OLIS Conformance Testing Guide

Testing Toolkit

Document Identifier: 1845

Version: 2.0

Ontario
eHealth Ontario

Document Control

Revision History

Version Date	Version	Summary of Change
2011-01-21	2.0	Revised to align with changes in the OLIS Conformance Test Scenarios.
2010-04-08	1.3	Revised to reflect changes from senior management.
2010-03-26	1.2	Revised to align with changes in the OLIS Conformance Test Scenarios Guide.
2010-02-02	1.1	Minor modifications and formatting changes.
2009-12-19	0.1	Initial draft

Authorized Reader

This document is authorized to the following organizational roles

Role(s)

- End Users

Table of Contents

1.0 Introduction

1.1 Purpose of Document

This document provides information on the process and activities required to conformance-test the functionality of an HL7 interface from a Laboratory Information System (LIS) to the Ontario Laboratory Information System (OLIS).

1.2 Intended Audience

This document is primarily intended to be used by all individuals that are involved in the OLIS Conformance Testing process. These individuals may include: Project Manager; Information Technology personnel; Laboratory Information System (LIS) Subject Matter Experts; Interface Analysts; and System Testers.

1.3 Desired Outcomes

Use of this document will result in an understanding of:

- Concepts associated with Conformance Testing
- Each category of Conformance Tests
- Activities that require completion before Conformance Testing
- Requirements for submission of Conformance Test Scenarios
- Process for completion of Conformance Testing
- Criteria for passing Conformance Testing

1.4 Reference Documents

- OLIS Interface Specifications
- OLIS Conformance Test Scenarios
- International Organization for Standardization (ISO/IEC 9646 Standard)
- A Guide to the OLIS Nomenclature
- OLIS-LIS (Laboratory Information System) Interface Specification
- OLIS Conformance Testing Entry Checklist form
- OLIS Go-Live Entry Checklist form
- User Guide for CITRIX Access to COIL Transaction Logs
- OLIS Web Application (Version 1.0) User Guide
- OLIS Self Testing Kick-Off Meeting

2.0 Before You Begin

2.1 What is Conformance Testing?

Conformance Testing is a formal process instituted by eHealth Ontario in which an OLIS Adopter must successfully demonstrate that their LIS-to-OLIS interface conforms with the requirements of the OLIS Interface Specification prior to submitting HL7 messages to the OLIS Production environment. For a Laboratory Information System (LIS), Hospital Information System (HIS), or Electronic Medical Record System (EMR) to be authorized to interact with the OLIS Production environment, it must be successfully conformance-tested. HL7 messages can be sent directly to OLIS from the LIS interface or indirectly via an intermediate hub (e.g., interface engine, or Common OLIS Integration Layer (COIL).

Conformance Testing is conducted by completing, validating and passing Conformance Test (CT) Scenarios *(Refer to the OLIS Conformance Test Scenarios)* provided by the OLIS Program.

2.2 Purpose of Conformance Testing

The purpose of Conformance Testing is to assess the degree to which an HL7 message that is sent to OLIS conforms to the OLIS Interface Specifications. In addition to assessing data exchange between the LIS and OLIS, Conformance Testing assesses: the accuracy and completeness of HL7 messages sent to OLIS; and that data sent to OLIS is consistent with data in the Adopter's LIS.

2.3 Why is Conformance Testing Important?

Conformance Testing is important because organizations that have adopted OLIS must demonstrate that their LIS or HIS to OLIS interface conforms with the OLIS Interface Specification before submitting HL7 messages to the Production environment.

OLIS Adopters are required to perform Conformance Testing in the Client Self Test (CST) environment for each laboratory information system that will interface to OLIS. This can take place all at once or in stages.

Conformance Testing must be repeated if significant changes or enhancements are made to a LIS, HIS or intermediate system that will impact the way that test results are sent to OLIS. This will ensure that the LIS or HIS or intermediate system to OLIS interface still conforms with the OLIS Interface Specification.

A system Vendor or OLIS Adopter may elect to repeat Conformance Testing at any time.

2.4 What are the Guiding Principles for Conformance Testing of OLIS?

Conformance Testing was designed in accordance with the general principles established by the International Organization of Standards (ISO/IEC 9646 Standard). The guiding principles for OLIS Conformance Testing are:

- Transmission of data must be both accurate and complete as it relates to the clinical use of data and its quality
- OLIS Adopters, the custodian of patients' health records, are responsible for the data submitted to the OLIS repository
- OLIS Adopters have completed Self Testing and have already extensively tested their LIS-OLIS interface and/or the intermediate system(s) in accordance with the current OLIS Interface Specifications and OLIS-LIS Interface Specification. During Self Testing, all functionality must be thoroughly tested. This includes testing of the entire order catalogue for a LIS
- A signed copy of the *"Conformance Testing Entry Checklist"* at the completion of Self Testing is provided to the OLIS Program Coordinator
- HL7 messages generated for each CT Scenario comply with the current OLIS Interface Specifications and requirements of OLIS CT Scenarios. These include all inbound and outbound messages to and from any intermediate system(s) between LIS and OLIS
- Documentation of results that are generated and reported for each CT Scenario(s) is submitted to the OLIS Program
- Messages submitted to OLIS that do not comply with the OLIS Interface Specifications are corrected and the relevant Conformance Test(s) is repeated

2.5 Requirements

During Conformance Testing, OLIS Adopters are required to:

- Thoroughly test each Conformance Test Scenario provided by the OLIS Program Team
- Forward selected Conformance Test Scenarios, along with supporting documentation to the OLIS Program Coordinator for review. Deficiencies in these messages will be reported by the OLIS Program after a thorough analysis
- Make corrections in situations of non-conformance and repeat relevant Conformance Test Scenarios

2.6 Pre-Conformance Testing Activities

Before Conformance Testing can begin, the following steps must be completed:

2.6.1 Request for PKI Certificate

- PKI certificate is installed and configured for the laboratory (results-to-OLIS interface)
- PKI certificate is backed up to ensure their availability in case of server failure

2.6.2 Nomenclature Mapping

- All LIS codes used by each laboratory section in scope have been mapped to the OLIS Nomenclature test request, test result, specimen (source), and or microorganism codes
- LIS codes have been verified as unique across the site's laboratory enterprise to ensure there is no duplication of codes between laboratory sections
- Processes are in place to ensure that new or modified LIS codes are correctly mapped to the appropriate OLIS code as they are created or modified
- Processes are in place to review all new OLIS Nomenclature releases and to remap LIS codes when appropriate
- Processes are in place to ensure new code submissions are communicated to OLIS in a timely manner

2.6.3 Assertion of CST Results

- The Adopter's Project Manager has submitted a signed copy of the *"Conformance Testing Entry Checklist"* at the completion of Self Testing to the OLIS Program Coordinator

2.6.4 Scheduling a Managed Area in the CST Environment

- When an organization is ready to begin Conformance Testing, a managed area in the CST environment must be scheduled.

3.0 Conformance Test Scenarios

Successful completion of Conformance Testing requires the completion of OLIS CT Scenarios (*Refer to OLIS Conformance Test Scenarios*). CT Scenarios have been developed to test each laboratory discipline and each LIS module. The test script outlined in each CT Scenario serves a particular testing purpose. Collectively the CT Scenarios have been developed to test each of the requirements outlined in the OLIS Interface Specifications.

3.1 Objectives of Conformance Test Scenarios

Conformance Test Scenarios are designed to identify key data fields and business workflow processes that must be validated to demonstrate that the laboratory can:

1. Establish system connectivity
2. Submit observation HL7 messages to OLIS
3. Submit HL7 messages that conform to the OLIS Interface Specification for creating, amending and cancelling an order
4. Populate HL7 fields with data in alignment with information in the LIS
5. Submit high quality data in OLIS in order to support clinical data use
6. Handle all messages returned from OLIS, including acknowledgement messages, warnings, errors and query responses
7. Properly use microorganism, specimen (source), test request, test result codes and the associated description in accordance to OLIS Nomenclature Tables
8. Retrieve orders from OLIS
9. Retrieve test results from OLIS
10. Retrieve other selected queries
11. Accurately and appropriately display data and information returned from OLIS in an organization's Clinical Viewer
12. Handle and resolve message errors and re-submit the appropriate changes or corrections
13. Transmit a patient's consent directives

3.2 Format of Conformance Test Scenarios

Each Conformance Test Scenario outlines the following information:

- Purpose – the intent of the scenario and its requirements

- Process for Executing the Test Scenario – description of the steps required to execute the CT Scenario
- Expected Outcome – the result that is expected after completion of a Conformance Test
- Documentation Requirements – description of the evidence that is required by the OLIS Program team for evaluation of each CT Scenario

3.3 Categories of Conformance Test Scenarios

There are six categories of CT Scenarios. These include:

- General
- LIS Error Handling
- Override of Blocked Laboratory Information
- Referrals of Laboratory Orders
- Walk-In Scenarios
- Clinical Viewers

3.3.1 General Category

Orders and results transactions refer to the submission of HL7 ORU messages that include details about the patient, ordering health care providers, test requests, and test results. The CT Scenarios used by OLIS Adopters for testing the Order and Results On-Line Transaction Processing (OLTP) interface can be Discipline (Laboratory Section) specific cases or General cases used for all laboratory disciplines and LIS modules. General CT Scenarios examine an organization's ability to handle orders and test results. Data on test request and test result codes is non-fictitious in the CST environment; whereas patient and practitioner identifiers are fictitious.

For General Conformance Tests, OLIS Adopters will be required to capture two HL7 messages for each order and test result HL7 transaction and review them together. One message will be generated by the organization's interface and consist of patient identification, order information and test result(s) information. The other message will be a response message generated by OLIS. This OLIS response message will indicate whether the LIS transaction was accepted or rejected deal to error(s) in the LIS message. If an intermediate system(s) is being used to connect the LIS to OLIS, both inbound and outbound messages to and from the intermediate system(s) must be captured. The Adopter organization should ensure that the data submitted to OLIS mirrors the information that is provided by the laboratory to practitioners.

3.3.2 LIS Error Handling

The LIS Error Handling Conformance Test Scenarios examine an organization's ability to handle test result amendment and invalidation, incorrect patient ID (health card number), and incorrect licence number for a practitioner. These Test Scenarios will test the ability of an organization to handle errors of an LIS and/or intermediate connecting system.

For each test result amendment and invalidation, an HL7 message must be submitted with specific information to show that the information in OLIS accurately reflects the information changed in the LIS.

3.3.3 Override of Blocked Laboratory Information

ALL laboratory test information for a patient can be blocked at the request of a patient. Depending on the circumstances, blocked patient laboratory test information can be overridden. Override features are primarily built into Clinical Viewer systems.

The OLIS Conformance Test Scenarios will test the ability of a Clinical Viewer to handle and generate different types of override codes and to revoke an existing override.

3.3.4 Referral of Laboratory Orders

Conformance Testing of laboratory referrals using OLIS is complex and must be completed separately for a Referring Laboratory (Referred-Out) and a Reference Laboratory (Referred-In). A Referring Laboratory is a laboratory that sends laboratory specimens and orders to another laboratory for testing. A Reference Laboratory is a laboratory that performs testing for other laboratories. Separate sections in each Conformance Test Scenario describe the process and requirements for OLIS Adopters as it is pertinent to the active role of the organization in a referral situation (i.e. a Referring or Reference Laboratory or both).

Conformance Test Scenarios for Referring Laboratories assess the ability of a Referring Laboratory to: submit HL7 order messages to another laboratory; retrieve test results; incorporate these test results in their LIS; and to report the final results to OLIS. Specimen identification can also be transmitted as part of this process to allow a Reference Laboratory to match orders with the specimen(s) transferred to their facility.

Conformance Test Scenarios for Reference Laboratories are designed to assess the ability of a Reference Laboratory to: query OLIS for orders directed to their laboratory; and process the orders (using the specimen identification information transmitted with the order retrieved from OLIS). These Test Scenarios are also designed to assess: how orders are handled by the reference laboratory's LIS; and how the test results are reported to OLIS.

In the "Expected Outcome" section of these CT Scenarios, the information primarily focuses on the protocols used for referral situations (*Refer to the OLIS Conformance Test Scenarios)*. However, evaluation of the entire CT for Referrals will be based on the requirements in both the most current OLIS Interface Specification and the OLIS CT Scenarios. For example, if a laboratory passed a Conformance Test in the past based on an older version of the OLIS Interface Specification and the laboratory is conducting a new Conformance Test for Referrals, the laboratory will be expected to demonstrate compliance with the new OLIS requirements that were added, enhanced or modified in the most current OLIS Interface Specifications and the current CT Scenarios. This is to ensure that there is interoperability between laboratories that exchange data with each other through OLIS.

Since referrals between laboratories always takes place between two parties, the OLIS Business Service Desk (BSD) will act as the counter partner to an OLIS Adopter involved in referrals. For example, in the case of a reference laboratory site, the site would be Reference Laboratory B and the BSD would be Referring Laboratory A. In the case of a referring laboratory site, the site would be the Referring Laboratory A, while BSD would be Reference Laboratory B. Laboratories that are both Referring and Reference facilities at the same time are required to complete both Referred-In and the Referred-Out sections of the Conformance Test Scenarios.

Conformance Testing must be performed for each laboratory module that is used to generate referred-out orders or to receive referred-in test requests. If an OLIS Adopter has a separate LIS for different laboratory sections, or if the LIS has unique modules that handle referred-out or referred-in orders, each LIS module must be conformance-tested.

3.3.5 Walk-In Scenarios

Walk-In Conformance Test Scenarios are meant to test Order Retrieval. Order Retrieval is the process by which a Specimen Collection Centre (SCC) will retrieve laboratory orders. A typical sequence of events would involve the following:

1. A practitioner places an order for laboratory tests on a patient into OLIS through his/her EMR or the OLIS Web Application
2. The patient walks in to a SCC to provide the requested specimen
3. The SCC uses its information system to query OLIS for the order that was submitted for the patient
4. OLIS returns the order information to the querying system
5. The SCC collects the specimen from the patient and sends it to the performing laboratory
6. The laboratory performs testing on the specimen and submits the test results to OLIS
7. The results are retrieved by the ordering practitioner from OLIS

Walk-In Conformance Test Scenarios assess the ability of a laboratory to retrieve orders and the associated business processes in place to handle various Walk-In situations. This ensures a laboratory has established an information system and process that is robust enough to detect and correct potential problems associated with Walk-In encounters.

3.3.6 Clinical Viewer

Conformance Test Scenarios for the Clinical Viewer are meant to assess the ability of a Clinical Viewer to properly and accurately display clinical data (laboratory results) retrieved from OLIS. Some examples of these applications include a practitioner's EMR system, HIS or Health Care Web Portal.

The CT Scenarios are designed to assess the Clinical Viewer's ability to:

- Place specific queries to OLIS

- Include information on the person that initiates the query
- Handle data returned from OLIS
- Display laboratory data accurately and appropriately
- Provide appropriate feedback to users on warnings and errors

For consistency purposes, specific test patients and laboratory test results have been created for these CT Scenarios. Each test patient is created for a specific CT Scenario with predefined outcomes. **Note:** These test patients SHOULD NOT be used for Self Testing or Conformance Testing of other Conformance Test Scenarios.

3.4 Documentation Requirements for Evaluation of Conformance Test Scenarios

OLIS Adopters are required to provide evidence on the execution of each CT Scenario. Documents requirements include: HL7 Messages, On-Line Laboratory Reports, Primary Practitioner Laboratory Reports, and the OLIS Web Application Screen Shots.

3.4.1 HL7 Messages

Document requirements include:

- Copies of HL7 messages submitted to OLIS for each Test Scenario
- Copies of HL7 acknowledgement messages received from OLIS for each Test Scenario
- If an intermediate system(s) is used to connect the LIS or Clinical Viewer to OLIS, then the inbound and outbound HL7 messages at the intermediate system(s) including acknowledgements or their equivalent must be captured and submitted

Submission of all HL7 messages should be in text file format (.txt).

3.4.2 Laboratory or Clinical Viewer On-Line Laboratory Reports

Document requirements include:

- Screen images of laboratory reports as displayed in the LIS, or
- Screen images of laboratory reports as displayed in the Clinical Viewer

3.4.3 Primary Practitioner Laboratory Reports

Primary practitioner laboratory reports are produced for use by the practitioner. It can be in the form of a printed paper report or an on-line report in an organization's Clinical Viewer. Document requirements include a scanned copy of a paper report or screen shots of an online report.

3.4.4 OLIS Web Application Screen Images

Document requirements include screen images of data in the OLIS Web Application. This can be facilitated by contacting your OLIS Program Coordinator.

4.0 Process for Conformance Testing

4.1 Selection of Conformance Test Scenarios

The OLIS Program Coordinator will inform an OLIS Adopter of the CT Scenarios that must be used at the time of Conformance Testing. The selection of Conformance Tests by the OLIS Program Team will be based on the functionality that is being built or changed by the OLIS Adopter.

In situations where a laboratory does not perform a particular test or the LIS does not directly support the requirement(s), the OLIS Program Coordinator will discuss alternative Test Scenarios with the organization. Any changes will be documented in the Conformance Testing documentation.

In situations when an OLIS Adopter is a specialized laboratory (e.g., Public Health Laboratories), the laboratory tests used in CT may be different from the ones listed in the CT Scenarios. The OLIS Program Coordinator will inform the organization of the CT Scenarios and the combination of laboratory tests that should be used. Any changes will be documented in the Conformance Testing documentation.

4.2 Criteria for Evaluation of Conformance Tests

4.2.1 Laboratory Information Systems

In order for an OLIS Adopter to pass Conformance Test(s) for a LIS and any associated intermediate system(s), an organization must:

- Demonstrate that the purpose of a CT Scenario was fulfilled
- Demonstrate that HL7 messages and queries sent to OLIS are in accordance with current OLIS Interface Specifications
- Correctly populate HL7 fields with data that is captured in the LIS
- Submit data to OLIS that is in the same context as is provided to a practitioner in a primary laboratory report. This is to ensure data quality for clinical use
- Demonstrate the ability to handle OLIS acknowledge messages, including rejection and warning messages
- Be able to correct any error(s) identified in OLIS acknowledgement messages and re-submit HL7 message to OLIS

4.2.2 Clinical Viewers

In order for an OLIS Adopter to pass Conformance Test(s) for a Clinical Viewer, and any associated intermediate system(s), an organization must:

- Demonstrate that the purpose of a CT Scenario was fulfilled
- Demonstrate that HL7 queries sent to OLIS are in accordance with the current OLIS Interface Specifications

- Demonstrate the ability to handle OLIS acknowledge messages, including rejection and warning messages
- Be able to provide feedback to end users regarding OLIS rejections and warnings
- Be able to correct any error identified in OLIS acknowledgement messages and re-submit HL7 queries to OLIS
- Display OLIS-returned data in the Clinical Viewer accurately, completely and appropriately within the clinical context

4.3 OLIS Program Review and Approval Process

Once an OLIS Adopter has completed the development and testing of their interface, documents from selected CT Scenarios must be forwarded to the OLIS Program Coordinator for review and approval.

The OLIS Program Coordinator will inform an OLIS Adopter if it has passed their Conformance Tests. If an organization has successfully completed their Conformance Test(s), the OLIS Program will grant certification. In situations in which an OLIS Adopter fails their Conformance Test(s), the OLIS Program Coordinator will identify points of failure and ask the organization to repeat the relevant Conformance Test(s).

5.0 Regression Testing

When a Laboratory Information System, Clinical Viewer, intermediate system(s) or OLIS is upgraded, Regression Testing on the interface connecting to OLIS must be done to ensure the interface still conforms to the current OLIS Interface Specification.

When an OLIS Adopter is planning to make changes to an interface between OLIS and a connecting application, the application owner/administrator must notify the BSD of the change and provide information on timelines for an upgrade and release notes outlining the details of the upgrade. Based on the extent of the changes documented in the release notes, the BSD will determine which CT Scenarios are required to re-certify the LIS-OLIS interface. This may range from a few to a comprehensive set of CT scenarios. The same process will apply when there is an OLIS upgrade. Application owner/administrator can use OLIS Conformance Test Scenarios to formulate their own testing scripts during Self Testing.

6.0 Glossary

Terms, Acronyms and Abbreviations	Definition
Adopter	A user of the Ontario Laboratories Information System.
Business Service Desk (BSD)	A team within the OLIS Program that is the first line of contact for Adopters on issues relevant to operation and usage of OLIS. Email: OLIS.BusinessSupport@ehealthontario.on.ca
Client Self Test (CST) Environment	Computer servers running the most current version of the OLIS software that can be used to develop and test a Laboratory Information System to OLIS interface or Clinical Management System to OLIS interface. The environment simulates the OLIS Production environment but only contains fictitious patient and practitioner data to safeguard patient confidentiality.
Clinical Viewer (CV)	Clinical Viewers are applications that are designed to display clinical data of patients on an on-demand basis. Some of examples of these include practitioner's Electronic Medical Record (EMR) system, Hospital Information System (HIS) and Health Care Web Portal.
Common OLIS Integration Layer (COIL)	An Enterprise Service Bus (based on IBM Websphere Message Broker and Message Queue) used to transfer laboratory reports from the Integration Facility (IF) to the OLIS Message Broker for processing.
Conformance Test Scenarios	A script outlining the intent, procedure and required outputs for tests that will be done to test a computer application such as a LIS to OLIS interface.
Conformance Testing	A formal process of generating OLIS HL7 conformant messages using specific conformance test scenarios, submitting the messages, and assessing the messages for conformance to the OLIS Interface Specifications as well as fidelity to source Laboratory Information System data.
Consent Directive	A Consent Directive is an instruction from an individual, or an individual's substitute decision maker, regarding the collection, use, or disclosure of the individual's personal health information.
Discipline	A sub-specialty within the laboratory that is dedicated to performing groups of tests based on the area of science (discipline).
eHealth Ontario	An agency created by the Ontario government to oversee the development and delivery of e-health initiatives for the province.
Electronic Medical Record (EMR)	An Electronic Medical Record (EMR) is a software application that combines the clinical and administrative aspects of practice management into an integrated electronic record. The EMR encompasses and manages many aspects of practice management and patient care - from appointment scheduling and billing, to clinical encounter notes, medications, test results and a cumulative patient profile.
Error Handling	Processes devoted to identifying when errors occur with HL7 messages, their cause, and corrective action to resolve the errors.
HL7 Message	A unit of data transferred between systems. It consists of a group of segments in a defined sequence. Each message has a message type that defines its purpose. A trigger event, an event in the real world of health care, such as a patient being admitted, or a laboratory result

Terms, Acronyms and Abbreviations	Definition
	being finalized, initiates an exchange of messages.
Health Information Custodian	Defined in section 3(1) of PHIPA as a person or organization who is described in that section and who has custody or control of personal health information as a result of, or in connection with, the person's or organization's powers or duties.
Health Level Seven Standard (HL7)	A standard for the electronic data exchange of health care information. HL7 endeavours to standardize the format and protocol of the exchange of certain key sets of data among health care computer application systems, such as patient administration/registration, discharge, and requisitions for laboratory testing, results and clinical observations.
Hospital Information System (HIS)	A comprehensive, integrated information system designed to manage the administrative, financial and clinical aspects of a hospital.
Hospital Viewer	A computer application developed by or for a hospital to allow patient information (including laboratory test results stored in the OLIS repository) to be displayed.
International Organization for Standardization (ISO/IEC 9646 Standard)	Is an international standard that specifies a general methodology for compliance testing.
Laboratory Information System (LIS)	A class of software which handles receiving, processing and storing information generated by laboratory testing processes. These systems often must interface with instruments and other information systems such as Hospital Information Systems.
Laboratory Information System (LIS) codes	Codes used in a laboratory information system to define test request, specimen (source), test result and microorganism codes
Laboratory Test	A laboratory test is a common term for laboratory test requests and laboratory test results. A laboratory test is a scientific analysis performed on a wide variety of specimens such as blood, urine, stool, body fluid, tissue, or from sources derived from a patient during their care or treatment (e.g., swabs, iv solutions, medication, aspirate or biopsies). Laboratory tests are used to determine physiological and biochemical states, such as disease, mineral content, drug effectiveness, and organ function. They are also used for diagnosis, monitoring, therapeutic drug monitoring, or genetic assessment of a patient.
Logic Observation Identifier Names and Codes (LOINC®) Nomenclature Standard	A set of standard codes and universal nomenclature for identifying and encoding laboratory terms and clinical observations. The LOINC Nomenclature Standard has over 50,000 codes which provide a structured means of identifying and naming laboratory and medical tests or procedures. http://www.regenstrief.org/medinformatics/loinc/
Ontario Laboratories Information System (OLIS)	An integrated, province-wide, information and order fulfillment system that allows for the electronic exchange of laboratory test information between authorized practitioners, specimen collection centres and laboratories.
Ontario Laboratory Information System Interface Specifications	Interface specifications for the Ontario Laboratories Information System (OLIS), including HL7 message definitions, message transport protocols, OLIS test request and test result nomenclatures, as well as conformance testing and registration / enrolment requirements.

Terms, Acronyms and Abbreviations	Definition
OLIS Adoption Implementation Team (OAIT)	A team from the OLIS Program responsible for liaising with and supporting OLIS Adopters during the development and implementation of their LIS to OLIS interface.
OLIS Program Collaboration Portal	An area of the eHealth Ontario portal that provides information and tools to registered OLIS users.
OLIS Nomenclature	A naming schema which provides an unambiguous and consistent system of names, unique codes and related information which a laboratory information system, hospital information system or clinical management system uses to exchange data with OLIS. The OLIS Nomenclature includes the OLIS Test Requests Test Results, Microorganism and Specimen (Source) Nomenclature.
OLIS Program	A division within eHealth Ontario responsible for the delivery of OLIS.
OLIS Program Coordinator	An individual from the OLIS Program responsible for liaising with and supporting OLIS Adopters during the development and implementation of their LIS to OLIS interface.
OLIS Interface Specifications	A technical document outlining the requirements that must be followed when developing an interface between a laboratory information system, hospital information system or electronic medical record system and the OLIS. The current OLIS Interface Specifications is Version 1.07 (September 2010).
OLIS Web Application	Software that has been developed for eHealth Ontario to allow queries to be submitted to the OLIS repository and to display laboratory test results returned by those queries.
On Line Transaction Processing (OLTP)	Online transaction processing, or OLTP, refers to a class of systems that facilitate and manage transaction-oriented applications, typically for data entry and retrieval transaction processing. The term is somewhat ambiguous; some understand a "transaction" in the context of computer or database transactions, while others define it in terms of business or commercial transactions. OLTP has also been used to refer to processing in which the system responds immediately to user requests.
Order	An Order is a collective term used to refer to one or more Test Requests from an authorized practitioner to be performed on a specimen(s) obtained from a specific patient.
Ordering Practitioner	Individual who places an order for a laboratory test.
Override	The act or an instance of reversing a consent directive
Patient Identifier	A unique code or number used to identify a specific individual (e.g. OHIP number, Medical Record Number, Drivers License)
Performing Laboratory	Laboratory that performs a laboratory test.
Public Key Infrastructure (PKI) Certificate	A set of hardware, software, people, policies, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates.[1] In cryptography, a PKI is an arrangement that binds public keys with respective user identities by means of a certificate authority (CA). The user identity must be unique within each CA domain. The binding is established through the registration and issuance process, which, depending on the level of assurance the binding has, may be carried out by software at a CA, or under human supervision. The PKI role that assures this binding is called the

Terms, Acronyms and Abbreviations	Definition
	Registration Authority (RA). For each user, the user identity, the public key, their binding, validity conditions and other attributes are made unforgettable in public key certificates issued by the CA.
Practitioner	A member of one of the four types of practitioners (physicians, dentists, nurse practitioners and midwives) that OLIS recognizes as authorized to order medical laboratory tests.
Production System	The final version of a particular product in which the release is considered to be very stable and relatively bug-free with a quality suitable for wide distribution and use by end users. It is sometimes referred to as the LIVE system.
Production Environment	A suite of computer servers running OLIS software which receive, store and respond to queries. This environment contains copies of patient test requests and test results including confidential personal health information and practitioner information.
Reference Laboratory	Is a laboratory to which specific types of tests are forwarded from a referring Laboratory because: 1. the referring Laboratory is not licensed to perform the test, or 2. the referring Laboratory is temporarily unable to perform the test, or 3. the Reference Laboratory is able to utilize specialized techniques that may yield results that the referring laboratory has been unable to obtain using conventional techniques (e.g., PHLs are Reference Laboratories for other Laboratories in the areas of bacteriology, virology, and mycology, etc.), or the referring Laboratory has a business arrangement with the Reference Laboratory to perform specific types of tests on its behalf.
Referring Laboratory	Is a laboratory that sends a test request to another laboratory (a reference laboratory) for testing. Specific test might be referred to a reference laboratory because: 1. the referring Laboratory is not licensed to perform the test, or 2. the referring Laboratory is temporarily unable to perform the test, or 3. the Reference Laboratory is able to utilize specialized techniques that may yield results that the referring laboratory has been unable to obtain using conventional techniques (e.g., PHLs are Reference Laboratories for other Laboratories in the areas of bacteriology, virology, and mycology, etc.), or the referring Laboratory has a business arrangement with the Reference Laboratory to perform specific types of tests on its behalf.
Referrals	Transfer of laboratory tests to another laboratory for testing.
Registration	The process of validating the identity of an individual before he/she is registered with eHealth Ontario.
Registration Authority (RA)	Person who is responsible for the registration and service enrolment processes with the organization. The RA supports the LRAs and is responsible for providing the names of sponsors to the LRAs.
Release Note	Detailed notes produced by the software developer that outline the scope and impact of changes made in a software release.
Self Testing	The stage in which an OLIS Adopter tests their systems in the CST

Terms, Acronyms and Abbreviations	Definition
	environment in order to prepare for Conformance Testing. Testing in the CST environment is meant to ensure the LIS to OLIS interface functions as specified in the OLIS Interface Specifications and accurately reflects the data in the LIS. Self Testing can be performed by any organization who is an authorized OLIS user.
Specimen Collection Centre (SCC)	A place where specimens are taken or collected from the human body for examination to obtain information for diagnosis, prophylaxis or treatment
Specimen (Source)	A Specimen is a substance collected from the human body for examination to obtain information for diagnosis, prophylaxis, or treatment.
Sub-Discipline	An area of specialization within a Discipline.
Test	A medical procedure or analysis performed to detect, diagnose, or evaluate disease, disease processes and susceptibility.
Test Request	A request for a laboratory test or medical procedure that is generated by a licensed health care provider.
Test Result	The results of a laboratory test or medical procedure generated in response to a test request.
Testing System	A computer environment which contains either the current version or an unreleased version of LIS software and fictitious patient information. This system is used for development and training purposes.
Transaction	An exchange of information between two computer systems.
Walk-In Testing	Order retrieval process used by specimen collection centres to obtain orders for laboratory tests from OLIS that were placed by ordering practitioners. The orders will typically be retrieved at the time a patient visits the specimen collection centre (hence the reference to Walk-In)