HEALTH INFORMATION STANDARDS COMMITTEE FOR ALBERTA

LAB INFORMATION SYSTEMS
MESSAGE STANDARD SUMMARY

HL7 LAB TEST RESULT DELIVERY SPECIFICATION V3.6

Status: Approved
Version: v3.6
Status Date: Oct 10, 2018

Revision History

Version	Revision Date	Summary of Changes
1.0	Sept. 20, 2004	LTRD Functional Working Specification
1.1	May 31, 2006	LTRD Functional Working Specification, Updates Revised the LTRD message specification to change the cardinality of "OBR28 – Results Copy To" field in the OBR segment from (0..5) to (0..*). The "*" indicates that copies can be sent to any number of recipients.
2.0	Sept. 9, 2009	LTRD Functional Working Specification, Updates Create a new version (2.0) of the Provincial Laboratory Test Results Delivery message specification. Revised the current Provincial LTRD to include AHS Calgary Laboratory Message Specification requirements. 1. Include fields specified in the CLS data specification and not in the provincial LTRD message specification. 2. Ensure conformance criteria is satisfied
2.1	April 28, 2011	LTRD Functional Working Specification, Updates - Update to ensure published document is consistent with Messaging Workbench file - Remove parent length - Ability to send multiple results - Add encoding characters description to beginning - OBR 15.1.6 Name of Alternate Coding System – changed to required or empty - Updated notes for MSH 4.1, 6.1, PV1 3.4.1, 39 and ORC 13.4.1 to add support for Delivery Site Registry (DSR) ID - Updated lengths of PV1 3.4.1, PV1 39 from 10 to 20 to support the DSR ID - Added Transaction Message Detail section to preamble - Changes are backward compatible with version 2.0 - Cleaned up ambiguous wording - Added support for DSR ID/Mnemonic - Removed non-conformant and system specific codes / table values
3.0	June 17, 2014	Accepted in Draft - Lab messaging spec package: HL7V2.4 Lab Test Result Delivery Specification and HL7V3 CDA Lab Report Specification
3.6	October 10, 2018	Includes updates from 3.1-3.5 LTRD Functional Working spec Updates: - Specified length for MSH-7.1 - Added MSH-9.1, 9.2, 9.3, PID-33.1, OBR-27.1, 27.3, 27.4, 27.6, 31.1 – 31.3, OBX-5.1 – 5.6, 16.9, 16.9.1 - Increased length of MSH-10, PID-5.1, 11.5, PV1-8.2, ORC-2, 3, OBR-2, 3, 4.2, 10.1, 15, OBX3.2, and 16.2, - Updated sequence numbers to make segments easier to identify

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		- Removed segments PV1-10 and PV1-20, unable to determine standardized data. Updated Vocabulary Tables (Appendix A) Added new Sample Messages (Appendix B) **HISCA status: Approved December 4, 2018.**

Contact Information

Documents may be requested from HISCA@gov.ab.ca by sending the title and filename requested as listed in the Specification Documents section. Large files or requests may be sent as multiple archive files to the requestor.

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[1]CDA components of the LTRD have been de-scoped and therefore will not be up to date with the most current version of the HL7 specification

Table of Contents

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[1]CDA components of the LTRD have been de-scoped and therefore will not be up to date with the most current version of the HL7 specification

1 Background

The Lab Information Systems Standards Project seeks to normalize laboratory messaging and terminologies through the adoption of relevant pan-Canadian and Provincial standards.

To produce this standard message, the Laboratory Message Transformation Service will restructure the incoming HL7v2 messages from 11 Laboratory Information Systems, transforming data, normalizing with appropriate terminology, and leveraging a standard HL7v2.4 message and a CDA-compliant clinical document.

- *The CDA portion of the LTRD package has been de-scoped and will not be kept up-to-date with the latest HL7 message specification*

The specifications focus on edits to the standardized HL7v2.4 message structure and terminologies captured therein.

2 Objectives[1]

Laboratory Messaging Standards have been developed and implemented to enable the transformation of messages from 11 LISs to a single provincial standard.

Laboratory Messaging specifications include HL7 v2.4 messaging specifications and a CDA laboratory report document template. They have been developed and implemented to enable the transformation of messages from 11 LISs to a single provincial standard.

3 Scope

3.1 Scope of Laboratory Information System (LIS) Project

- CDA Clinical Documentation has been de-scoped, and therefore will not be updated with latest version of messaging standard
- Edits to the HL7v2.4 Lab Result Message Specification (LTRD Release 3) inclusive of:
  - Message samples for each Blood Bank, Microbiology, Coagulation, Hematology, Anatomical Pathology, and Chemistry
- Updated Vocabulary Table (Appendix A)

3.2 Scope of Transaction

- In-scope:
  - Send Laboratory Result (Preliminary or Final)
  - Revise Laboratory Result (Corrected, When a Final is replacing a Preliminary; Amendments)
  - Cancel Laboratory Results
- Out of scope:
  - Laboratory Order workflow

4 Standards Alignment

In early 2013, the project conducted a Laboratory Standardization Assessment to determine the extent to which the Canada Health Infoway pan-Canadian Laboratory Messaging and Nomenclature (pCLMN) Specification could be used in Alberta.

The recommendation included a hybrid solution – leveraging the HL7v2 Lab Test Result Delivery Specification (Release 3) and aspects of the pCLMN for terminologies (SNOMED CT® and LOINC) and the HL7v3 domain constraints for the Lab Report clinical document.

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5 Stakeholder Engagement

An Alberta Laboratory Working Group was created for collaborative design of the AB Lab Report Specifications.

Clinical input was obtained from the Integrated Clinical Working Group and the Netcare Portal-Sub-group

Organization	Accountability
Alberta Health Services	Chair/Facilitator
	LIS Standards Project
	Lab Information Systems
	LIS Standards Project Architect Services
	LIS Standards Project
	Architecture Services
	Integration Coordination Centre
	Regional Integration Team
	AB Netcare
	Data standards and Terminology, Health Information Management
Alberta Health	Health Information Standards, HL7
	Architecture Standards
	EHR Integration and Operations

6 Lab Report Specification Overview

6.1 Business Context

The first step in the development methodology was to develop a common understanding of the business context within which the lab standards would be used. This understanding is reflected in the following Business Context Diagram. The scope of this specification covers the transactions and clinical documents for laboratory result reporting. At this time, laboratory order management is out of scope. This diagram illustrates the key processes and actors in the overall simplified Laboratory Business Model.

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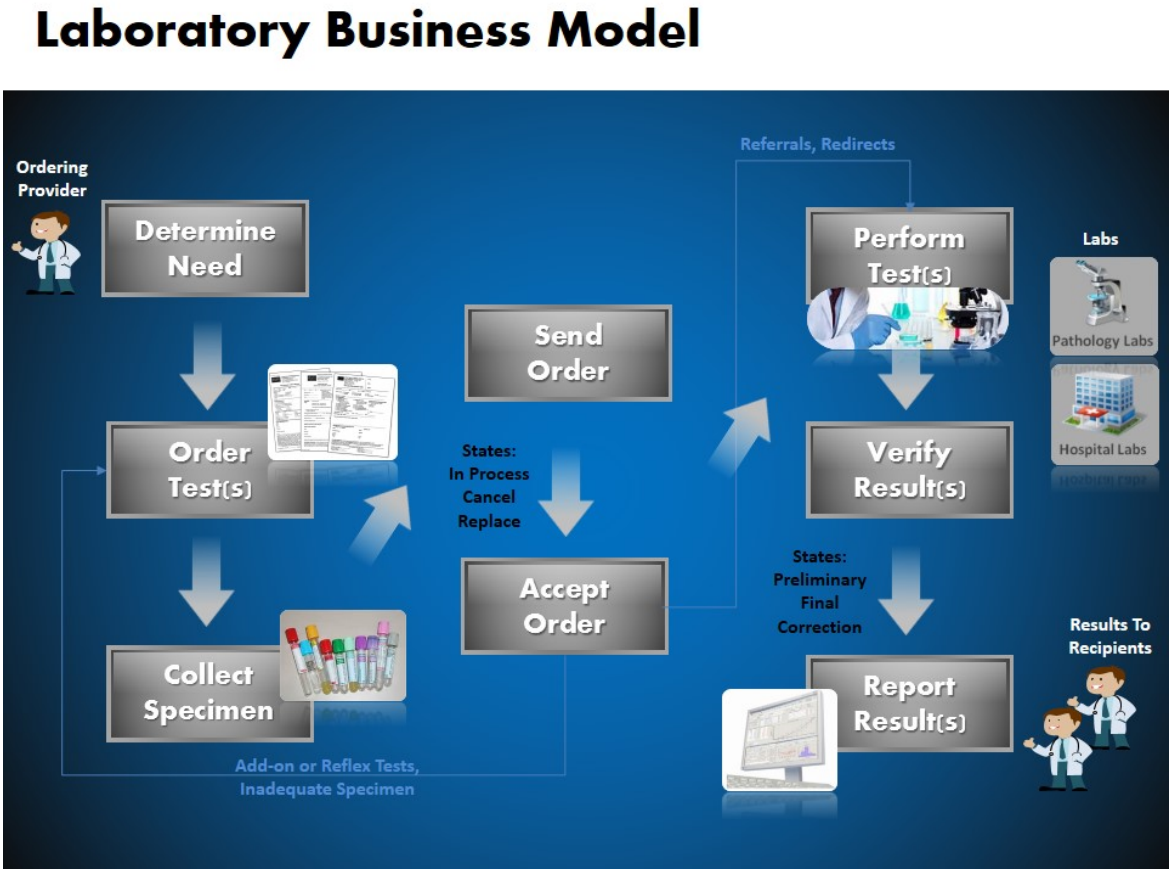

Figure a: Business Model Diagram

Below is the basic workflow:

- The ordering provider completes the Test Requisition and provides direction to the patient/client to present to the lab for the Specimen to be collected or the specimen may be collected at the Service Delivery location and forwarded to the Laboratory for processing.
- Subsequent to collection, the Order is provided to the patient for collection of the Specimen(s) by the Laboratory. Note: the specimen is sometimes collected prior to the creation of the Order.
- The Specimen is sent to the Laboratory for processing.
- Orders can be In Process, Cancelled or Replaced.
- The Laboratory may accept the Order as is, may add-on tests, or may indicate that the Specimen is inadequate. One or more of the tests may also be referred to another lab or the entire Order may be re-directed.
- The performing Laboratory runs the tests, verifies the results and distributes the results to the Ordering Provider and Copies to.
- Results can be Preliminary, Final or Corrected. Only Preliminary Results can be cancelled.
- Receiving Providers may either receive pushed results or need to query the Alberta Netcare Portal to obtain the results. Corrections to Results in the Alberta Netcare Portal are re-bolded to alert Providers of changes to the records.

6.2 Transaction Framework

The Process Flow and Use Cases identified three Transaction Groups required to support the full Laboratory Test Order and Result Management Workflow. Only one Transaction Group is in scope for these specifications.

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Table 1: Transaction Group List

ID	Transaction Group
TG01	**Laboratory Result Reporting**
a) Send Laboratory Result (Preliminary or Final) b) Revise Laboratory Result (Corrected, When a Final is replacing a Preliminary; Amendments, Addendums) c) Cancel Laboratory Results d) Notification of Changes to Laboratory Results in the Alberta Netcare Portal (re-bolding in the CDV)	
TG02	**Laboratory Order Management**
Out of scope	
TG03	**Laboratory Report Clinical Document Query**
See Shared Health Record Project Specifications.	

6.3 Lab Result Design Pattern[1]

The design pattern for the Lab Result transaction group includes a combination of HL7 messaging and HL7 Clinical Document Architecture documents. The purpose of the HL7 message component is to communicate the workflow data elements needed to process the Lab Result. The purpose of the document component is to communicate the displayable, clinically attested content that is relevant to the Lab Report.

There are many elements that will be duplicated in the message, because they are necessary for workflow, and in the document, because they are part of the clinical content.

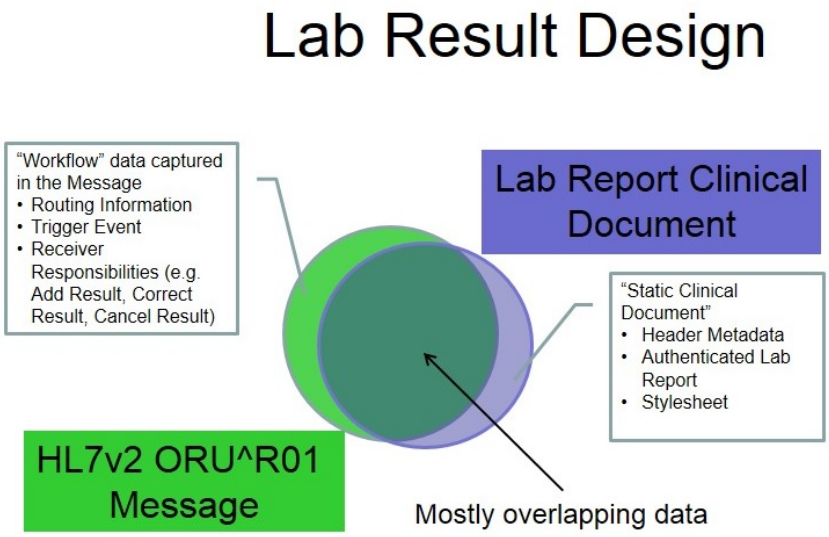

Figure b: Lab Result Design Pattern

Within the Message and Document there are distinct conceptual components. The approach for each conceptual component is outlined in the following figure:

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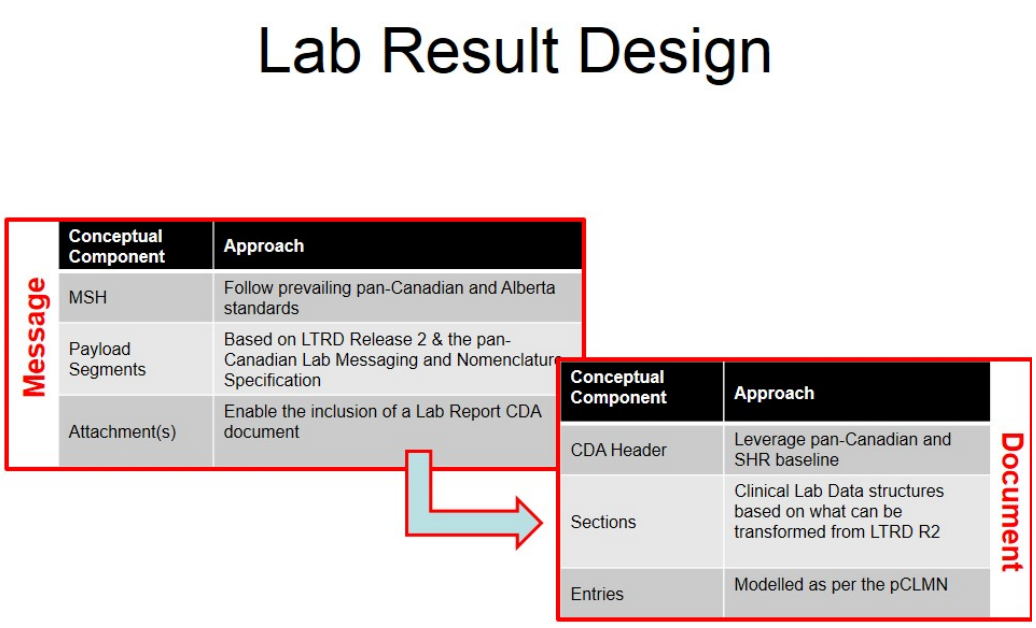

Figure c: Lab Result Design Approach (LTRD R2 is HL7 v2.4 R2)

6.4 Alberta Laboratory Report Result Types[1]

6.4.1 Business Context

The Laboratory Report is a clinical document used to convey detailed laboratory results for a variety of laboratory disciplines including General Laboratory, Blood Bank, Microbiology and Anatomical Pathology.

- General Lab

For purposes of this specification, General Lab covers tests more familiar to the general public; such as blood cell counts, coagulation studies, urinalysis, blood glucose level determinations. Its subsections include chemistry, hematology, immunology, and urinalysis, to name a few.

- Microbiology

Microbiology is the study of microscopic organisms, either unicellular (single cell), multicellular (cell colony), or acellular (lacking cells). Microbiology encompasses numerous sub-disciplines including virology, mycology, parasitology, and bacteriology.

- Blood Bank

Blood bank-related tests refer to the blood typing and screening of blood products for use in future transfusions.

- Anatomical Pathology

Anatomical pathology is a medical specialty that is concerned with the diagnosis of disease based on the gross, microscopic, chemical, immunologic and molecular examination of organs, tissues, and rarely

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whole bodies (autopsy). Sub-disciplines in scope of this specification include surgical pathology and cytopathology.

6.4.2 Business Processes

The Laboratory Report may be replaced when a laboratory result is corrected or cancelled or when a preliminary result is to be replaced by a final result.

*T*he following table list the business processes in scope for this specification.

Process Name	Identifier	Process Purpose
Laboratory Result Create	**[T01]**	Send a Lab Result to the EHR and/or other consuming systems using the Lab Message Transformation Service.
Laboratory Result Update	**[T02]**	Send an update Lab Result to the EHR and/or other consuming systems using the Lab Message Transformation Service. This could include corrections, replacements of Preliminary with Final results or addition of information (i.e. Append).
Laboratory Result Cancel	**[T03]**	Send a request to cancel one or more tests for a Lab Result to the EHR and/or other consuming systems using the Lab Message Transformation Service.
Laboratory Result Deletion	**N/A**	Laboratory Results cannot be deleted. If they are in error and Preliminary, they will be cancelled. If they are in error and Final, they will be corrected.

Notifications of changes to Laboratory Results (e.g. Corrections or Cancellations) propagated to the Alberta Netcare Portal will follow the existing Netcare processes whereby documents on the Clinical Document View tree will re-bold when a change of any kind occurs.

6.5 Design decision -Use of Clinical Document Architecture[1]

The HL7 Clinical Document Architecture (CDA) is an XML-based markup standard intended to specify the encoding, structure and semantics of clinical documents for exchange.

CDA is part of the HL7 version 3 standard and it is based on the HL7 Reference Information Model (RIM) and the HL7 Version 3 Data Types. The CDA specifies that the content of a document consists of a mandatory textual part (which ensures human interpretation of the document contents) and optional structured parts (for software processing).

6.5.1 Transporting CDA

The CDA standard does not specify how clinical documents should be transported. For this specification, the Lab Report (as described in the ***CDA Implementation Guide***) will be transported with HL7 v2.4 messages.

The constrained CDA document can be embedded in a v2 payload as a Multipurpose Internet Mail Extension (MIME) package as described in section 3 (CDA Document Exchange in HL7 Messages) of the CDA R2 specification.

The querying of the Lab Report Document will be handled by the Shared Health Record specification infrastructure (i.e. using HL7v3 query/response messaging).

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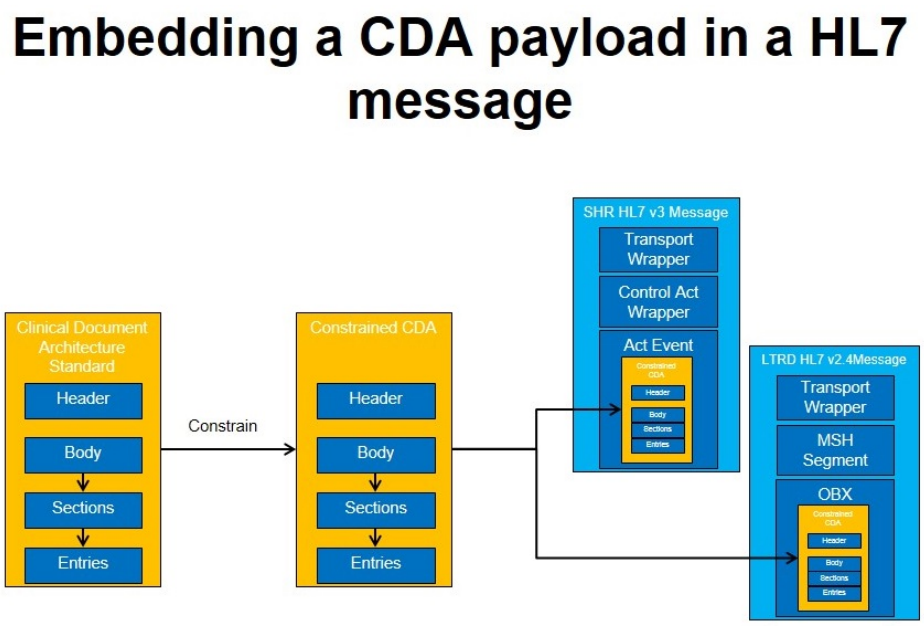

Figure d: Embedding a CDA payload in a message

7 Lab CDA Templates[1]

7.1 Document Templates

The CDA Document Templates describe the purpose and rules for constructing conformant instances of each of the in-scope documents included in CDA specifications. Document templates include constraints on the CDA header and refer to Section Templates. The Document Types and Required/Optional Sections table lists the sections used by each document type.

Each Document Template contains the following information:

- Scope and intended use of the document type;
- Description and explanatory narrative;
- Template metadata (*e.g.* `templateId`, *etc.*);
- Header constraints: this includes a reference to the Alberta specific Clinical Document Header template and additional constraints specific to each document type; and
- Required and optional Section Templates.

7.1.1 Alberta Laboratory Report

The Laboratory Report is a clinical document used to convey detailed laboratory results for a variety of laboratory disciplines including General Laboratory, Blood Bank, Microbiology and Anatomical Pathology.

Below is a depiction of the structure of the CDA templates used for the Laboratory Report.

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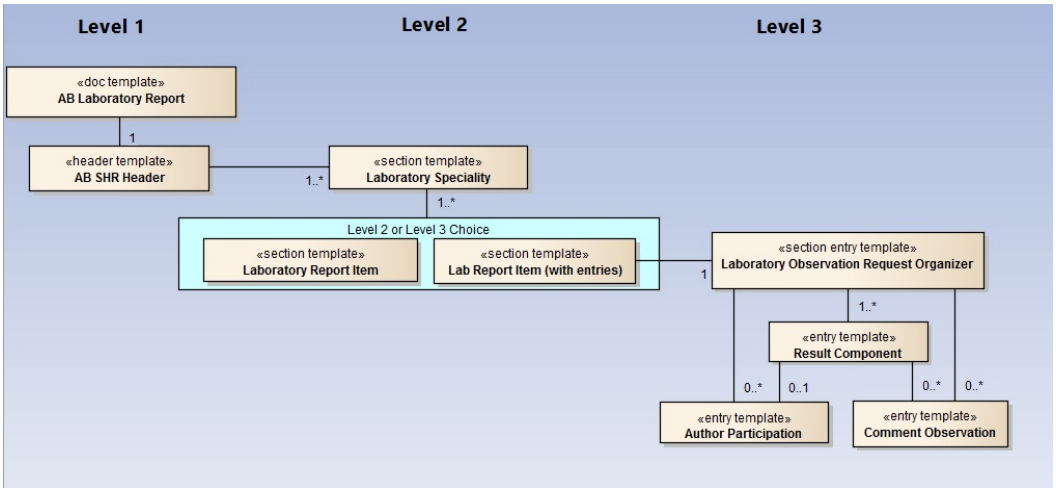

Figure e: structure of the CDA templates for the Laboratory Report

7.2 Section Templates

The CDA section Templates are referenced by one or more of the Document Templates of CDA specifications. These templates describe the purpose of each section and the section-level constraints.

Section Templates are always included in a document.

Each Section Templates contains the following:

- LOINC section code
- Template metadata (e.g., `templateId`, etc.)
- Section title
- Requirements for a text element
- Description and explanatory narrative
- Section Entry Templates names and IDs for referenced templates (required and optional)

Section Templates may also contain the following:

- Other Design Considerations

Section templates which are specific for LAB CDA are:

7.2.1 Laboratory Results & Reports

This section provides details on different laboratory tests or procedures that were performed on the patient that are relevant to the Request for Service and may have an effect on the treatment of the patient.

7.2.2 Laboratory Specialty

This section identifies the type of laboratory result being reported such as Microbiology, Anatomical Pathology, Blood Bank, and Chemistry. The Lab Specialty code must be coded using LOINC. The following is a list of most commonly used specialty codes.

7.3 SubSection Templates

The Subsection Templates are referenced by one or more of the Section Templates of CDA specifications. These templates describe the purpose of each subsection and the subsection-level constraints.

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Subsection Templates are always used by Section templates and will not be included separately from the parent section in a document.

The structure of a subsection is the same as a section template structure.

Each Template contains the following:

- Subsection code
- Template metadata (e.g., `templateId`, etc.)
- Subsection title
- Requirements for a text element
- Description and explanatory narrative
- Section Entry Templates names and IDs for referenced templates (required and optional)

Please refer to the Section Templates Chapter for details about the code, title, narrative text and entries elements.

7.3.1 Laboratory Report Item

This section provides the details pertaining to the laboratory observations. It includes observation request information such as the ordered lab test(s), specimen collection date and ordering provider as well as the observation result information such as the lab test(s) performed and resulting values. Lab Report Item section headings reference the lab test codes.

The Laboratory Report Item templates are sub-sections to the Laboratory Specialty section template which identifies the type of lab results being reported (e.g. Microbiology).

For General Laboratory, the Laboratory Report Item sub-section heading may pertain to a Sodium test (i.e. 2947-0), a Complete Blood Count (i.e. 58410-2) or a Cholesterol test (i.e. 14647-2) to name a few.

For Microbiology, the lab report item may pertain to a Stool Culture (i.e. 625-4).

For Blood Bank, the lab report item may pertain to Blood Typing and Antibody Screen (i.e. 34532-2).

For Anatomical Pathology, the lab report item may pertain to the Surgical Pathology Report (i.e. 11529-5). In addition, guidance within the pan-Canadian Laboratory Messaging and Nomenclature Specification as well as the IHE Anatomical Pathology Structure Reporting guidelines suggests the following section headings:

LOINC Code	Section Name
22634-0	Clinical Information
22635-7	Macroscopic Observation
22637-3	Microscopic Observation
46059-2	Diagnosis
46450-3	Procedure Steps

7.4 Section Entry Templates

The Section-Entry Templates are referenced by one or more of the Section Templates of CDA specifications. These templates contain the structured entry constraints that are required for the applicable section. Note that the Section-Entry Templates are presented in alphabetical order rather than usage.

Section Entry Templates are always allowed in sections.

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Each Section Entry Template's description contains the following information:

- Key template metadata (*e.g.*, `templateId`, *etc.*);
- Description and explanatory narrative;
- Entry Templates names and IDs for referenced templates (required and optional)
- Required CDA acts, participants and vocabularies; and
- Optional CDA acts, participants and vocabularies.

7.4.1 Laboratory Observation

The Laboratory Observation template defines the format for the results of observations generated by laboratories. The scope includes observations such as hematology, chemistry, serology, virology, toxicology, microbiology, and pathology observations. The section often includes notable results such as abnormal values or relevant trends, and could contain all results for the period of time being documented.

Laboratory results are typically generated by laboratories providing analytic services in areas such as chemistry, hematology, serology, histology, cytology, Anatomical pathology, microbiology, and/or virology. These observations are based on analysis of specimens obtained from the patient and submitted to the laboratory.

7.4.2 Laboratory Observation Request Organizer

The Lab Observation Request Organizer template defines the lab order information and serves as the grouper for the lab observation results. This maps to the OBR segment content in HL7v2 messaging. Content includes the lab test(s) ordered, the filler order number and associations to ordering provider and any notes pertaining to the order (i.e. NTE segment).

For General Laboratory, the lab test ordered (i.e. ObservationRequest.code) may pertain to many types of observation requests. For example, it could pertain to a Complete Blood Count ordered (i.e. 58410-2), a Sodium test (i.e. 2957-0), or Cholesterol level (i.e. 14647-2).

For Microbiology, the lab test ordered may pertain to the culture ordered (e.g. 625-4 Stool Culture; 630-4 Urine Culture).

For Blood Bank, the lab test ordered may pertain to a blood typing request (e.g. 34532-2 Blood Type and Indirect Antibody Screen).

Entry templates are not used for Anatomical Pathology.

7.5 Entry Templates

The Entry Templates are referenced by one or more of the Section-Entry Templates of these consolidated CDA specifications. These templates are reusable sections of the implementation guide that are called from the Section-Entry Templates as required. They contain the structured entry constraints for specific clinical statements or functions. Entry Templates may be called from Section-Entry Templates, or from other Entry Templates.

Note that the Entry Templates are presented in alphabetical order; templates are not grouped by possible containing templates.

Entry Templates are always allowed in sections.

Each Entry Templates description contains the following information:

- Key template metadata (*e.g.*, `templateId`, *etc.*);
- Description and explanatory narrative;
- Entry Templates names and IDs for referenced templates (required and optional);
- Required CDA acts, participants and vocabularies; and
- Optional CDA acts, participants and vocabularies.

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7.5.1 Result Component

The Result Component template defines the observation result details. This maps to each of the OBX segments in HL7v2 messaging. This includes the lab test(s) performed, the result values, the result status, specimen collection information and reference ranges and associations to producing laboratory and any notes pertaining to the result (i.e. NTE segment). Each lab test performed is a separate Result Component.

The Result Component can be used for all laboratory specialties except Anatomical Pathology where this level of discrete data is not captured.

For General Laboratory, the lab test performed (i.e. ObservationEvent.code) may pertain to many types of observations. For example, a Sodium test (e.g. 2947-0) might have a lab test value (i.e. ObservationEvent.value) equal to 145 with units of measure of mmol/L coded using UCUM. A reference range may also be provided (e.g. 133-145 mmol/L = Normal). For a Complete Blood Count, the lab tests performed would pertain to each of the WBC, RBC, Hemoglobin A, etc. with corresponding numeric lab test values and units of measure.

For Microbiology, the lab test performed may pertain to the identification of a microorganism (e.g. 11475-1 Microorganism Identified) with the lab test value referencing a specific microorganism using SNOMED-CT (e.g. 112283007 escherichia coli). The lab test performed may also pertain to the various antimicrobials tested (e.g. 18864-9 Ampicillin) with a blank lab test value but a populated interpretation code such as 'Susceptible'.

For Blood Bank, the lab test performed may pertain to the blood typing or screening tests (e.g. 34478-8 Blood Group Antibodies Present) with the lab test value populated with 'Negative'.

7.5.2 Result Organizer

The Result Organizer template identifies any lab test batteries that are used to group individual lab observation results. An example is a Complete Blood Count performed with observation results for each test. Each test would be identified in Result Component entries.

7.6 Conformance Approach

Interoperability specifications, such as the Lab Result Messaging and Document Specifications, are intended to enable systems from multiple vendors to interoperate in order to meet stated business objectives. The goal of the specifications is to be the basis for a standard, once approved by the Health Information Standards Committee for Alberta (HISCA) that will minimize costs over non-standardized, one-of many-to-many interfaces while ensuring that key business rules and data standards are followed in the various technical implementations.

The specification should aim to minimize the need for negotiations among trading partners during initial implementation and as part of ongoing operations by providing, whenever possible, unambiguous guidance. The degree to which this can be achieved is directly related to a number of factors:

I. ***Strength of Core Specification Framework***: The strength of the specification frameworks - in this case HL7 v2.4 and CDA - to clearly and concisely convey interoperability requirements;
II. ***Specification Quality and Completeness***: The quality of the specification (both in terms of design and completeness of the associated artifacts).
III. ***Stakeholder Direction***: The ability of stakeholders to reach consensus about key design decision points.

Subject to these considerations, this CDA specification aims to establish clear expectations for the development, testing/certification and deployment of conformant solutions.

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8 Implementing Systems

The following systems are currently live with LTRD2 messages:

- PSI (Provincial Surveillance Initiative). PSI receives a subset of information from the Calgary zone Lab Information System. The subset is primarily microbiology and notifiable infectious information.
- PHR (Personal Health Record). PHR receives a subset of approximately 60 common test results from the three Core lab Information systems in Alberta. The subset represents about of the overall test volume performed.
- ALREP (Alberta Lab Repository). ALREP receives 100% of lab results from all lab information systems in the province. This data flow has been in place since July 2018. ALREP is the consolidated repository that will support future implementation of Netcare.

9 Conceptual Data Model

Not available currently

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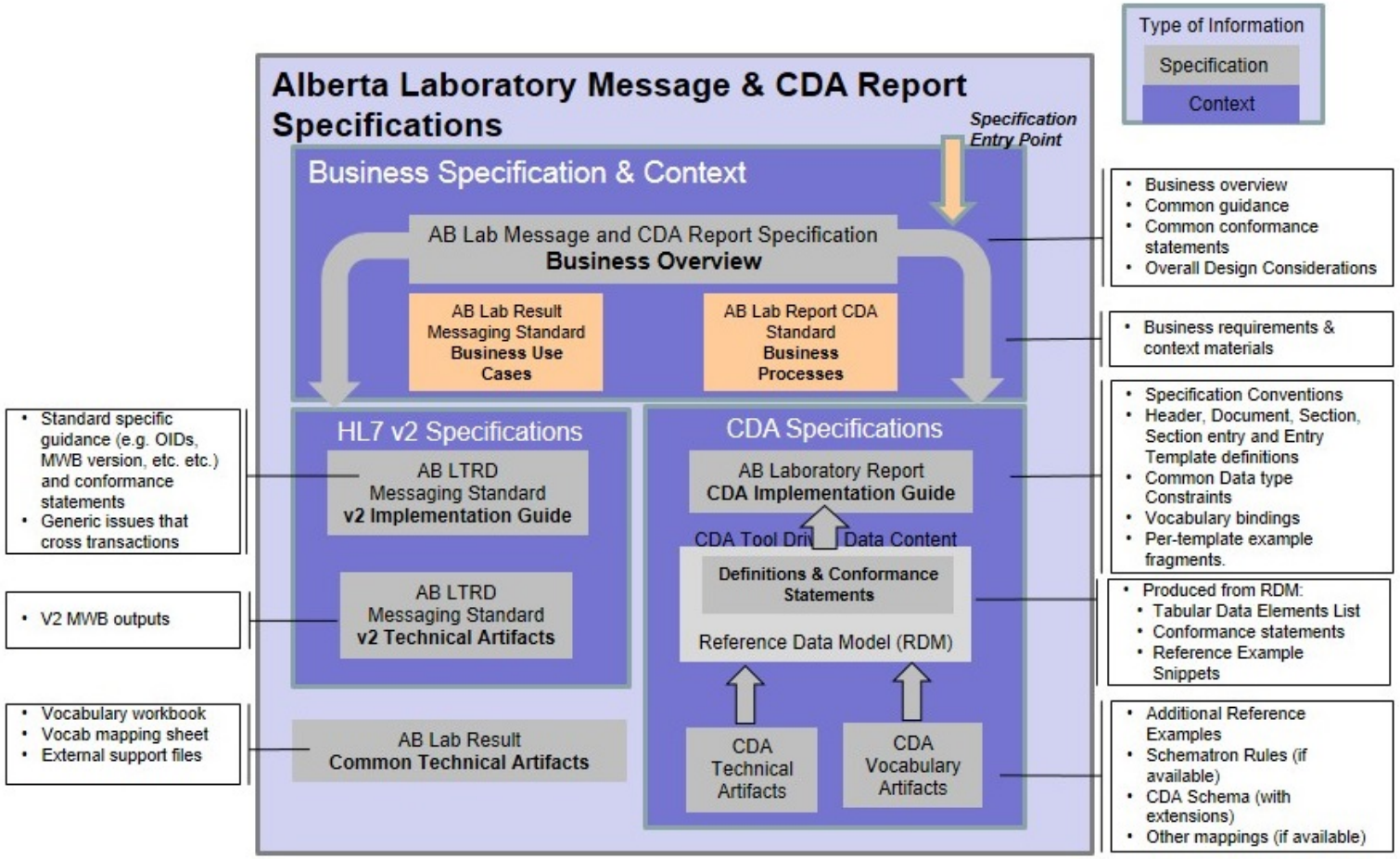
10 Specification Documents

10.1 Specification Structure[1]

These specifications have been layered into multiple documents and technical artifacts which, together, provide implementation direction and establish conformance requirements.

Figure F: Specification Structure



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These documents have been structured to minimize duplication and to streamline access to information for prospective implementers. Moreover, recognizing that certain implementers will likely need to support v2.4 and CDA based interoperability, these specification documents aim to offer an integrated view for both specifications. Each of these specification sets has been stratified and it is recommended that readers approach these layers in order as follows:

IV. ***V2.4 Implementation Guide:*** This guide is intended to provide clear direction to implementers about the in-scope interoperability transactions and provides both guidance and normative direction about how to implement the specifications.

V. ***CDA Implementation Guide:*** This document is intended to provide the technical information required to implement the specification. It includes an outline of the specification conventions and overall technical requirements. The implementation guide then includes the detailed requirements for the in-scope documents, all of the document sections, and templates that are used to build the specifications. The implementation guide consists of both tabular as well as conformance-statement oriented views of the requirements and includes the testable conformance statements for the specification which conformant systems are expected to support as well as specific business rules and data obligations. Where applicable the formal CDA conformance statements are incorporated or referenced.

VI. ***V2 Conformance Profiles***: The HL7v2.4 **Conformance Profile** document outlines the in-scope transactions which conformant systems are expected to support as well as specific business rules and data obligations for each transaction. Where applicable a formal conformance profile (e.g. HL7 Message Profile) is referenced.

VII. ***Technical Artifacts***. Each specification includes appropriate technical artifacts as outlined in Appendix B of this document. Broadly speaking, the following artifacts are included:

- HL7 v2.4: Applicable HL7 Message Workbench files; and

Finally, these specifications are published with a set of common artifacts including a normative vocabulary specification contained in the ***Lab Report - Data Model and Mapping Workbook***. This is intended to consolidate valid vocabulary pertaining to the message portion of the specification in a convenient, machine processable manner. Vocabulary pertaining to the Clinical Document Architecture (CDA) portion of these specifications is fully integrated into the CDA Implementation Guide.

Please consult section V (Conformance Approach) for further details about how these specification documents are intended to be formally interpreted so as to maximize clarity and to enable the effective development and validation of conformant solutions.

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10.2 Specification Documents List

This section summarizes the various files that are part of the specification.

Group	Title	File Name	Comments
Interoperability Standard **Messaging & Clinical Document Specification Deliverables**	HL7v2 Lab Test Result Delivery Specification	AB HL7v2 Lab Test Result Delivery Specification – V3.6 – 20181010.doc	Message profile for ORU^R01, corresponding vocabulary value sets and sample messages
	HL7v2 Lab Test Result Delivery Specification MWB	ab_ltrd_hl7_oru_r01_r3_20181204 v36.mwb	Messaging workbench file from which the .doc is derived
	Rendering Guide	Laboratory Result Consumer System Validation Criteria.doc	This document is not complete, but provides an overview of how data should be displayed by a downstream system.
	HL7v3 CDA Lab Report Specification	AB Consolidated CDA Implementation Guide (Laboratory Reporting Release) – V3.0 – 20140527.doc	Has not been updated with current LTRD Messaging Spec; included for reference only
	HL7v3 CDA Lab Report Specification Schema	AB Lab Report Schemas	Has not been updated with current LTRD Messaging Spec; included for reference only
	HL7v3 CDA Lab Report Specification Samples	AB Lab Report Sample CDA Instances (with and without applied stylesheet)	Has not been updated with current LTRD Messaging Spec; included for reference only
	Hl7 V2 Conformance profile	HL7 V2.4 Conformance profile document	Not available
Baseline Input Specifications		• Data profiling from incoming LIS messages • HL7v2 LTRD Release 2 Draft • Pan-Canadian Lab Messaging and Nomenclature Specification (pCLMN) • Pan-Canadian CDA Implementation Guidance • Pan-Canadian CDA Header • AB Shared Health Record & eReferral CDA Headers • eReferral Lab Result – level 2 and level 3 Specifications • Integrating the Health Enterprise (IHE) – Lab Profile	These reference files listed solely for convenience. Desired copies should be obtained from document custodians such as Canada Infoway https://ic.infoway-inforoute.ca/en/ They are not included in the distribution.

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Group	Title	File Name	Comments
		• BC Interior Health EHR CDA Laboratory Templates • MR2009 pan-Canadian Data Type Specifications • MR2009 Terminology Worksheet	

Documents may be requested from HISCA@gov.ab.ca by sending the title and filename requested. Large files or requests may be sent as multiple archive files to the requestor.

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