) when the parent result is transmitted.

This field must follow a similar format to the format outlined in 6.1 below, [EI: Entity Identifier for Document and Medication Order Numbers](#), but with one crucial distinction. This field uses the PRL data type and places all EI components as subcomponents in the first component of the PRL. This means in effect that for a placer order number of

“2233^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1”, a child order would refer to its parent as
“2233&1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1”.

5.14.13 OBR-28 (Result Copies To)

This field contains the identity of any providers who have been copied on this result, if applicable. Note that use of this field does not indicate that acCDR should attempt to deliver the result to the named provider, only that the provider has been named as someone who should or may read it.

This field must follow the format outlined in 6.2 below, [XCN: Composite ID for Provider](#).

5.14.14 OBR-32 (Principal Result Interpreter)

This field may be used to transmit the principal result interpreter, if appropriate. For Medical Records and Diagnostic Imaging reports, this would be the author of the report.

This field must follow the format outlined in 6.3 below, [NDL: Composite ID for Provider](#).

5.15 OBX Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data (Notes)
OBX-1	All	O	10	SI			Set ID	1
OBX-2	All	R	3	ID		0125	Value Type	TX, FT, ED
OBX-3	cO	R	350	CE			Observation Identifier	
OBX-4	cO	O	20	ST			Observation Sub-ID	
OBX-5	All	R	*	*	1..*		Observation Value	
OBX-6	cO	O	350	CE			Units	
OBX-7	cO	O	60	ST			Reference Range	
OBX-8	cO	O	5	IS	0..5	0078	Abnormal Flags	

..skip..								
OBX-11	c0	R	1	ID		0085	Observation Result Status	F
..skip..								
OBX-14	c0	0	19	TS			Date/Time of Observation	

5.15.1 OBX-1 (Set ID)

This field may be populated with a sequential integer number which indicates the sequence of this OBX within the document or result.

Note that sequence is important. The acCDR preserves the sequence in which OBX segments are transmitted and will ensure that the order is preserved when data is extracted.

5.15.2 OBX-2 (Value Type)

This field must contain the ID of the data type found in [OBX-5 \(Observation Value\)](#).

5.15.3 OBX-3 (Observation Identifier)

This field must contain a code and description indicating the type of document, document section, or result contained within this segment. The following definition must be used.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	R	50	ST		Identifier	DML <i>(HIC Defined)</i>
CE.2	c0	R	250	ST		Text	Discharge Medication List <i>(HIC Defined)</i>
CE.3	c0	R	50	ID	9007	Name of Coding System	1.3.6.1.4.1.12201.2.2 <i>(acCDR Provided)</i>

5.15.3.1 OBX-3 CE.1 (Identifier)

This field must contain either an HIC-defined code or a standardized code (e.g. SNOMED CT) identifying this observation. No specific codes are required, but any codes used should be consistent between documents.

5.15.3.2 OBX-3 CE.2 (Text)

This field must contain an HIC-defined textual description of this observation. The value here does not need to be consistent between documents but must be appropriate for display to an end user as a label for this observation.

5.15.3.3 OBX-3 CE.3 (Name of Coding System)

This field must contain an identifier for the coding system used. The identifier here shows from which code table the code in CE.1 is drawn. Values will be provided by the acCDR.

5.15.4 OBX-4 (Observation Sub-ID)

This field contains a unique integer assigned to the discrete OBX segments within one OBR and is used to group related components in each document or report.

5.15.5 OBX-5 (Observation Value)

This field contains the value or text of the patient-related observation or documents. Note that the acCDR supports the same data types as the *Ontario Laboratories Information System (OLIS)*.

See [6.5 HL7 Data Types for OBX-5](#) for information on permitted data types.

5.15.5.1 Transmitting Textual Reports

When transmitting textual reports, the TX or FT data type should be used.

Sending systems may use either a single OBX segment with sections (i.e., lines/paragraphs) separated by the repeating fields separator (~ or tilde), or multiple OBX segment repetitions. Each repetition will be treated as a separate line. Special characters in the text of the report must be represented using the escape sequences as recommended in [MSH-2 \(Encoding Characters\)](#). Reports larger than 64K characters must be coded as one or more OBX segments, where each report section (i.e., lines/paragraphs) is represented as a TX data type.

If the report contains multiple sections, these may each be placed in single separate OBX repetition, or in separate sequential OBX repetitions. The OBX-3 (Universal Service Identifier) code may be used in this case to identify the section name. Note that this is desirable as it may improve readability, but it is not mandatory.

5.15.5.2 Transmitting Binary Contents (Scanned Images, PDFs, etc.)

The acCDR supports the storage of binary attachments as a part of a document. This may serve several purposes (the following list is only to provide examples; it is not an exclusive list):

- A PDF document or Microsoft Word document may be transmitted which contains the entire contents of a report
- An image file can be transmitted which supplements the contents of a report
- A diagram can be transmitted which explains a portion of a report
- A sound file can be transmitted which provides interpretation
- An HTML document can be transmitted which contains the body of a report

Binary content is transmitted using the encapsulated data (ED) HL7 data type. In order to be transmitted in an HL7 message, binary contents must be Base 64 encoded. See the following URL for a description of Base 64 encoding: <http://en.wikipedia.org/wiki/Base64>

HRM Specific Notes:

HRM only supports the following binary BASE 64 encoded report types:

- JPEG
- GIF
- PNG
- HTML
- RTF (deprecated)
- PDF

As with other types of content, binary content is transmitted in an OBX segment within a message. The value of **OBX-2 (Value Type)** must be set to “ED”, and the value of OBX-5 must be defined as follows:

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
..skip..							
ED.2	All	R	20	ID	0191	Type of Data	TEXT
ED.3	All	R	20	ID	0291	Data Subtype	PDF
ED.4	All	R	20	ID		Encoding	Base64 <i>(Fixed Value)</i>
ED.5	All	R	*	ST		Encoded Data	

5.15.5.3 Binary Contents Examples

Note that in the following examples ***the Base 64 portion has been truncated***. In a real message the contents of OBX-5-5 would be much longer. The OBX segments below could be the only OBX segment within a message or could come at the appropriate position within a larger collection of content spanning multiple OBX segments.

The following example shows a PDF document:

```
OBX|1|ED|DCONConsult^1.3.6.1.4.1||^Text^PDF^Base64^Ui9QYWdl
cyAxMiAwIFlvdVhlwZS9DYXRhbG9nL1Bh=
```

The following example shows an embedded WAV file:

5.15.5.4 Additional details regarding transmission size limits for large binary files

At the time of publication, the acCDR solution is limited to accepting message transmissions of 7MB or less in size (for a single message), for both storage and retrieval. This is sufficient for the large majority of HL7 binary transmissions, but some files may exceed this threshold. For example, a scanned copy of a paper chart for an emergency visit could be many pages (if the corresponding visit lasted many days), and such a file could be quite large in size.

A participant's first course of action should be to examine if the file(s) exceeding the 7MB threshold can be reduced in size. For example, the message output of a document scanning system may be inadvertently set to an extremely high DPI resolution, resulting in unnecessarily large image transmissions.

If the binary content cannot or should not be reduced in size before transmitting to acCDR, then the document must be 'split' so each individual transmission does not exceed 7MB in size. For example, a 10MB file might be split into two transmissions of 5MB each. This document splitting invokes several additional considerations, detailed below. However, in all cases, *the individually-transmitted components must be valid files in their own right*. In the case of a 6-page scanned document, split into two parts for transmission, each part should be capable of opening independently. It is not acceptable to merely split the same Base64-encoded content across two messages, as two corrupted/invalid files would result. In practice, this often means the 'splitting' behavior, if applicable, must take place at the source system, rather than in a site's integration engine

5.15.5.5 Parent/Child relationships for multi-part documents, and other considerations

If a document has been 'split' into several parts, these parts should be electronically linked via field OBR-26, which is used to specify the 'parent result' of a document. The first document in a set should leave this field blank, while subsequent parts should specify the first part as their parent.

Each part of the split set must also contain a unique document number in field OBR-2.1 (this despite the fact they are all components of a single file with a single document number in the source system). This is accomplished by appending a hyphen and the part number to the original document number. For example, a document originally identified with the number '1234', would have two parts identified as '1234-1' and '1234-2' if split across two transmissions. It is also important to change the document description from field OBR-4.2

The following example shows two minimalistic OBR segments, representing a document split in two parts. Note the contents of OBR-2.1, OBR-4.2, and OBR-26:

```
OBR|1|2233-1^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||5049^Procedure
Note - Part 1^1.3.6.1.4.1.12201.2.1|||201402030830-
0400|||||||||N|N|||||F|||||||
```

```
OBR|1|2233-2^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||5049^Procedure
Note - Part 2^1.3.6.1.4.1.12201.2.1|||201402030830-
0400|||||||||N|N|||||F|2233-
1&1.3.6.1.4.1.12201&1.3.6.1.4.12201.1|||||||
```

5.15.5.6 Invalidation procedures for multi-part documents

If the parent/child relationships between parts of the same root document have been properly described using field OBR-26, then invalidation (marking OBR-25 with a status ‘W’) of the parent document will also invalidate all its children. Individual invalidation messages may also be sent for each part, but this is not necessary.

Note that at present, this invalidation logic is only implemented for data of the ‘ED’ binary subtype, pending a more fulsome analysis of parent/child result behavior across sending systems. Purely textual documents transmitted with parent/child relationships will not currently display this invalidation behavior – these documents must be invalidated individually.

5.15.5.7 Change/Update procedures for multi-part documents

Under most circumstances, updating a multi-part document is no different than updating a single document. The components of the multi-part document would be transmitted to acCDR with the changes included, and OBR-25 set to a status of ‘C’ (for changed/corrected). In many implementations all the components would be re-transmitted, even if the change only affected a small portion of the document, though this is not strictly necessary. A participant could, in theory, only transmit the part of the multi-part set that included changes, provided the document identifier in OBR-2.1 correctly represented the part of the set that needed to change.

A special circumstance arises when:

- a) A multi-part document changes due to corrections or other edits
-and-
- b) The change results in the document set *reducing in size*. For instance, a large document that was split into four parts, and then edited with multiple redactions, might (in theory) be small enough to only take up three parts after the change.

If this workflow is possible with the sending system in question, then acCDR requires additional information in order to ensure the ‘orphan’ component of the set is marked as obsolete, and not accidentally returned to users as if it was still valid.

*****Note: If it is impossible for a document set to reduce in size, and thus the number of parts in which it has been split, then the following procedures do not need to be followed***

Multi-part documents potentially affected by this workflow should adhere to the following logic:

1. The document number, in field OBR-2.1, should include an indicator stating which part of the multi-part document is referenced by the message that follows, in the form of a “-#” syntax. In other words, a document with an ID of ‘abc123’, split into two parts, should have IDs of ‘abc123-1’ and ‘abc123-2’ in those two parts. There should be no spaces between the dash and the position indicator.
2. The document description, in field OBR-4.2, must include a special syntax describing the document set position, and document set size, using the following syntax
 - a. The special syntax region will begin with a curly brace (‘{’)
 - b. The document part position indicator will be noted with an integer (‘1’)
 - c. The position and set size indicators will be separated by a colon (‘1:’)
 - d. The document set size indicator will be indicated by a second indicator, indicating the current size of the document set (‘1:3’)
 - e. The special syntax region will end with a second curly brace
 - f. Thus, for a document with a name in OBR-4.2 of “ED Report”, the second component of a four-part split document might have a full OBR-4.2 value of ‘ED Report{2:4}’

The following example shows two minimalistic OBR segments, representing a document split in two parts, including the special syntax for document set position and set size:

```
OBR|1|2233-
1^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||5049^Procedure
Note - Part 1{1:2}^1.3.6.1.4.1.12201.2.1||201402030830-
0400|||||||||N|N|||||C|||||||

OBR|1|2233-
2^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||5049^Procedure
Note - Part 2{2:2}^1.3.6.1.4.1.12201.2.1||201402030830-
0400|||||||||N|N|||||C|2233-
1&1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1|||||||
```

5.15.6 OBX-6 (Units)

This field must contain the units relating to this observation, if applicable. Standard SI units are recommended, but this is not required. The format should be similar to the CE data type as defined in [OBX-3 \(Observation Identifier\)](#) above.

5.15.7 OBX-7 (Reference Range)

This field must contain the lower and upper limits of the observation, if applicable. The following formats are recommended, but not required:

- [lower limit] – [upper limit]

- > [lower limit]
- < [upper limit]

5.15.8 OBX-8 (Abnormal Flags)

This field may contain the codes that flag abnormal observations. Values are drawn from [HL7 Table 0078 – Abnormal Flags](#).

5.15.9 OBX-11 (Observation Result Status)

This field must contain the status of the observation. Values are drawn from [HL7 Table 0085 \(Observation Result Status\)](#)

5.15.10 OBX-14 (Observation Date/Time)

This field may contain the date and time that the observation was performed.

5.16 NTE Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
1	c0	0	4	SI			Set ID - NTE	
2	c0	0	8	ID		0105	Source of Comment	
3	c0	R	65536	FT	Y		Comment	

5.16.1 NTE-1 (Set ID – NTE)

This field may contain the sequential numeric identifier for this NTE repetition.

5.16.2 NTE-2 (Source of Comment)

This field may be used to identify the source of the comment. Although based on [HL7 Table 0105](#), additional values may be added locally.

5.16.3 NTE-3 (Comment)

This field must contain the textual comment.

5.17 TQ1 (Timing/Quantity) Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
-----	-----	-----	-----	----	------	------------	-------------------	-------------

TQ1-1	c0	R	4	SI			Set ID	1
TQ1-3	c0	RE	540	RPT		0335	Repeat Pattern	225761000 &As required&SNM3
..skip								
TQ1-6	c0	RE	75	CQ			Service Duration	6^month
TQ1-7	c0	0	19	TS			Start Date/Time	201204181000-0400
TQ1-8	c0	0	19	TS			End Date/Time	201205221000-0400
TQ1-11	c0	RE	250	TX			Text Instruction	“every 4 hours, take with meal”

5.17.1 TQ1-1 (Set ID)

For the first timing specification transmitted, the sequence number shall be 1. If multiple TQ1 segments are specified, each subsequent TQ1-1 shall be 2, and so on.

5.17.2 TQ1-3 (Repeat Pattern)

This field should contain the repeating frequency with which the treatment is to be administered. Contributing HICs shall populate the field with the SNOMED-CT code and meaning from HL7 table 0335 if applicable. If a suitable SNOMED-CT code cannot be found, CE.1 and CE.3 may be left empty, and a text description must be provided in CE.2. If a coded value is being transmitted, CE.1 and CE.3 must be populated.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
RPT.1	c0	R	705	CWE	0335	Repeat Pattern Code	

This field must follow the following format:

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	20	ST	0335	Identifier	225750008

CE.2	c0	R	200	ST		Text	Every 2 hours
CE.3	c0	RE	50	ID		Name of Coding System	Use fixed value "SNM3" if sending SNOMED-CT values. Otherwise leave blank

5.17.2.1 TQ1-3 CE.1 (Identifier)

This field shall contain a code from HL7 Table 0335 or a local code indicating the frequency with which the medication is to be taken or administered. Example: if the medication should be given "PRN" or "as needed", the code 225761000 with text "As required" from Table 0335 should be used. This intensional value set includes codes from <http://snomed.info/sct> where the concept is a 272103003 (Time patterns) i.e., codes that are subtypes of | Time patterns (qualifier value)| and a set of pan-Canadian members. This subset contains many possible values and a limited set only is displayed in table 0335. This is a broad data exchange subset that supports interoperability and conformance testing and can be constrained to meet local use.

5.17.2.2 TQ1-3 CE.2 (Text)

This field shall contain the description for the code in the identifier field. This can be from HL7 Table 0335. If a suitable code cannot be found for TQ1.3.1 then the site can send a text description.

5.17.2.3 TQ1-3 CE.3 (Naming of Coding System)

If a value from HL7 Table 0335 is used, this field must contain the value SNM3. This field is left blank if a local text only is provided.

5.17.3 TQ1-6 (Service Duration)

This field contains the duration for which the service is requested. The value of this field shall be specified as below.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CQ.1	c0	R	25	NM		Quantity	6
CQ.2	c0	R	350	CE		Units	mo&month&2.16.840.1.113883.6.8

Note in CQ.2, a UCUM based time unit code (CE.1) should be provided if available. A textual description (CE.2) must be provided. For example, "month" can be specified as "mo&month&2.16.840.1.113883.6.8". Other commonly used UCUM values include "h" (Hour), "d" (Day), "wk" (Week), "a" (Year). For complete list of UCUM codes, please refer to "<https://ucum.org/>"

If a UCUM time unit is not available, a textual description can be specified in CE.2 and CE.1 and CE.3 may be left empty.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	9012	Identifier	mo (<i>UCUM code should be provided if available</i>)
CE.2	c0	R	250	ST		Text	month
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM Otherwise leave blank

5.17.4 TQ1-7 (Start Date/Time)

This field may contain the start date for this order. Values must contain precision at least up to the minute level.

5.17.5 TQ1-8 (End Date/Time)

This field may contain the end date for this order. Values must contain precision at least up to the minute level.

5.17.6 TQ1-11 (Text instruction)

This field should contain the full text of the instruction which may include additional information. For example, "every 4 hours, take with meal".

5.18 RXA Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
..skip..								
RXA-2	c0	0	4	NM			Administration Sub-ID Counter	
RXA-3	c0	R	26	TS			Date/Time Start of Administration	
RXA-4	c0	RE	26	TS			Date/Time End of Administration	
RXA-5	c0	R	275	CWE			Administered Code	2337983 ^APO- ROSUVASTATIN (rosuvastatin calcium) 10 mg oral tablet) APOTEX INC

								^ 2.16.840.1.113883.2.20.6.1
RXA-6	c0	R	20	NM			Administered Amount	1 <i>(Whole Number or Decimal ok)</i>
RXA-7	c0	RE	250	CE			Administered Units	421026006^tablet^SNM3
RXA-8	c0	RE	250	CE			Administered Dosage Form	INJ^Injection
RXA-9	c0	O	250	CE	1..10		Administration Notes	
RXA-10	c0	RE	250	XCN			Administering Provider	
..skip..								
RXA-12	c0	C	20	ST			Administered Per (Time Unit)	
RXA-13	c0	RE	20	NM			Administered Strength	10
RXA-14	c0	RE	250	CE			Administered Strength Units	mg^milligram^2.16.840.1.113883.6.8
..skip								
RXA-20	c0	R	2	ID		0322	Completion Status	CP
RXA-21	c0	R	2	ID		0323	Action Code	D

5.18.1 RXA-2 (Administration Sub-ID Counter)

This field increments by 1 each time the medication or treatment is administered for this order.

5.18.2 RXA-3 (Date/Time Start of Administration)

This field must contain the actual time that the administration occurred or started occurring. For a continuous administration order, this field is used to record the time for a rate change (i.e., IV). The new rate is found in the same message, in RXA-12, Administered/Time Unit.

The value must include precision at least up to the minute.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
TS.1	c0	R	24	DTM		Time	201201250101-0400

5.18.3 RXA-4 (Date/Time End of Administration)

This field is used to record the end date/time for the administration of the medication. If not set, the end time is assumed to be the same time as the start time (RXA-3).

The value must include precision at least up to the minute.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
TS.1	c0	R	24	DTM		Time	201201250101-0400

5.18.4 RXA-5 (Administered Code)

This field identifies the medical substance that has been administered to the patient. Canadian Clinical Drug Data (CCDD) is the required terminology for drug identifiers. Contributing HICs must support all levels of drug terminology defined in the CCDD including Manufactured Product (MP), Non-proprietary Therapeutic Product (NTP), Therapeutic Moiety (TM). If the TM is used then additional information such as the strength, dosage form and possibly the route of administration must be sent (each in separate fields in their system and in the message); Health Canada Natural Product Number (NPN) may also be used if a CCDD code is not available. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable drug code is not available in CCDD or NPN, only then should the system send the drug name as text without a code (CE.1 and CE.3 may be left empty, and text description must be provided in CE.2).

Code systems that are acceptable in the message are:

2.16.840.1.113883.2.20.6.1 for CCDD

2.16.840.1.113883.5.1107 for Health Canada NPN

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	20	ST		Identifier	02337983
CE.2	c0	R	199	ST		Text	APO-ROSUVASTATIN (rosuvastatin calcium) 10 mg oral tablet) APOTEX INC Note: for CCDD terminology, this must be the formal name.
CE.3	c0	RE	50	ID		Name of Coding System	Use "2.16.840.1.113883.2.20.6.1" for CCDD code

							Use "2.16.840.1.113883.5.1107" for Health Canada NPN Otherwise leave blank
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5.18.5 RXA-6 (Administered Amount)

This field must be populated and shall contain the amount of medication or treatment given. This is the dose of the medication administered to the patient.

Example:

1 tablet – RXA-6 value will be "1", RXA-7 is "421026006^tablet^SNM3"

10 milligrams - RXA-6 will be "10", RXA-7 is "mg^milligram^2.16.840.1.113883.6.8"

5.18.6 RXA-7 (Administered Units)

This field must be populated if the administered amount code does not imply units and must contain a code and description indicating the unit of measure from UCUM or SNOMED CT as indicated in Table 9012.

UCUM is the required coding system. In the instance where a UCUM unit of measure is not defined, a SNOMED-CT unit of measure can be used. If no suitable code is found in UCUM or SNOMED-CT, text alone can be provided. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable code is not available in UCUM or SNOMED-CT, only then should the system send the unit of measure as text without a code (CE.1 and CE.3 may be left empty, with text description provided in CE.2).

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	9012	Identifier	mg (<i>UCUM or SNOMED code is required</i>)
CE.2	c0	R	250	ST		Text	milligram
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM Use "SNM3" for SNOMED CT CA

5.18.7 RXA-8 (Administered Dosage Form)

The dosage form indicates the manner in which the medication/treatment is aggregated for administration, e.g., tablets, capsules, suppositories. In some cases, this information is implied by the dispense/give code in RXA-5-Administered Code. Use this field when the administered code does not specify the dosage form.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	O	50	ST		Identifier	INJ <i>(HIC Defined)</i>
CE.2	c0	R	250	ST		Text	Injection <i>(HIC Defined)</i>

5.18.8 RXA-9 (Administration Notes)

This field is for any notes from the person who gave the medication or treatment. If coded, coded text requires a user-defined table. For free text, the first component should be null and the second component used for the actual text.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	O	20	ST		Identifier	D5WGB <i>(May be empty)</i>
CE.2	c0	R	199	ST		Text	250 mL D5W pre-mixed glass bottle

5.18.9 RXA-10 (Administering Provider)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

If the medication is administered by a provider, this field must contain the information of that provider outlined in 6.2 below, [XCN: Composite ID for Provider](#). If the medication is not administered by a provider (e.g. patient), this field can be left blank.

5.18.10 RXA-12 (Administered Per (Time Unit))

This field contains the rate the medication or treatment was administered and is calculated from RXA-6 (administered amount) and RXA-7 (administered units). This field is conditional and is required for continuous administration orders, i.e., IV.

5.18.11 RXA-13 (Administered Strength)

This is a new field added in Version 2.6.1 to improve the quality of acCDR medication administration data.

This field is used when RXA-5 (Administered Code) does not specify the strength. This is the numeric part of the strength, used in combination with RXA-14 (Administered Strength Units). Note that this is the strength of the medication administered to the patient.

5.18.12 RXA-14 (Administered Strength Units)

This is a new field added in Version 2.6.1 to improve the quality of acCDR medication administration data.

This field is used when RXA-5 (Administered Code) does not specify the strength. This is the unit of the strength, used in combination with RXA-13 (Strength). It must contain a code and description indicating the unit of measure from UCUM or SNOMED CT as indicated in Table 9012.

UCUM is the required coding system. In the instance where a UCUM unit of measure is not defined, a SNOMED-CT unit of measure can be used. If no suitable code is found in UCUM or SNOMED-CT, text alone can be provided. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable code is not available in UCUM or SNOMED-CT, only then should the system send the unit of measure as text without a code (CE.1 and CE.3 may be left empty, with text description provided in CE.2).

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	9012	Identifier	mg (<i>UCUM or SNOMED code is required</i>)
CE.2	c0	R	250	ST		Text	milligram
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM Use "SNM3" for SNOMED CT

5.18.13 RXA-20 (Completion Status)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field indicates the status of the administration event. It must contain a code value from HL7 Table 0322.

5.18.14 RXA-21 (Action Code – RXA)

This is a new field added in Version 2.6 to support data contribution of medication administration.

This field indicates the status of the medication administration record and what action should be performed for this record. It must contain a code value from HL7 Table 0323 as follows:

- If HIC is to send a new medication administration record, this field must contain “A”.
- If HIC is to delete this administration record, this field must contain “D”.
- If HIC is to send updated information for this administration record, this field must contain “U”.

5.19 RXC Segment

This segment should only be sent for compounded medications, including IV solutions.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
1	cO	R	1	ID		0166	RX Component Type	B
2	cO	R	350	CWE			Component Code	
3	cO	R	20	NM			Component Amount	22 <i>(Whole Number or Decimal ok)</i>
4	cO	R	350	CE			Component Units	mg^milligram^2.16.840.1.11388 3.6.8
5	cO	O	20	NM			Component Strength	2
6	cO	O	350	CE			Component Strength Units	mg^milligram^2.16.840.1.11388 3.6.8

5.19.1 RXC-1 (RX Component Type)

This field must indicate whether this component is the base or an additive. Valid values are “B” and “A”. A medication with multiple components may have no more than one base component. Multiple additives may be included in addition to the base component.

5.19.2 RXC-2 (Component Code)

This field must contain a code and description indicating the type of component. Canadian Clinical Drug Data (CCDD) is the required terminology for drug identifiers. Contributing HICs must support all levels of drug terminology defined in the CCDD including Manufactured Product

(MP), Non-proprietary Therapeutic Product (NTP), and Therapeutic Moiety (TM). Health Canada Natural Product Number (NPN) may also be used if a CCDD code is not available. If a coded value is being transmitted, CE.1, CE.2, and CE.3 must be populated. If a suitable drug code is not available in CCDD MP, NTP, TM or NPN, only then should the system send the ingredient name (with strength, strength units, and form if available) as text without a code (CE.1 and CE.3 may be left empty, and text description must be provided in CE.2).

Code systems that are acceptable in the message are:

2.16.840.1.113883.2.20.6.1 for CCDD

2.16.840.1.113883.5.1107 for Health Canada NPN

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CWE.1	c0	RE	50	ST		Identifier	8001044
CWE.2	c0	R	250	ST		Text	Acetaminophen Note: for CCDD terminology, this must be the formal name.
CWE.3	c0	RE	50	ID		Name of Coding System	Use “2.16.840.1.113883.2.20.6.1” for CCDD code Use “2.16.840.1.113883.5.1107” for Health Canada NPN Otherwise leave blank

5.19.3 RXC-3 (Component Amount)

This field must contain the amount for this component.

5.19.4 RXC-4 (Component Units)

This field must contain a code and description indicating the unit of measure from Table 9012. UCUM is the required coding system. In the instance where a UCUM unit of measure is not defined, a SNOMED-CT unit of measure can be used. If no suitable code is found in UCUM or SNOMED-CT, text alone can be provided. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable code is not available in UCUM or SNOMED-CT, only then should the system send the unit of measure as text without a code (CE.1 and CE.3 may be left empty, with text description provided in CE.2).

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	9012	Identifier	mg (<i>UCUM or SNOMED code is required</i>)
CE.2	c0	R	250	ST		Text	milligram
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM Use "SNM3" for SNOMED CT

5.19.5 RXC-5 (Component Strength)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field contains the numeric part of the component strength, used in combination with RXC-6 (Component Strength Units)

5.19.6 RXC-6 (Component Strength Units)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field must contain a code and description indicating the unit of measure. UCUM is the required terminology for unit of measure. Contributing HICs must provide UCUM codes for this data element. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable code is not available in UCUM, only then should the system send the unit of measure as text without a code (CE.1 and CE.3 may be left empty, with text description provided in CE.2).

For complete list of UCUM codes, please refer to <https://ucum.org/>.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST		Identifier	mg (<i>UCUM code is preferred</i>)
CE.2	c0	R	250	ST		Text	milligram (<i>HIC Defined</i>)
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM

5.20 RXE Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
RXE-2	c0	R	350	CWE			Give Code	02337983^APO-ROSUVASTATIN (rosuvastatin calcium) 10 mg oral tablet) APOTEX INC^2.16.840.1.113883.2.20.6.1
RXE-3	c0	R	5	NM			Give Amount — Minimum	1 <i>(Whole Number or Decimal ok)</i>
RXE-4	c0	O	5	NM			Give Amount — Maximum	1.5 <i>(Whole Number or Decimal ok)</i>
RXE-5	c0	R	350	CE			Give Units	mg^milligram^2.16.840.1.113883.6.8
RXE-6	c0	O	300	CE			Give Dosage Form	
RXE-7	c0	O	300	CE	1..10		Provider's Administration Instructions	
..skip								
RXE-25	c0	RE	20	NM			Give Strength	5
RXE-26	c0	RE	350	CE			Give Strength Units	mg^milligram^2.16.840.1.113883.6.8
RXE-27	c0	RE	270	CE	1..5		Give Indication	274663001^Acute Pain^SNM3

5.20.1 RXE-2 (Give Code)

This field identifies the medical substance that has been ordered to be given to the patient, as encoded by the pharmacy or treatment supplier. Canadian Clinical Drug Data (CCDD) or Natural Product Number (NPN) is the required terminology for drug identifiers. Contributing HICs must support all levels of drug terminology defined in the CCDD including Manufactured Product (MP), Non-proprietary Therapeutic Product (NTP), Therapeutic Moiety (TM). If the TM is used then additional information such as the strength, dosage form and possibly the route of administration must be sent (each in separate fields in their system and in the message); this is in contrast to selecting a more fully defined product (as the NTP provides). If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable drug code is not available in CCDD or NPN, only then should the system send the drug name as text without a code (CE.1 and CE.3 may be left empty, and text description must be provided in CE.2).

Code systems that are acceptable in the message are:

2.16.840.1.113883.2.20.6.1 for CCDD

2.16.840.1.113883.5.1107 for Health Canada NPN

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST		Identifier	02337983
CE.2	c0	R	250	ST		Text	APO-ROSUVASTATIN (rosuvastatin (rosuvastatin calcium) 10 mg oral tablet) APOTEX INC Note: for CCDD terminology, this must be the formal name.
CE.3	c0	RE	50	ID		Name of Coding System	Use "2.16.840.1.113883.2.20.6.1" for CCDD code Use "2.16.840.1.113883.5.1107" for Health Canada NPN Otherwise leave blank

5.20.2 RXE-3 (Give Amount – Minimum)

This field contains the ordered amount as encoded by the pharmacy. In a variable dose order, this is the minimum ordered amount. In a nonvarying dose order, this is the exact amount of the order.

5.20.3 RXE-4 (Give Amount – Maximum)

In a variable dose order, this is the maximum ordered amount. In a nonvarying does, this field is not used.

5.20.4 RXE-5 (Give Units)

This field must be populated if the administered amount code does not imply units and must contain a code and description indicating the unit of measure from UCUM or SNOMED CT as indicated in Table 9012.

UCUM is the required coding system. In the instance where a UCUM unit of measure is not defined, a SNOMED-CT unit of measure can be used. If no suitable code is found in UCUM or SNOMED-CT, text alone can be provided. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable code is not available in UCUM or SNOMED-CT, only then should the system send the unit of measure as text without a code (CE.1 and CE.3 may be left empty, with text description provided in CE.2).

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	9012	Identifier	mg <i>(UCUM or SNOMED CT code is required)</i>
CE.2	c0	R	250	ST		Text	milligram
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM Use "SNM3" for SNOMED CT

5.20.5 RXE-6 (Give Dosage Form)

The dosage form indicates the manner in which the medication or treatment is aggregated for dispensing, e.g., tablets, capsules, suppositories. In some cases, this information is implied by the give code in RXE-2 (Give Code). Use the RXE-6 (Give Dosage Form) when the give code does not specify the dosage form. A coded value is used, but these are not currently standardized and do not need to be normalized for acCDR.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	O	50	ST		Identifier	INJ <i>(HIC Defined)</i>
CE.2	c0	R	250	ST		Text	Injection <i>(HIC Defined)</i>

5.20.6 RXE-7 (Provider's Administration Instructions)

This field contains the ordering provider's instructions to the patient or the provider administering the drug or treatment. A coded element is used but is not currently standardized and is not normalized for acCDR. It is acceptable to not provide a coded value in CE.1 if the instructions are free text (describing a custom IV, mixture, or salve, for example) placing the text in the second component, (e.g., |^this is a free text administration instruction|) and leaving CE 1 blank.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	O	50	ST		Identifier	<i>(Acceptable to leave blank)</i>
CE.2	c0	R	250	ST		Text	Hold PCA if patient confused or loses IV access

5.20.7 RXE-25 (Give Strength)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field is used when RXE-2 (Give Code) does not specify the strength. This is the numeric part of the strength, used in combination with RXE-26 (Give Strength Units)

5.20.8 RXE-26 (Give Strength Units)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field is used when RXE-2 (Give Code) does not specify the strength. This is the unit of the strength, used in combination with RXE-25 (Give Strength). It must contain a code and description indicating the unit of measure from UCUM or SNOMED CT as indicated in Table 9012.

UCUM is the required coding system. In the instance where a UCUM unit of measure is not defined, a SNOMED-CT unit of measure can be used. If no suitable code is found in UCUM or SNOMED-CT, text alone can be provided. If a coded value is being transmitted, CE.1 and CE.3 must be populated. If a suitable code is not available in UCUM or SNOMED-CT, only then should the system send the unit of measure as text without a code (CE.1 and CE.3 may be left empty, with text description provided in CE.2).

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	9012	Identifier	mg (<i>UCUM or SNOMED code is required</i>)
CE.2	c0	R	250	ST		Text	milligram
CE.3	c0	RE	50	ST		Name of Code System	Use "2.16.840.1.113883.6.8" for UCUM Use "SNM3" for SNOMED CT

5.20.9 RXE-27 (Give Indication)

This is a new field added in Version 2.6 to improve the quality of acCDR medication administration data.

This field specifies the clinical reason, condition or problem for which the drug/treatment was prescribed. Multiple conditions may be specified. If contributing HICs are able to support

SNOMED CT codes as outlined in HL7 Table 9011, they shall populate the field with the code and meaning. Otherwise, they can send text only in CE.2.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	20	ST	9011	Identifier	274663001
CE.2	c0	R	200	ST		Text	Acute pain
CE.3	c0	RE	50	ST		Name of Coding System	Use value "SNM3" if using values in HL7 Table 9011), or leave blank if only text is provided

5.21 RXR Segment

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
RXR-1	c0	R	250	CWE			Route	26643006^ Oral route^SNM3

5.21.1 RXR-1 (Route)

This field must contain the route for the medication.

Contributing HICs shall send one of the SNOMED-CT codes listed in HL7 Table 0162. If a suitable SNOMED-CT code cannot be provided, CE.1 and CE.3 may be left empty, and a text description must be provided in CE.2. If a coded value is being transmitted, CE.1 and CE.3 must be populated.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
CE.1	c0	RE	50	ST	0162	Identifier	26643006
CE.2	c0	R	250	ST		Text	Oral route
CE.3	c0	RE	50	ID		Name of Coding System	Use fixed value SNM3 if sending SNOMED-CT values. Otherwise leave blank

5.22 ZDR Segment

The ZDR Segment is required only for HICs which are also implementing OntarioMD Health Report Manager using this standard and contains information designating the specific recipients of electronic reports.

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
ZDR-1	HRM	R	1000	ZDR	1..10		Physician CPSO/Nurse Practitioner CNO	

5.22.1 ZDR-1 (Physician CPSO/Nurse Practitioner CNO License Number)

Seq	Use	Opt	Len	DT	RP/#	Vocab Tbl#	Field Description	Sample Data
ZDR-1	HRM	R	1000	ST	1..10		Physician CPSO/Nurse Practitioner CNO	
ZDR-1.1	HRM	R	200	ST			Identifier	123456
ZDR-1.2	HRM	R	200	ST			Text	MD
ZDR-1.3	HRM	R	200	ID			Name of Coding System	2.16.840.1.113883.4.347
ZDR-1.4	HRM	RE	200	ST			Alternate Identifier	MOMBR
ZDR-1.5	HRM	RE	200	ST			Alternate Coding System Identification	SendingFacilityMnemonic (Fixed value)

5.22.1.1 ZDR-1.1 (Identifier)

ZDR1.1 identifies report recipients by their CPSO (College of Physicians and Surgeons of Ontario)/CNO (College of Nurses of Ontario) ID);

e.g. “12345” or “01234” (valid CPSO License Number for Medical Doctor). Currently the CPSO limit is 5 or 6 numeric which is the limit that HRM will accept for physician identifiers.

e.g. “1234567” or “0123456” (valid CNO License Number for Registered Nurse Practitioner). Currently the CNO limit is 7 or 8 numeric which is the limit that HRM will accept for Nurse Practitioner identifiers.

5.22.1.2 ZDR-1.2 (Text)

Codes: “MD” (is required to identify Medical Doctor) or “RNP” (is required to identify Registered Nurse Practitioner) as an HRM electronic report recipient.

5.22.1.3 ZDR-1.3 (Name of Coding System)

ZDR1.3 represents the name of the coding system corresponding to the CPSO and CNO ID

If ZDR-1.2 is “MD” use the OID code “2.16.840.1.113883.4.347” corresponding to the College of Physicians & Surgeons of Ontario.

If ZDR-1.2 is “RNP” use the OID code “2.16.840.1.113883.3.239.13.15” corresponding to the College of Nurses of Ontario.

5.22.1.4 ZDR-1.4 (Alternate Identifier)

Includes the Report Recipients mnemonic (i.e., abbreviation for the provider where this information exists) provided by the Sending Facility.

5.22.1.5 ZDR-1.5 (Alternate Coding System Identification)

“SendingFacilityMnemonic” is a fixed value, required if ZDR-1.4 is provided.

If there is more than one recipient for the report it would be recorded as a repetition of ZDR1.1; ZDR1.2; ZDR1.3; ZDR1.4 & ZDR1.5 separated by “~”. e.g.:

- Example 1 - Single Recipient:

```
ZDR|31214^MD^2.16.840.1.113883.4.347^HolNi^ SendingFacilityMnemonic~
```

- Example 2 - Multiple Recipients:

```
ZDR|32346^MD^2.16.840.1.113883.4.347^KNAT^  
SendingFacilityMnemonic~87654321^RNP^2.16.840.1.113883.3.239.13.15^MOM  
BR^ SendingFacilityMnemonic
```

6.0 Data Types

6.1 EI: Entity Identifier for Document and Medication Order Numbers

The following format is used for identifiers used to identify individual documents, results, placer groups, medication orders, etc.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
EI.1	All	R	75	ST		Entity Identifier	12345
EI.2	c0	R	50	IS	9004	Namespace ID	1.3.6.1.4.1.12201
EI.3	c0	R	50	ST	9008	Universal ID	1.3.6.1.4.1.12201.1

6.1.1 EI.1 (Entity Identifier)

This field must contain the number which uniquely identifies the document or medication order, according to the system which assigns this ID.

6.1.2 EI.2 (Namespace ID)

This field must contain the OID which has been assigned to your HIC to identify it as an assigning authority for document or medication order numbers. In other words, this component identifies the sending organization.

The acCDR will assign a single OID which is used to identify your organization in all cases.

6.1.3 EI.3 (Universal ID)

This field must contain an OID which has been assigned to your HIC to identify the specific system which assigns the ID in EI-1. This component is useful in cases where IDs are generated by more than one system at a given HIC, as each system can have a different universal ID and ID/number collisions will not be an issue.

The acCDR will assign a unique OID which is used for EI.3 in different locations within a message. For example, one OID might be assigned for use in OBR-4-3, where another might be assigned for use in OBX-3-3.

6.1.4 EI: Entity Identifier for Document Number Examples

The following is an example of a document being transmitted by University Health Network. This document has been assigned a unique number of 2233 by the UHN HIS, which is identified as “1.3.6.1.4.1.12201.1”.

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| 2233^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1

6.2 XCN: Composite ID for Provider

Where the XCN data type is used to identify a provider, the following definition must be used:

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
XCN.1	cO	R	15	ST		ID Number	12345
XCN.2	All	R	60	FN		Family Name	Smith
XCN.3	All	R	60	ST		Given Name	John
XCN.4	All	O	60	ST		Second and Further Given Names	Robert Homer <i>(Initials are also acceptable)</i>
XCN.5	cO	O	60	ST		Suffix	Junior
XCN.6	cO	O	60	ST		Prefix	Captain
XCN.7	All	O	60	ST		Degree	FRCPC
..skip..							
XCN.9	cO	R	150	HD		Assigning Authority	
9.1	cO	R	50	IS	9001	Namespace ID	1.3.6.1.4.1.12201.1.2.1.5
9.2	cO	C	50	ST	9004P	Universal ID	1.3.6.1.4.1.12201
9.3	cO	C	50	ST	9008	Universal ID Type	1.3.6.1.4.1.12201.1

6.2.1 XCN: Composite ID for Provider Notes

6.2.1.1 XCN-1 (ID Number)

When identifying providers, there are two types of identifiers which are acceptable to acCDR:

- Provincial Licensed Numbers such as CPSO Number, CNO Number, etc. This is the preferred approach if your system is able to comply.
- Locally assigned user/provider IDs, which are designated by the HIC and are local to that HIC.

6.2.1.2 XCN-9 (Assigning Authority)

This field is used to identify the entity that assigns this identifier.

- If the ID being transmitted is an Ontario license number

- XCN-9-1 must be populated with the appropriate value identifying which type of license is being used from [Table 9001](#).
 - XCN-9-2 must be blank.
 - XCN-9-3 must be blank.
- If the ID being transmitted is a locally assigned identifier:
 - XCN-9-1 must be populated with the value “1.3.6.1.4.1.12201.1.2.1.5”
 - XCN-9-2 must be populated with the OID which has been assigned to your HIC for the local provider identifier assigning authority.
 - XCN-9-3 must contain the identifier of the system within the HIC which is being used to generate this identifier and is considered to be the “source of truth” for it. For example, if the HIC has a Reg/ADT system or an EMR which generates local MRNs, then this identifier should identify that system even if it is not the one transmitting the HL7 message.

6.2.2 XCN: Composite ID for Provider Examples

The following is an example of a Doctor John Q Smith, who has a CPSO number of 12345:

```
12345^Smith^John^Q^^FRCPC^2.16.840.1.113883.4.347
```

The following is an example of a Frances Smith, who has an ID of 9876 which was assigned by St. Michael’s Hospital:

```
9876^Smith^Frances^^^^^
1.3.6.1.4.1.12201.1.2.1.5&
2.16.840.1.113883.3.239.23.5.1&
2.16.840.1.113883.3.239.23.5.101.1
```

6.3 NDL: Composite ID for Provider

Where the NDL data type is used to identify a provider, the following definition must be used. Note that only the first component of NDL is used, and all elements are subcomponents within NDL.1.

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
NDL.1							
1.1	c0	R	60	ST		ID Number	12345
1.2	All	R	60	FN		Family Name	Smith

1.3	All	R	60	ST		Given Name	John
1.4	All	O	60	ST		Second and Further Given Names	Robert Homer <i>(Initials are also acceptable)</i>
1.5	cO	O	60	ST		Suffix	Junior
1.6	cO	O	60	ST		Prefix	Captain
1.7	All	O	60	ST		Degree	FRCPC
..skip..							
1.9	cO	R	250	IS	9001	Namespace ID	1.3.6.1.4.1.12201.1.2.1.5
1.10	cO	C	250	ST	9004P	Universal ID	1.3.6.1.4.1.12201
1.11	cO	C	250	ST	9008	Universal ID Type	1.3.6.1.4.1.12201.1

6.3.1 NDL: Composite ID for Provider Notes

6.3.1.1 NDL.1.1 (ID Number)

When identifying providers, there are two types of identifiers which are acceptable to acCDR:

- License Numbers such as CPSO Number, CNO Number, etc. This is the preferred approach if your system is able to comply.
- Locally assigned user/provider IDs, which are designated by the HIC and are local to that HIC.

6.3.1.2 NDL.1.9, NDL.1.10, NDL.1.11 (Assigning Authority)

This field is used to identify the entity that assigns this identifier.

- If the ID being transmitted is an Ontario license:
 - NDL.1.9 must be populated with the appropriate value identifying which type of license is being used from [Table 9001](#).
 - NDL.1.10 must be blank.
 - NDL.1.11 must be blank.
- If the ID being transmitted is a locally assigned identifier:
 - NDL.1.9 must be populated with the value “1.3.6.1.4.1.12201.1.2.1.5”
 - NDL.1.10 must be populated with the OID which has been assigned to your HIC for the local provider identifier assigning authority.
 - NDL.1.11 must contain the identifier of the system within the HIC which is being used to generate this identifier and is considered to be the “source of truth” for it. For example, if the HIC has a Reg/ADT system or an EMR which generates local

MRNs, then this identifier should identify that system even if it is not the one transmitting the HL7 message.

6.3.2 NDL: Composite ID for Provider Examples

The following is an example of a Doctor John Q Smith, who has a CPSO number of 12345:

```
12345&Smith&John&Q&&FRCPC&2.16.840.1.113883.4.347
```

The following is an example of a Frances Smith, who has an ID of 9876 which was assigned by St. Michael's Hospital:

```
9876&Smith&Frances&&&&1.3.6.1.4.1.12201.1.2.1.5&2.16.840.1.113883.3.239.23.5.1&2.16.840.1.113883.3.239.23.5.101.1
```

6.4 PPN: Composite ID for Performing Person Time Stamp

Where the PPN data type is used to identify a performing person, the following definition must be used:

Seq	Use	Opt	Len	DT	Vocab Tbl#	Field Description	Sample Data (Notes)
PPN.1	c0	R	15	ST		ID Number	12345
PPN.2	c0	O	194	FN		Family Name	Smith
PPN.3	c0	O	30	ST		Given Name	John
PPN.4	c0	O	30	ST		Second and Further Given Names	Robert Homer
PPN.5	c0	O	20	ST		Suffix	Junior
PPN.6	c0	O	20	ST		Prefix	Captain
PPN.7	c0	B	5	IS	0360	Degree	Doctor
PPN.9	c0	R	750	HD	0363	Assigning Authority	<i>(see below)</i>
9.1	c0	R	250	IS	9001	Namespace ID	1.3.6.1.4.1.12201.1.2.1.5
9.2	c0	C	250	ST	9004P	Universal ID	1.3.6.1.4.1.12201
9.3	c0	C	250	ST	9008	Universal ID Type	1.3.6.1.4.1.12201.1

...skip ...							
9.15	c0	0	26	TS		Date/Time Action Performed	

6.4.1 PPN: Composite ID for Performing Person Time Stamp

6.4.1.1 PPN-1 (ID Number)

When identifying providers, there are two types of identifiers which are acceptable to acCDR:

- License Numbers such as CPSO Number, CNO Number, etc. This is the preferred approach if your system is able to comply.
- Locally assigned user/provider IDs, which are designated by the HIC and are local to that HIC.

6.4.1.2 PPN-9 (Assigning Authority)

This field is used to identify the entity that assigns this identifier.

- If the ID being transmitted is an Ontario license number:
 - PPN-9-1 must be populated with the appropriate value identifying which type of license is being used from [Table 9001](#).
 - PPN-9-2 must be blank.
 - PPN-9-3 must be blank.
- If the ID being transmitted is a locally assigned identifier:
 - PPN-9-1 must be populated with the value “1.3.6.1.4.1.12201.1.2.1.5”
 - PPN-9-2 must be populated with the OID which has been assigned to your HIC for the local provider identifier assigning authority.
 - PPN-9-3 must contain the identifier of the system within the HIC which is being used to generate this identifier and is considered to be the “source of truth” for it. For example, if the HIC has a Reg/ADT system or an EMR which generates local MRNs, then this identifier should identify that system even if it is not the one transmitting the HL7 message.
 - PPN-9-15. Is this field is not-null, then both the performing person and the time stamp must have a value.

6.4.2 PPN: Composite ID for Performing Person Examples

The following is an example of a Doctor John Q Smith, who has a CPSO number of 12345:

```
12345^Smith^John^Q^^Doctor^2.16.840.1.113883.4.347
```

The following is an example of a Frances Smith, who has an ID of 9876 which was assigned by St. Michael's Hospital:

```
9876^Smith^Frances^^^  
^1.3.6.1.4.1.12201.1.2.1.5&2.16.840.1.113883.3.239.23.5.1&2  
.16.840.1.113883.3.239.23.5.101.1
```

6.5 HL7 Data Types for OBX-5

When document and results are being transmitted to the HIAL, the HIAL supports the following data types as value types in OBX-5.

Field	Description	Accepted by cO	Accepted by HRM
ST	String	X	X
SN	Structured Numeric	X	
CE	Coded Element	X	
FT	Formatted Text	X	X
TX	Text	X	X
TS	Timestamp	X	
DT	Date	X	
TM	Time	X	
NM	Number	X	
ED	Encapsulated Data	X	X

7.0 Message Examples

7.1 Documents and Results

7.1.1 Example: Simple Clinical Note

The following example shows an OR Procedure Note being transmitted as a single block of text. The text of the report is contained within successive OBX segments, each having a Universal Service Identifier of “14001”, which is the HIC-assigned code representing the report body. Several other ancillary data fields are also represented.

```
MSH|^~\&|EPR|G^2.16.840.1.113883.3.59.3:947^L|||201112051820||ORU^R01^ORU_R01|20151|T|2.5|||||CAN|
PID|1||7007615^^^^2.16.840.1.113883.3.239.18.148&1.3.6.1.4.1.12201.1^MR^G^4265||Test^Carl^^^^^L|19730909|M||20
Dundas Street^^TORONTO^CANON^M5G 2C2^Can^H|1811|(416)123-
4567^PRN^PH|ENG^English^HL70296|||||||||N|||20111241208|
PV1|1|O|5354-AMS-Motility
Clinic^^^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.3.1|||||||A|||15284^Darling^Gail^^^Dr.^MD^^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1
.12201&1.3.6.1.4.1.12201.1|CP|10840001455^^^^1.3.6.1.4.1.12201.2&1.3.6.1.4.1.12201.1^VN|||||||||||||200810011600||||
||V|
ORC||||ENENA_DISCHARGE_102319^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1|
OBX||ENENA_DISCHARGE_102319^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||5053^Unscheduled Discharge
Summary^1.3.6.1.4.1.12201.102.5^18842-5^Discharge
summary^LN|||201009281147|||||||||||||I|||13546^Generic^Physician^Moe^^Dr.^MD^^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1
12201&1.3.6.1.4.1.12201.1|||||||||||||5053^Unscheduled Discharge Summary^HL70396|||59^Transcription^HL70396|
OBX|1|DT|10017^Date Dictated^HL70396||20100928||N||F|||201112051820|
OBX|2|ST|14002^Attending/Staff^HL70396||Raymond Chow||N||F|||201112051820|
OBX|3|ST|10063^Distribute Y/N?^HL70396||yes||N||F|||201112051820|
OBX|4|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|1|Discharge Summary||||F|||20111205182000-0500|
OBX|5|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|2|Date: 28-Sep-2010||||F|||20111205182000-0500|
OBX|6|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|3|Patient: TestingTwo TestingOne||||F|||20111205182000-
0500|
OBX|7|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|4|MRN: 7007615||||F|||20111205182000-0500|
OBX|8|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|5|DOB: 01-Jan-1950||||F|||20111205182000-0500|
OBX|9|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|6|Address: NFA toronto ON M7A 3R3||||F|||20111205182000-
0500|
OBX|10|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|7|Family Physician:||||F|||20111205182000-0500|
OBX|11|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|8|Referring Physician: Physician Moe
Generic||||F|||20111205182000-0500|
OBX|12|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|9|Location: Toronto General Hospital, IP 407
2||||F|||20111205182000-0500|
OBX|13|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|10|Visit Number: 10840001455||||F|||20111205182000-0500|
OBX|14|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|11|Your patient TestingTwo TestingOne was admitted to Toronto
General Hospital on||||F|||20111205182000-0500|
OBX|15|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|12|06-May-2010 and discharged home on 01-Sep-
2010.||||F|||20111205182000-0500|
OBX|16|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|13|Most Responsible Diagnosis:||||F|||20111205182000-0500|
OBX|17|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|14|- Cascade stomach||||F|||20111205182000-0500|
OBX|18|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|15|Letter Created By: Hamill, Chris||||F|||20111205182000-
0500|
OBX|19|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|16|Attending Physician: Physician Moe
Generic||||F|||20111205182000-0500|
OBX|20|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|17|A copy of the discharge summary will also be faxed
to:||||F|||20111205182000-0500|
OBX|21|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|18|- Generic, Physician Moe||||F|||20111205182000-0500|
```

OBX|22|ST|10060^Report Type^1.3.6.1.4.1.12201.2.2||Unscheduled Discharge Summary||N||F||201112051820|
OBX|23|ST|10064^Review/Query?^1.3.6.1.4.1.12201.2.2||no||N||F||201112051820|

7.1.2 Example: HRM ZDR Segment

The following message shows a truncated report, with a ZDR segment present which addresses the message to specific physicians using the Health Report Manager.

MSH|^~\&|EPR|G^2.16.840.1.113883.3.59.3:947^L||201112051820||ORU^Ro1^ORU_Ro1|20151|T|2.5|||||CAN||
PID|1||7007615^^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1^MR^G^4265||Test^Carl^^^^^L|19730909|M||20 Dundas
Street^^TORONTO^CANON^M5G 2C2^Can^H|1811|(416)123-
4567^PRN^PH||ENG^English^HL70296||||||||||||N||20111241208||
PV1|1|O|5354-AMS-Motility
Clinic^^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.3.1|||||||||A||15284^Darling^Gail^^^Dr.^MD^^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1.
12201&1.3.6.1.4.1.12201.1|CP|10840001455^^^1.3.6.1.4.1.12201&1.3.6.1.4.1.12201.1^VN|||||||||||||200810011600|||||
V||
ORC||||ENENA_DISCHARGE_102319^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||
OBX||ENENA_DISCHARGE_102319^1.3.6.1.4.1.12201^1.3.6.1.4.1.12201.1||5053^Unscheduled Discharge
Summary^1.3.6.1.4.1.12201.102.5^18842-5^Discharge
summary^LN||201009281147||||||||||||I||13546^Generic^Physician^Moe^^Dr.^MD^^1.3.6.1.4.1.12201.1.2.1.5&1.3.6.1.4.1.
12201&1.3.6.1.4.1.12201.1|||||||||5053^Unscheduled Discharge Summary^HL70396||59^Transcription^HL70396||
OBX|1|DT|10017^Date Dictated^HL70396||20100928||N||F||201112051820||
OBX|2|ST|14002^Attending/Staff^HL70396||Raymond Chow||N||F||201112051820||
OBX|3|ST|10063^Distribute Y/N?^HL70396||yes||N||F||201112051820||
OBX|4|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|1|Discharge Summary||||F||20111205182000-0500||
OBX|5|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|2|Date: 28-Sep-2010||||F||20111205182000-0500||
OBX|6|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|3|Patient: TestingTwo TestingOne||||F||20111205182000-
0500||
OBX|7|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|5|DOB: 01-Jan-1950||||F||20111205182000-0500||
OBX|8|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|6|Address: NFA toronto ON M7A 3R3||||F||20111205182000-
0500||
OBX|9|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|7|Family Physician:||||F||20111205182000-0500||
OBX|10|ST|14001^Medical Records Report^1.3.6.1.4.1.12201.2.2|8|Referring Physician: Physician Moe
Generic||||F||20111205182000-0500||
ZDR|01234^MD^2.16.840.1.113883.4.347^MORBR^SendingFacilityMnemonic~01234^MD^2.16.840.1.113883.4.347^MORBR^S
endingFacilityMnemonic~12345^MD^2.16.840.1.113883.4.347^MURST^SendingFacilityMnemonic~0123456^RNP^2.16.840.1.11
3883.3.239.13.15^NANNU^SendingFacilityMnemonic~1234567^RNP^2.16.840.1.113883.3.239.13.15^NURNP^SendingFacilityMn
emonic

8.0 Vocabulary Tables

Table 1: HL7 Table 0001 (Administrative Sex)

Code	Meaning
F	Female
M	Male
U	Unknown / Undifferentiated
O	Other

Table 2: HL7 Table 0004 (Patient Class)

Code	Meaning
E	Emergency
I	Inpatient
O	Ambulatory (Outpatient, Clinic Patient, Outpatient Procedure, etc.)
P	Pre-Admit
R	Recurring Outpatient
U	Unknown/Other
C	HCCSS (formerly CCAC) Client
V	Virtual

Table 3: HL7 User Defined Table 0007 (Admission Type)

Note that this table is user defined. The values presented here are examples, but implementing HICs are permitted to use locally defined codes, and these codes may express concepts not represented in the table below.

Code	Meaning
A	Accident
C	Elective
E	Emergency
L	Labor and Delivery
N	Newborn (Birth in healthcare facility)
R	Routine
U	Urgent

Note: HCCSS (formerly CCAC) should support the table below.

Code	Meaning
C	HCCSS (formerly CCAC)

Table 4: HL7 Table 0023 (Admit Source)

Code	Meaning
D	Direct
N	Newborn
E	Emergency
S	Stillborn
P	Day procedure
C	Clinic

Table 5: HL7 Table 0053 (Diagnosis Coding Method)

Code	Meaning
2.16.840.1.113883.11.6.94	ICD-10-CA
2.16.840.1.113883.6.96	SNOMED CT

Table 6: HL7 Table 0063 (Relationship Type)

Code	Meaning
SEL	Self
SPO	Spouse
DOM	Life partner
CHD	Child
GCH	Grandchild
NCH	Natural child
SCH	Stepchild
FCH	Foster child
DEP	Handicapped dependent
WRD	Ward of court
PAR	Parent
MTH	Mother
FTH	Father

Code	Meaning
CGV	Care giver
GRD	Guardian
GRP	Grandparent
EXF	Extended family
SIB	Sibling
BRO	Brother
SIS	Sister
FND	Friend
OAD	Other adult
EME	Employee
EMR	Employer
ASC	Associate
EMC	Emergency contact
OWN	Owner
TRA	Trainer
MGR	Manager
NON	None
STM	Step Mother
STF	Step Father
STP	Step Parent
FOM	Foster Mother
FOF	Foster Father
FOP	Foster Parent
UNK	Unknown
OTH	Other

Table 7: HL7 Table 0069 (Hospital Service)

Code	Meaning
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Acute and Community Clinical Data Repository (acCDR) Input Standard v2.6.1

June 2024

01	Family Practice
10	General Medicine
11	Allergy
12	Cardiology
13	Dermatology
14	Endocrinology
15	Gastroenterology
16	Nephrology
17	Neurology
18	Respirology
19	Rheumatology
20	Paediatric Medicine
21	Paediatric Allergy
22	Paediatric Cardiology
23	Paediatric Dermatology
24	Paediatric Endocrinology
25	Paediatric Gastroenterology
26	Paediatric Nephrology
27	Paediatric Neurology
28	Paediatric Respirology
29	Paediatric Rheumatology
30	General Surgery
31	Cardiovascular Surgery
32	Neurosurgery
33	Oral surgery
34	Orthopaedic Surgery

35	Plastic Surgery
36	Thoracic Surgery
37	Transplant Surgery
38	Traumatology
39	Urology
40	Surgery
41	Paediatric Cardiovascular Surgery
42	Paediatric Neurosurgery
43	Paediatric Oral Surgery
44	Paediatric Orthopaedic Surgery
45	Paediatric Plastic Surgery
46	Paediatric Thoracic Surgery
47	Paediatric Transplant Surgery
48	Paediatric Traumatology
49	Paediatric Urology
51	Obstetrics (OBS) Delivered
52	Obstetrics (OBS) Antepartum
53	Obstetrics (OBS) Aborted
54	Newborn
55	Gynecology
56	Paediatric Gynecology
58	Palliative Care
59	Obstetrics (OBS) Postpartum
60	Otolaryngology and Otorhinolaryngology (ORL)
61	Paediatric Otolaryngology and Otorhinolaryngology (ORL)
62	Ophthalmology

63	Paediatric Ophthalmology
64	Psychiatry
65	Paediatric Psychiatry
66	Haematology
67	Paediatric Haematology
68	Immunology
69	Paediatric Immunology
70	Physical Medicine and Rehabilitation (Physiatry)
71	Paediatric Physical Medicine and Rehabilitation (Physiatry)
72	Geriatrics
74	Oncology
76	Rehabilitation in Acute Care Facility
81	Radiotherapy
82	Genetics
87	Dentistry
88	Paediatric Dentistry
89	Stillborn
90	Cadaveric Donor
91	Podiatry
96	Infectious Disease
97	Neonatology
99	Alternate Level of Care (ALC)

Table 8: HL7 Table 0078 (Abnormal Flags)

Code	Meaning
L	Below low normal
H	Above high normal

LL	Below lower panic limits
HH	Above upper panic limits
N	Normal (applies to non-numeric results)
A	Abnormal (applies to non-numeric results)

Table 9: HL7 Table 0085 (Observation Result Status)

Code	Meaning
I	Incomplete / In Progress
P	Preliminary
D	Draft
F	Final
C	Corrected
W	Withdrawn

Table 10: HL7 Table 0105 (Source of Comment)

Code	Meaning
L	Ancillary (filler) department is source of comment
P	Orderer (placer) is source of comment
O	Other system is source of comment

Table 11: HL7 Table 0112 (Discharge Disposition)

Code	Meaning	Definition
04	Home with Support/Referral	Discharge to private home, condo or apartment with supports from the community at home or referred to services
05	Private Home	Discharge to private home, condo or apartment without supports from the community at home or referred to services
06	Admit to reporting facility as Inpatient to special care unit or from ambulatory care visit functional centre	
07	Admit to reporting facility as an inpatient to another unit of the reporting facility from the ambulatory care visit functional centre	

08	Transfer to another acute care facility directly from ambulatory care visit functional centre	
09	Transfer to another non-acute care facility directly from ambulatory care functional centre (e.g. stand-alone rehab, mental health)	
10	Inpatient Care	Transfer to reporting or another facility for inpatient care, including specialty hospitals (inpatient rehab, inpatient psychiatry and inpatient chronic/complex continuing care), military medical facilities and subacute care where this occurs within acute care hospitals
12	Intra-facility transfer to day surgery	
13	Intra-facility transfer to the ED	
14	Intra-facility transfer to clinic	
20	ED and Ambulatory Care	Transfer to reporting or another facility for ED, day surgery or ambulatory care; includes nursing stations, although on occasion inpatients are also treated in such settings
30	Residential Care	Transfer to long-term care home (24-hour nursing), mental health and/or addiction treatment centre or hospice/palliative care facility
40	Group/Supportive Living	Transfer to assisted living/supportive housing or transitional housing, including shelters; these settings do not have 24-hour nursing care
59	Absent Without Leave (AWOL)	Note: for inpatient only
60	Left Against Medical Advice (LAMA)	
61	Leave Post Registration	Patient left at their own risk following registration; triage, further assessment by a service provider and treatment did not occur
62	Leave Post Initial Treatment	Patient left at their own risk following registration, triage, further assessment by a service provider and initiation of treatment
63	Left After Triage	Patient left the ED at their own risk following registration and triage, further assessment by a service provider and treatment did not occur
64	Left After Initial Assessment	Patient left the ED at their own risk following registration, triage (if an ED visit) and further assessment by a service provider, treatment did not occur
65	Did not Return from Pass/Leave	Patient did not return from pass/leave
66	Died While on Pass/Leave	Patient died (excluding suicides) while on pass/leave
67	Suicide out of Facility	Patient died by suicide while on pass/leave

71	Dead on Arrival (DOA)	Patient is dead on arrival to the ambulatory care service; there is no resuscitation; includes cases where the patient is brought in for pronouncement of death
72	Died in Facility	
73	Medical Assistance in Dying (MAID)	
74	Suicide in Facility	
90	Correctional Facility	Transfer to jail or halfway house

Table 12: HL7 Table 0119 (Order Control)

Code	Meaning
NW	New Order placed in ordering system
CA	Order cancelled
OK	Order/service accepted & OK
OR	Order replaced (changed/modified)
OD	Order discontinued
HD	Order held
RE	Observations/Performed Service to follow
RL	Order released (after being held)

Table 13: HL7 Table 0125 (Value Type)

Code	Meaning
DT	Date
ED	Encapsulated Data
FT	Formatted Text (Display)
NM	Numeric
SN	Structured Numeric
ST	String Data
TM	Time
TS	Time Stamp (Date & Time)

Code	Meaning
TX	Text Data (Display)

Table 14: HL7 Table 0127 (Allergen Type)

Code	Meaning
DA	Drug allergy
FA	Food allergy
MA	Miscellaneous allergy (or Unknown)
MC	Miscellaneous contraindication
EA	Environmental Allergy
AA	Animal Allergy
PA	Plant Allergy
LA	Pollen Allergy

Table 15: HL7 Table 0128 (Allergy Severity)

Code	Meaning
SV	Severe
MO	Moderate
MI	Mild
U	Unknown

Table 16: HL7 Table 0162 (Route of Administration)

This intensional value set includes the SNOMED CT set of subtypes of 284009009 | Route of administration value (qualifier value)|. This table provides a limited subset of sample values only. The complete list can be accessed from Canada Health Infoway's Terminology Gateway at <https://tgateway.infoway-inforoute.ca/singlesubset.html?id=2.16.840.1.113883.2.20.3.188> (Infoway registration required). Code and Meaning are sent in the V2 Message. Synonyms provided are informational only.

Code	Meaning	Synonym
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26643006	Oral route	PO – Per os
10547007	Otic route	OT – Otic
37161004	Rectal route	PR – Per rectum
78421000	Intramuscular route	IM - Intramuscular

Table 17: HL7 Table 0166 (RX Component Type)

Code	Meaning
B	Base
A	Additive

Table 18: HL7 Table 0190 (Address Type)

Code	Meaning
H	Home
C	Current (If different from home)
B	Business / Work
M	Mailing
U	Other / Unknown

Table 19: HL7 Table 0191 (Type of Data for Encapsulated Data)

Code	Meaning
SI	Scanned Image
NS	Non-scanned Image
SD	Scanned Document
TEXT	Machine readable text document
IM	Image Data
AU	Audio

Table 20: HL7 Table 0200 (Name Type Code)

Code	Meaning
L	Legal Name (This is the most important name in most circumstances)
A	Alias Name
B	Name at Birth
M	Maiden Name
U	Unspecified

Table 21: HL7 Table 0201 (Telecommunication Use Code)

Code	Meaning
PRN	Primary Residence
WPN	Work
EMP	Emergency
NET	Email
OTH	Other / Unknown
HRN	Home Residence Number

Table 22: HL7 Table 0202 (Telecommunication Equipment Type)

Code	Meaning
PH	Phone
FX	Fax
CP	Mobile
BP	Pager / Beeper
Internet	Internet

Table 23: HL7 Table 0203 (Identifier Type Code)

Code	Use	Meaning
JHN	Patient Identifier	Jurisdictional Health Number, meaning a provincially assigned

		health number such as an OHIP or jurisdictional number.
MR	Patient Identifier	Medical Record Number
MRS	Patient Identifier	Secondary or Ancillary Medical Record Number
MRT	Patient Identifier	Temporary Medical Record Number
PI	Patient Identifier	Patient or person identifier (non-MRN)
AN	Visit/Encounter Identifier	Account Number
VN	Visit/Encounter Identifier	Visit Number

Table 24: HL7 Table 0271 (Document / Result Completion Status)

Code	Meaning
P	Preliminary
F	Final
C	Corrected
W	Withdrawn

Table 25: HL7 Table 0291 (Data Subtype for Encapsulated Data)

Code	Meaning
TIFF	~~TIFF Image~~ (Deprecated)
JPEG	JPEG Image
GIF	GIF Image
PNG	PNG Image
HTML	HTML Document
RTF	~~RTF Document~~ (Deprecated)
PDF	PDF Document
WAV	WAV Sound File
MP3	MP3 Sound File

Table 26: HL7 Table 0322 (Completion Status)

Code	Meaning
CP	Complete
NA	Not Administered
PA	Partially Administered
RE	Refused

Table 27: HL7 Table 0323 (Action Code)

Code	Meaning
A	Add/Insert
D	Delete
U	Update

Table 28: HL7 Table 0335 (Repeat Pattern)

This intensional value set includes codes from <http://snomed.info/sct> where the concept is a 272103003 (Time patterns) i.e. codes that are subtypes of | Time patterns (qualifier value)| and a set of pan-Canadian members. This subset contains many possible values and a limited set is displayed in the table below. This is a broad data exchange subset that supports interoperability and conformance testing, and can be constrained to meet local use.

Code	Meaning	Synonym
229799001	Two times a day	BID
229798009	Three times a day	TID
307439001	Four times a day	QID
307472001	Every morning	AM
69620002	Every day	QD
225760004	Every other day	QOD
225768006	Every hour	Q1H
225750008	Every 2 hours	Q2H
225753005	Every 3 hours	Q3H

225756002	Every 4 hours	Q4H
307468000	Every 6 Hours	Q6H
307469008	Every 8 hours	Q8H
396142006	Once a day, at bedtime	QHS
14497002	Weekly	WK
89185003	Monthly	MO
225761000	As required	PRN
1791000175106	Every 4 hours as required	PRNQ4H
1781000175108	Every 8 hours as required	PRNQ8H

Table 29: HL7 Table 0363 (Assigning Authority)

Code	Meaning
CAN	Canada
CANAB	Alberta
CANBC	British Columbia
CANMB	Manitoba
CANNB	New Brunswick
CANNF	Newfoundland
CANNS	Nova Scotia
CANNT	Northwest Territories
CANNU	Nunavut
CANON	Ontario
CANPE	Prince Edward Island
CANQC	Quebec
CANSK	Saskatchewan
CANYT	Yukon
US	United States
USAL	Alabama

Code	Meaning
USAK	Alaska
USAZ	Arizona
USAR	Arkansas
USCA	California
USCO	Colorado
USCT	Connecticut
USDE	Delaware
USFL	Florida
USGA	Georgia
USHI	Hawaii
USID	Idaho
USIL	Illinois
USIN	Indiana
USIA	Iowa
USKS	Kansas
USKY	Kentucky
USLA	Louisiana
USME	Maine
USMD	Maryland
USMA	Massachusetts
USMI	Michigan
USMN	Minnesota
USMS	Mississippi
USMO	Missouri
USMT	Montana
USNE	Nebraska
USNV	Nevada
USNH	New Hampshire

Code	Meaning
USNJ	New Jersey
USNM	New Mexico
USNY	New York
USNC	North Carolina
USND	North Dakota
USOH	Ohio
USOK	Oklahoma
USOR	Oregon
USPA	Pennsylvania
USRI	Rhode Island
USSC	South Carolina
USSD	South Dakota
USTN	Tennessee
USTX	Texas
USUT	Utah
USVT	Vermont
USVA	Virginia
USWA	Washington
USWV	West Virginia
USWI	Wisconsin
USWY	Wyoming
USDC	Washington DC
OTHER	Other (Text description must be provided)

Table 30: HL7 Table 0399 (Country Code and Optional Time Zone)

Code	Meaning
CAN	Canada
CAN_EST	Canada — Eastern Standard Time

CAN_CST	Canada — Central Standard Time
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Table 31: HL7 Table 0432 (Admission Level of Care Code)

Code	Meaning
1	CTAS 1
2	CTAS 2
3	CTAS 3
4	CTAS 4
5	CTAS 5

Table 32: HL7 Table 0443 (Provider Role)

Note: Only one value is allowed within Table 0443. Other values may be added in future versions of this document.

Code	Meaning
PP	Primary Care Provider

Table 33: HL7 Table 9001 (Provider Namespace IDs)

Code	Meaning
1.3.6.1.4.1.12201.1.2.1.5	Locally assigned identifier for a specific HIC
2.16.840.1.113883.4.347	Ontario Doctor License Number
2.16.840.1.113883.3.239.13.52	Ontario Dentist License Number
2.16.840.1.113883.3.239.13.15	Ontario Nurse Practitioner License Number
2.16.840.1.113883.3.239.13.12	Ontario Midwife License Number
2.16.840.1.113883.3.239.13.6	Ontario Audiologist and Speech-Language Pathologist License Number
2.16.840.1.113883.3.239.13.17	Ontario Chiropodist License Number
2.16.840.1.113883.4.394	Ontario Chiropractor License Number
2.16.840.1.113883.3.239.13.7	Ontario Dental Hygienist License Number
2.16.840.1.113883.3.239.13.10	Ontario Dental Technologist License Number
2.16.840.1.113883.3.239.13.8	Ontario Denturist License Number
2.16.840.1.113883.3.239.13.9	Ontario Dieticians License Number
2.16.840.1.113883.3.239.13.14	Ontario Massage Therapist License Number
2.16.840.1.113883.3.239.13.11	Ontario Medical Laboratory Technologists License Number
2.16.840.1.113883.3.239.13.13	Ontario Radiation Technologists License Number
2.16.840.1.113883.3.239.13.4	Board of Regents, Board of Directors of Drugless Therapy-Naturopathy License Number

2.16.840.1.113883.3.239.13.18	Ontario Occupational Therapists License Number
2.16.840.1.113883.4.390	Ontario Opticians License Number
2.16.840.1.113883.4.395	Ontario Optometrists License Number
2.16.840.1.113883.3.239.13.43	Ontario Pharmacists License Number
2.16.840.1.113883.4.388	Ontario Physiotherapists License Number
2.16.840.1.113883.3.239.13.71	Ontario Psychologists License Number
2.16.840.1.113883.3.239.13.19	Ontario Respiratory Therapists in Ontario License Number
2.16.840.1.113883.3.239.13.44	Ontario College of Social Workers and Social Service Workers License Number
2.16.840.1.113883.3.239.13.20	College of Traditional Chinese Medicine Practitioners and Acupuncturists of Ontario License Number
2.16.840.1.113883.3.239.13.54	Unregulated - Transitional Council of the College of Homeopaths License Number
2.16.840.1.113883.3.239.13.55	Unregulated - Transitional council for the College of Kinesiologists of Ontario License Number
2.16.840.1.113883.3.239.13.56	Unregulated - Transitional Council of the College of Psychotherapists License Number

Table 34: HL7 Table 9003 (Province and State Codes)

Code	Meaning
CAN	Canada
CANAB	Alberta
CANBC	British Columbia
CANMB	Manitoba
CANNB	New Brunswick
CANNF	Newfoundland
CANNS	Nova Scotia
CANNT	Northwest Territories
CANNU	Nunavut
CANON	Ontario
CANPE	Prince Edward Island
CANQC	Quebec
CANSK	Saskatchewan
CANYT	Yukon Territories
US	United States

Code	Meaning
USAL	Alabama
USAK	Alaska
USAZ	Arizona
USAR	Arkansas
USCA	California
USCO	Colorado
USCT	Connecticut
USDE	Delaware
USFL	Florida
USGA	Georgia
USHI	Hawaii
USID	Idaho
USIL	Illinois
USIN	Indiana
USIA	Iowa
USKS	Kansas
USKY	Kentucky
USLA	Louisiana
USME	Maine
USMD	Maryland
USMA	Massachusetts
USMI	Michigan
USMN	Minnesota
USMS	Mississippi
USMO	Missouri
USMT	Montana
USNE	Nebraska
USNV	Nevada

Code	Meaning
USNH	New Hampshire
USNJ	New Jersey
USNM	New Mexico
USNY	New York
USNC	North Carolina
USND	North Dakota
USOH	Ohio
USOK	Oklahoma
USOR	Oregon
USPA	Pennsylvania
USRI	Rhode Island
USSC	South Carolina
USSD	South Dakota
USTN	Tennessee
USTX	Texas
USUT	Utah
USVT	Vermont
USVA	Virginia
USWA	Washington
USWV	West Virginia
USWI	Wisconsin
USWY	Wyoming
USDC	Washington DC
OTHER	Other (Text description must be provided)

Table 35: HL7 Table 9004 (HIC Identifiers)

Reference: Values to be used for Table 9004, 9004M, 9004P, 9004V will be assigned by acCDR to each HIC when interface development begins. As values are assigned, they will be added to the table below in a future version of this document.

Code	Meaning
1.3.6.1.4.1.12201	University Health Network

Table 36: HL7 Table 9004M (MRN Assigning Authority Identifiers)

Code	Meaning
2.16.840.1.113883.3.239.18.148	University Health Network MRN Assigning Authority

Table 37: HL7 Table 9004P (Local Provider Identifiers)

Code	Meaning
1.3.6.1.4.1.12201.1	University Health Network Local Provider Identifier Assigning Authority

Table 38: HL7 Table 9004V (Patient Visit Number Identifiers)

Code	Meaning
1.3.6.1.4.1.12201.2	University Health Network Visit Number Assigning Authority

Table 39: HL7 Table 9005 (HIC Facilities)

Reference: Values to be used for Table 9005 will be assigned by acCDR to each HIC when interface development begins. As values are assigned, they will be added to the table below in a future version of this document.

Code	Meaning
1.3.6.1.4.1.12201.3.1	Toronto General Hospital
1.3.6.1.4.1.12201.3.2	Toronto Western Hospital
1.3.6.1.4.1.12201.3.3	Princess Margaret Hospital

Table 40: HL7 Table 9006 (HRM Report Category Code)

Reference: This table is maintained by OntarioMD

Code	Meaning
MR	Medical Records Reports
DI	Diagnostic Imaging Reports
CRT	Cardio Respiratory Report

Table 41: HL7 Table 9007 (Sending System Coding System IDs)

Reference: Values to be used for Table 9007 will be assigned by acCDR to each HIC when interface development begins. As values are assigned, they will be added to the table below in a future version of this document.

Code	Meaning
1.3.6.1.4.1.12201.2.1	University Health Network QCPR Order Codes
1.3.6.1.4.1.12201.2.2	University Health Network QCPR Observation Codes
1.3.6.1.4.1.12201.2.3	University Health Network QCPR Drug Administration Codes
1.3.6.1.4.1.12201.2.4	University Health Network QCPR Allergy Codes

Table 42: HL7 Table 9008 (Sending System Identifiers)

Reference: Values to be used for Table 9008 will be assigned by acCDR to each HIC when interface development begins. As values are assigned, they will be added to the table below in a future version of this document.

Code	Meaning
1.3.6.1.4.1.12201.1	University Health Network QCPR (UHN HIS)

Table 43: HL7 Table 9009 (Append Mode)

Code	Meaning
S	Snapshot Mode (Contents will replace all existing contents within the current ORDER_OBSERVATION group). This is the default behaviour.

A	Append Mode (Contents will be added at the end of any existing contents)
----------	--

Table 44: HL7 Table 9010 (Bed Type)

Code	Meaning
ACUTE - Adult Mental Health	ACUTE - Adult Mental Health
ACUTE - Child Mental Health	ACUTE - Child Mental Health
ACUTE - Combined Medical/Surgical	ACUTE - Combined Medical/Surgical
ACUTE - Intensive Care	ACUTE - Intensive Care
ACUTE - Intensive Care Paediatric	ACUTE - Intensive Care Paediatric
ACUTE - Long Term Vented	ACUTE - Long Term Vented
ACUTE - Medical	ACUTE - Medical
ACUTE - Bassinets	ACUTE- Bassinets
ACUTE - Bassinets (NICU)	ACUTE - Bassinets (NICU)
ACUTE - Obstetric	ACUTE - Obstetric
ACUTE - Other	ACUTE - Other
ACUTE - Paediatric	ACUTE - Paediatric
ACUTE - Palliative Care	ACUTE - Palliative Care
ACUTE - Reactivation	ACUTE - Reactivation
ACUTE - Surgical	ACUTE - Surgical
CHRONIC - Complex Continuing Care	CHRONIC - Complex Continuing Care
CHRONIC - Long Term Vent	CHRONIC - Long Term Vent
MENTAL - Adult Mental Health	MENTAL - Adult Mental Health
REHAB - General Rehabilitation	REHAB - General Rehabilitation
REHAB - Special Rehabilitation	REHAB - Special Rehabilitation

Table 45: HL7 Table 9011 (Indication for Use)

Note that this table shows sample SNOMED-CT values from the Canada Health Infoway PrescriptionIndicationForUse value set. The full value set is published at Infoway's terminology gateway. The complete list can be accessed at <https://gateway.infoway->

inforoute.ca/singlesubset.html?id=2.16.840.1.113883.2.20.3.401 (Infoway registration required).

Code	Meaning
225606002	Abnormal movement (finding)
10509002	Acute bronchitis (disorder)
274663001	Acute pain (finding)
54398005	Acute upper respiratory infection (disorder)
61582004	Allergic rhinitis (disorder)
26929004	Alzheimer's disease (disorder)
194828000	Angina (disorder)
197480006	Anxiety disorder (disorder)

Table 46: HL7 Table 9012 (PrescriptionDoseQuantityUnit)

Note that this table shows sample UCUM and SNOMED-CT values from the Canada Health Infoway PrescriptionDoseQuantityUnit value set. The full value set is published at Infoway's terminology gateway. The complete list can be accessed at <https://tgateway.infoway-inforoute.ca/singlesubset.html?id=2.16.840.1.113883.2.20.3.399&versionid=20220331> (Infoway registration required).

Code	Meaning	Code System
mg	milligram	2.16.840.1.113883.6.8
mL	milliliter	2.16.840.1.113883.6.8
[tbs_us]	tablespoon (US)	2.16.840.1.113883.6.8
mmol	millimole	2.16.840.1.113883.6.8
U	Unit(s)	2.16.840.1.113883.6.8
428673006	Tablet(s)	SNM3
404218003	Drop(s)	SNM3
415215001	Puff(s)	SNM3

9.0 Glossary

Term	Definition
Acute and Community CDR (acCDR) (“Project”)	A major clinical integration initiative for Ontario, funded and sponsored by Ontario Health and Canada Health Infoway. Through a single access point, the Project will electronically share Electronic Patient Data among health care practitioners in Ontario who are representative of the health care continuum.
Ancillary System	A standalone collection of electronic medical records (defined below) specific to a department, e.g. an Emergency Department Information System or a Family Health Clinic EMR System.
Clinical Data Types	Clinical data contributed from regional/provincial repositories or HICs.
Digital Health Asset	Has the meaning set out in section 26 of O. Reg. 324/04 and generally means a product or service that, (a) is selected, developed or used by a health information custodian, and (b) enables the custodian to use electronic means to collect, use, modify, disclose, transmit, retain or dispose of personal health information to provide care or assist in the provision of care.
Electronic Health Record (EHR)	Has the meaning set out in s. 55.1 of PHIPA and generally means the electronic systems that are developed and maintained by OH pursuant to Part V.1 of PHIPA for the purpose of enabling HICs to Collect, Use and Disclose PHI by means of the systems.
Electronic Medical Record (EMR)	Digitized medical records created by health care providers in a physician’s office or a hospital setting.
Health Care Practitioner	(a) a person who is a member within the meaning of the Regulated Health Professions Act, 1991 and who provides health care, (b) a person who is a member of the Ontario College of Social Workers and Social Service Workers and who provides health care, or (c) any other person whose primary function is to provide health care for payment; (“praticien de la santé”)
Health Information Custodian (HIC)	Has the meaning set out in s. 3 of PHIPA and generally means a person or organization that has custody or control of personal health information for the purpose of health care or other health-related duties. Examples include physicians, hospitals, pharmacies, laboratories and the Ministry of Health.
Home and Community Care Support Services (HCCSS)	Ontario’s 14 Home and Community Care Support Services organizations coordinate in-home and community-based care for patients across the province.
Hospitals	Hospitals within the meaning of the <i>Public Hospitals Act</i> or a private hospital within the meaning of the <i>Private Hospitals Act</i> .

Term	Definition
Hospital Information System (HIS)	An information system dealing with all aspects of information processing in a hospital.
Interoperability Specification	Has the meaning set out in section 26 of O. Reg. 324/04 and generally means a business or technical requirement established by the Agency that applies to a digital health asset or to a digital health asset's interaction with other digital health assets, and that may include, without being limited to, a requirement related to, (a) the content of data or a common data set for electronic data, (b) the format or structure of messages exchanged between digital health assets, (c) the migration, translation or mapping of data from one digital health asset to another, (d) terminology, including vocabulary, code sets or classification systems, or (e) privacy or security.
Personal Health Information (PHI)	Has the meaning set out in section 4 of PHIPA. Specifically, it is “identifying information” about an individual that: • Relates to the physical or mental health of the individual; relates to the provision of health care to the individual; • Is a plan of service under the Home Care and Community Services Act, 1994; • Relates to payments or eligibility for health care or eligibility for coverage for health care; • Relates to the donation of any body part or bodily substance of the individual or that is derived from the testing or examination of any such body part or bodily substance; • Is the individual's health number; and/or • Identifies an individual's substitute decision-maker. PHI also includes identifying information about an individual that is not PHI listed above but that is contained in a record that includes PHI listed above. Information is “identifying” when it identifies an individual or when it is reasonably foreseeable in the circumstances that it could be utilized, either alone or with other information, to identify the individual.
Pharmacy	In this specification, pharmacy refers to hospital pharmacy within the meaning of the Drug and Pharmacies Regulation Act.
PHIPA	Personal Health Information Protection Act, 2004. The Ontario health privacy law. It establishes rules for the management of PHI and the protection of the confidentiality of that information, while facilitating the effective delivery of healthcare services. References to PHIPA include the regulation made thereunder (O. Reg. 329/04), as may be amended or replaced from time to time.
Prescribed Organization (PO)	The organization prescribed in Ontario Regulation 329/04 as the organization for the purposes of Part V.1 of PHIPA. The Prescribed Organization has the power and the duty to develop and maintain the EHR in accordance with Part V.1 of PHIPA and the regulations made thereunder.

Term	Definition
Priority Clinical Data Types	Data that clinicians have indicated are a priority, is to be contributed first, i.e. clinical reports (from hospitals and HCCSS), lab, drug, diagnostic imaging.