Test Procedure for §170.306 (g) Reportable Lab Results

This document describes the test procedure for evaluating conformance of complete EHRs or EHR modules[1] to the certification criteria defined in 45 CFR Part 170 Subpart C of the Final Rule for Health Information Technology: Initial Set of standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology as published in the Federal Register on July 28, 2010. The document[2] is organized by test procedure and derived test requirements with traceability to the normative certification criteria as described in the Overview document located at http://healthcare.nist.gov/docs/TestProcedureOverview_v1.pdf. The test procedures may be updated to reflect on-going feedback received during the certification activities.

The HHS/Office of the National Coordinator for Health Information Technology (ONC) has defined the standards, implementation guides and certification criteria used in this test procedure. Applicability and interpretation of the standards, implementation guides and certification criteria to EHR technology is determined by ONC. Test procedures to evaluate conformance of EHR technology to ONC's requirements are defined by NIST. Testing of EHR technology is carried out by ONC-Authorized Testing and Certification Bodies (ATCBs), not NIST, as set forth in the final rule establishing the Temporary Certification Program (*Establishment of the Temporary Certification Program for Health Information Technology, 45 CFR Part 170; June 24, 2010*.)

Questions about the applicability of the standards, implementation guides or criteria should be directed to ONC at ONC.Certification@hhs.gov. Questions about the test procedures should be directed to NIST at hit-tst-fdbk@nist.gov. Note that NIST will automatically forward to ONC any questions regarding the applicability of the standards, implementation guides or criteria. Questions about functions and activities of the ATCBs should be directed to ONC at ONC.Certification@hhs.gov .

CERTIFICATION CRITERIA

This Certification Criterion is from the Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology Final Rule issued by the Department of Health and Human Services (HHS) on July 28, 2010.

§170.306 (g) Reportable lab results. Electronically record, modify, retrieve, and submit reportable clinical lab results in accordance with the standard (and applicable implementation specifications) specified in §170.205(c) and, at a minimum, the version of the standard specified in §170.207(c).

[1] Department of Health and Human Services, 45 CFR Part 170 Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, Final Rule, July 28, 2010.

[2] Disclaimer: Certain commercial products are identified in this document. Such identification does not imply recommendation or endorsement by the National Institute of Standards and Technology.

Per Section III.D of the preamble of the Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, Final Rule where the reportable lab results certification criterion is discussed:

- We clarify that the certification criterion does not specify, and is not intended to specify, the requirements for how the reports are to be triggered nor the periodicity of the reporting requirements. As a certification criterion, it only specifies capabilities necessary for certification.
- Each public health jurisdiction maintains its list of diseases or conditions that require notification of public health authorities by law. The CDC and the Council of State and Territorial Epidemiologists also maintain a list of nationally notifiable conditions (www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm). We reiterate, the adoption of this certification criterion is not intended to affect applicable Federal or state law concerning public health authority notification requirements.
- "We clarify that we do not expect Certified EHR Technology to natively (or internally) support LOINC in its entirety...". "…we agree with commenters that we should not require a LOINC code that has been received, to then be displayed." "…we expect Certified EHR Technology to be able to reuse a LOINC code once it has been received and is accessible to Certified EHR Technology. We do not expect…that Certified EHR Technology will have to crosswalk or map internal or local codes to LOINC codes." "This response is applicable to similar comments we received on other certification criteria that also referenced the use of LOINC codes."

INFORMATIVE TEST DESCRIPTION

This section provides an informative description of how the test procedure is organized and conducted. It is not intended to provide normative statements of the certification requirements.

This test evaluates the capability for a Complete EHR or EHR Module to electronically record, retrieve, and submit laboratory test results containing LOINC codes in HL7 v2.5.1 format to public health and other agencies. The EHR capability to record, display and submit the received laboratory test including the LOINC codes in HL7v 2.5.1 format will be evaluated.

The capability to modify the recorded laboratory test results is not included in this test procedure.

The Vendor provides part of the test data and NIST provides part of the test data for this test procedure.

The test procedure is organized into three sections:

- Record - evaluates the capability to enter LOINC-encoded laboratory test results in the EHR
    - The Tester enters the Vendor-supplied test results data and/or NIST-supplied laboratory test results examples/data into the EHR

- Retrieve - evaluates the capability to display LOINC-encoded laboratory test result data that have been entered into the EHR
    - The Tester displays the laboratory test result data entered during the test
    - The Tester validates that the displayed laboratory test results data are accurate and complete

- Submit – evaluates the capability of the EHR to electronically submit the LOINC-encoded laboratory test results in a conformant HL7 v2.5.1 format
    - Using Vendor-defined EHR functions, the Tester creates and uploads a lab message (composed of the LOINC-encoded laboratory test data entered into the EHR during the test procedure) to the NIST Test Tool identified in the Conformance Test Tools section of this test procedure
    - Using the NIST Test Tool identified in the Conformance Test Tools section of this test procedure, the Tester validates that the uploaded laboratory test message is conformant

REFERENCED STANDARDS

§170.205 Content exchange and implementation specifications for exchanging electronic health information	Regulatory Referenced Standard
The Secretary adopts the following content exchange standards and associated implementation specifications:	
(c) Electronic submission of lab results to public health agencies. Standard. HL7 2.5.1 (incorporated by reference in §170.299). Implementation specifications. HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm) (incorporated by reference in §170.299).	

§170.207 Vocabulary standards for representing electronic health information.	Regulatory Referenced Standard
The Secretary adopts the following code sets, terminology, and nomenclature as the vocabulary standards for the purpose of representing electronic health information:	
(c) Laboratory test results. Standard. Logical Observation Identifiers Names and Codes (LOINC®) version 2.27, when such codes were received within an electronic transaction from a laboratory (incorporated by reference in §170.299).	

NORMATIVE TEST PROCEDURES

Derived Test Requirements

DTR170.306.g – 1: Electronically Record Laboratory Test Results

DTR170.306.g – 2: Electronically Retrieve Laboratory Test Results

DTR170.306.g – 3: Electronically Submit Laboratory Test Results

DTR170.306.g – 1: Electronically Record Laboratory Test Results

Required Vendor Information

VE170.306.g – 1.01: Vendor shall identify an existing patient record in the EHR to be used for this test, and shall have entered Vendor-supplied information into the patient record for the following elements:

- Patient ID Number
- Assigning Authority
- Assigning Authority Universal ID
- Assigning Authority Universal ID Type
- Patient ID Number Type
- Family Name or Surname
- Given name
- Date of Birth
- Administrative Sex/Gender
- Race Identifier, Text, and Name of Race Coding System (appropriate for the NIST-supplied HL7 Race Coding System table)
- Ethnic Group Identifier, Text and Name of Ethnic Group Coding System (appropriate for the NIST-supplied HL7 Ethnic Group Coding System table)
- Patient address and phone data
  - Street Address
  - City
  - State
  - Zip Code
  - Country
  - Address Type
  - Home Telephone Number

VE170.306.g – 1.02: Vendor shall ensure that Vendor-supplied Performing Organization data are available in their EHR for this test for the following data elements:

- Organization Name
- Organization Name Type Code
- Assigning Authority Namespace ID
- Assigning Authority Universal ID
- Assigning Authority Universal ID Type
- Assigning Authority Identifier Type Code
- Assigning Authority Organization Identifier
- Performing Organization address data
  - Street or Mailing Address
  - City
  - State
  - Zip Code
  - Address Type

VE170.306.g – 1.03: Vendor shall ensure that Vendor-supplied Ordering Provider data are available in their EHR for this test for the following data elements[3]:

- Ordering Provider ID Number
- Ordering Provider Family Name/Surname and Given Name
- Assigning Authority Namespace ID
- Assigning Authority Universal ID
- Assigning Authority Universal ID Type
- Ordering Provider address data
  - Street or Mailing Address
  - City
  - State or Province
  - Zip Code
  - Address Type

VE170.306.g – 1.04: Vendor shall ensure that Vendor-supplied Ordering Facility data are available in their EHR for this test for the following data elements[4]:

- Organization Name
- Organization Name Type Code
- Assigning Authority Namespace ID
- Assigning Authority Universal ID
- Assigning Authority Universal ID Type
- Identifier Type Code
- Organization Identifier
- Ordering Facility address and phone data
  - Street or Mailing Address
  - City
  - State or Province
  - Zip Code
  - Address Type
  - Phone number

VE170.306.g – 1.05: Using the Test Data set selected by the Tester from TD170.306.g, Vendor shall identify to the Tester the Vendor-supplied laboratory test order and result data to be recorded or captured in the existing patient record for the following data elements:

- Set ID – OBR
- Filler Order Number Entity Identifier

[3] Depending on the Test Data set selected by the Tester from TD170.306.g, the vendor may need to provide either the Ordering Provider information or Ordering Facility information or both. Scenarios for populating the associated data elements include: (1) OBR-16 is populated; (2) ORC-21, ORC-22, and ORC-23 are populated; or (3) OBR-16, ORC-12, ORC-24, ORC-21, ORC-22, and ORC-23 are populated. In the case of (3), the data for OBR-16 and ORC-12 shall be the same. TD170.306.g provides different data sets to accommodate the three scenarios.

[4] Depending on the Test Data set selected by the Tester from TD170.306.g, the vendor may need to provide either the Ordering Provider information or Ordering Facility information or both. Scenarios for populating the associated data elements include: (1) OBR-16 is populated; (2) ORC-21, ORC-22, and ORC-23 are populated; or (3) OBR-16, ORC-12, ORC-24, ORC-21, ORC-22, and ORC-23 are populated. In the case of (3), the data for OBR-16 and ORC-12 shall be the same. TD170.306.g provides different data sets to accommodate the three scenarios.

- Filler Order Number Namespace ID
- Filler Order Number Universal ID
- Filler Order Number Universal ID Type
- Universal Service Text (Test Name appropriate for the NIST-supplied Universal Service Identifier (LOINC Code))
- Alternate Universal Service Identifier
- Alternate Universal Service Text
- Name of Alternate Universal Service Coding System
- Observation Date/Time
- Relevant Clinical Information
- Results Report/Status Change – Date/Time
- Reason for Study – Identifier
- Reason for Study – Text
- Reason for Study – Name of Coding System
- Set ID – OBX
- Result Value Type (appropriate for the NIST-supplied Observation Value)
- Observation Text (appropriate for the NIST-supplied Observation Identifier)
- Observation Sub-ID
- Results Units Text (appropriate for the NIST-supplied Units Identifier)
- Units Coding System
- References Range
- Abnormal Flag (if applicable)
- Susceptibility (if applicable)
- Date/Time of the Observation
- Observation Method (as appropriate for the NIST Test Data set selected by the Tester)
- Observation Method Identifier (as appropriate for the NIST Test Data set selected by the Tester)
- Date/Time of the Analysis
- Specimen Type Identifier (appropriate for the NIST-supplied lab test(s) in the Test Data set selected by the Tester)
- Specimen Type Text (appropriate for the NIST-supplied lab test(s) in the Test Data set selected by the Tester)
- Name of Specimen Type Coding System (appropriate for the NIST-supplied lab test(s) in the Test Data set selected by the Tester)
- Specimen Type Alternate Identifier (appropriate for the NIST-supplied lab test(s) in the Test Data set selected by the Tester)
- Specimen Type Alternate Text (appropriate for the NIST-supplied lab test(s) in the Test Data set selected by the Tester)
- Name of Alternate Specimen Type Coding System (appropriate for the NIST-supplied lab test(s) in the Test Data set selected by the Tester)
- Specimen Type Coding System Version ID
- Alternate Specimen Type Coding System Version ID

VE170.306.g – 1.06: Vendor shall identify the EHR function(s) that are available to 1) select an existing patient record, 2) enter laboratory test order and results data into the EHR, 3) retrieve the laboratory test results data and show where in the patient's record the LOINC codes associated with the laboratory test results data are stored, and 4) submit the laboratory test order and results data conformant with the HL7 2.5.1 standard and the HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm), and containing the LOINC codes associated with the laboratory test results

Required Test Procedure

TE170.306.g – 1.01: Tester shall select a data set from the NIST-supplied laboratory test results Test Data in TD170.306.g

TE170.306.g – 1.02: Tester shall obtain the Vendor-supplied laboratory test results data identified by the Vendor in VE170.306.g – 1.05

TE170.306.g – 1.03: Using the EHR function(s) identified by the Vendor, Tester shall select the patient's existing record and enter the Vendor-supplied laboratory test results test data identified by the Vendor in VE170.306.g – 1.05 and the NIST-supplied laboratory test results data from the selected data set in TD170.306.g

TE170.306.g – 1.04: Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the laboratory test results data are entered and captured correctly and without omission

Inspection Test Guide

IN170.306.g – 1.01: Using the NIST-supplied test data in the selected data set in TD170.306.g and the corresponding Vendor-supplied test data, Tester shall verify that the test data are entered and captured correctly and without omission

IN170.306.g – 1.02: Tester shall verify that the patient data, Ordering Provider data, Ordering Facility data, Performing Organization data, and laboratory test results data are stored in the patient's record

DTR170.306.g – 2: Electronically Retrieve Laboratory Test Results

Required Vendor Information

- As defined in DTR170.306.g – 1, no additional information is required

Required Test Procedure

TE170.306.g – 2.01: Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and shall display the laboratory test results entered during the DTR170.306.g – 1: Electronically Record Laboratory Test Results test

TE170.306.g – 2.02: Using the EHR function(s) identified by the Vendor, the Tester shall verify that the LOINC code(s) associated with the laboratory results data entered during the DTR170.306.g – 1: Electronically Record Laboratory Test Results test is/are stored in the patient's record

TE170.306.g – 2.03: Using the NIST-supplied Inspection Test Guide, the Tester shall verify that 1) the laboratory test results data display correctly and without omission, and 2) that the correct LOINC code(s) associated with the laboratory test results data is/are stored in the patient's record

Inspection Test Guide:

IN170.306.g – 2.01: Using the data in the NIST-supplied Test Data set TD170.306.g and the Vendor-supplied data identified by the Vendor, Tester shall verify that the laboratory test results data entered during the DTR170.306.g – 1: Electronically Record Laboratory Test Results test display correctly and without omission and that the correct LOINC code(s) is/are stored in the patient's record

DTR170.306.g – 3: Electronically Submit Laboratory Test Results

Required Vendor Information

- As defined in DTR170.306.g – 1, no additional information is required

Required Test Procedure

TE170.306.g – 3.01: Using EHR functions identified by the Vendor, the NIST-supplied Test Data Message Structures in TDMS170.306.g, and the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011, the Tester shall submit the entered laboratory test results

TE170.306.g – 3.02: Using the NIST-supplied Inspection Test Guide, the Tester shall verify conformance of the submitted laboratory test result message to the applicable standards and that the submitted laboratory test results data are correct and without omission

Inspection Test Guide

IN170.306.g. – 3.01: Using the NIST-supplied testing tool identified in the Conformance Test Tools section of this test procedure, the Tester shall verify that the submitted laboratory test result message is conformant with the HL7 2.5.1 standard and the HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm),

IN170.306.g. – 3.02: Using the NIST-supplied testing tool identified in the Conformance Test Tools section of this test procedure, the Tester shall verify that the submitted lab result message includes LOINC codes entered during the DTR170.306.g – 1: Electronically Record Laboratory Test Results test

TEST DATA

This Test Procedure requires the vendor to supply part of the test data. The Tester shall address the following:

- Vendor-supplied test data shall ensure that the functional and interoperable requirements identified in the criterion can be adequately evaluated for conformance

- Vendor-supplied test data shall strictly focus on meeting the basic capabilities required of an EHR relative to the certification criterion rather than exercising the full breadth/depth of capability that an installed EHR might be expected to support
- Tester shall record as part of the test documentation the specific Vendor-supplied test data that was utilized for testing

Part of the test data is provided by NIST for this Test Procedure to ensure that the functional and interoperable requirements identified in the criteria can be adequately evaluated for conformance, as well as to provide consistency in the testing process across multiple ONC-Authorized Testing and Certification Bodies (ATCBs). The NIST-supplied test data focus on evaluating the basic capabilities required of EHR technology, rather than exercising the full breadth/depth of capability that an installed EHR might be expected to support. The test data is formatted for readability of use within the testing process. The format is not prescribing a particular end-user view or rendering. No additional requirements should be drawn from the format.

The Tester shall use and apply the NIST-supplied test data during the test, without exception, unless one of the following conditions exists:

- The Tester determines that the Vendor product is sufficiently specialized that the NIST-supplied test data needs to be modified in order to conduct an adequate test. Having made the determination that some modification to the NIST-supplied test data is necessary, the Tester shall record the modifications made as part of the test documentation.
- The Tester determines that changes to the test data will improve the efficiency of the testing process; primarily through using consistent demographic data throughout the testing workflow. The Tester shall ensure that the functional and interoperable requirements identified in the criterion can be adequately evaluated for conformance and that the test data provides a comparable level of robustness.

Any departure from the NIST-supplied test data shall strictly focus on meeting the basic capabilities required of EHR technology relative to the certification criterion rather than full breadth/depth of capability that installed EHR technology might be expected to support.

The Test Procedures require that the Tester enter the test data into the EHR being evaluated for conformance. The intent is that the Tester fully controls the process of entering the test data in order to ensure that the data are correctly entered as specified in the test procedure. If a situation arises where it is impractical for a Tester to directly enter the test data, the Tester, at their discretion, may instruct the Vendor to enter the test data, so long as the Tester remains in full control of the testing process, directly observes the test data being entered by the Vendor, and validates that the test data are entered correctly as specified in the test procedure.

TEST DATA MESSAGE STRUCTURES

The Test Data Message Structures section includes charts that provide a detailed description of the message data elements required for this test procedure. In these charts, the information in the ***Location*** column indicates the canonical element location in the HL7 V2 message. For example, MSH-9.3 represents the 3rd component in the 9th field of the MSH segment. In the ***Data Element*** column is the name of each data element as specified by the HL7 V2 standard.

The source of test data for this test procedure is either NIST-supplied or Vendor-supplied. Vendor-supplied data can be system generated (i.e., system dependent, e.g., message control id) or fictitious data created by the vendor (e.g., an existing patient in the EHR). In the ***Test Data*** column in the charts, *NIST-Supplied* indicates the content for that data element is provided by NIST, and that this content is required for the test. As described in the Normative Test Procedures section of this document, the system being tested shall record and use these data to generate the message. In evaluation of the message, the exact content of these data will be examined by the Test Tool. *Vendor-Supplied* listed in the ***Test Data*** column indicates that these data are customarily provided by or exist in the system or are dependent on the system being tested. The system is expected to provide data for these elements.[5] In evaluation of the message, the Test Tool confirms the existence of the data, but will not evaluate the specific content for conformance.

When a Test Procedure states that the Vendor supplies the test data, the following guidance applies:

- Vendor-supplied test data should ensure that the functional and interoperable requirements identified in the criteria can be adequately evaluated for conformance
- Vendor-supplied test data should strictly focus on meeting the basic capabilities required of an EHR relative to the Test Procedure certification criteria rather than exercising the full breadth/depth of capability that an installed EHR might be expected to support
- Tester shall record as part of the test documentation exactly what Vendor-supplied test data were used

NIST has categorized the test data as NIST-supplied or Vendor-supplied. The ATCB has the latitude, as part of the testing process, to re-categorize these data based on the capabilities of the system being tested. Data values that appear in the ***Test Data*** column as "Fixed" must be in the message exactly as listed (e.g., MSH.9.1 must be ORU).

The ***Comments*** column of a chart provides additional information about the data element. The ***Table #*** column indicates the HL7 value set that is used to evaluate conformance of the data element.

[5] The data spreadsheet that accompanies the conformance test tool and the data sets in the Test Data for this test procedure contain example data values for Vendor-supplied data. The vendor may choose to use the NIST-supplied example data for Vendor-supplied data where appropriate.

TDMS170.306.g: Submit Laboratory Test Results

Reportable Lab Results – Message Header Segment

Location	Data Element	Test Data	Comments	Table #
MSH-1	Field Separator	|	FIXED	
MSH-2	Encoding Characters	^~\&	FIXED	
MSH-3	Sending Application			
MSH-3.1	Namespace ID	Vendor-Supplied		
MSH-3.2	Universal ID	Vendor-Supplied		
MSH-3.3	Universal ID Type	Vendor-Supplied		HL70301
MSH-4	Sending Facility			
MSH-4.1	Namespace ID	Vendor-Supplied		
MSH-4.2	Universal ID	Vendor-Supplied		
MSH-4.3	Universal ID Type	Vendor-Supplied		HL70301
MSH-5	Receiving Application			
MSH-5.1	Namespace ID	Vendor-Supplied		
MSH-5.2	Universal ID	Vendor-Supplied		
MSH-5.3	Universal ID Type	Vendor-Supplied		HL70301
MSH-6	Receiving Facility			
MSH-6.1	Namespace ID	Vendor-Supplied		
MSH-6.2	Universal ID	Vendor-Supplied		
MSH-6.3	Universal ID Type	Vendor-Supplied		HL70301
MSH-7.1	Date/Time of Message	Vendor-Supplied	Current time of the SUT	
MSH-9	Message Type		2.5.1	
MSH-9.1	Message Code	ORU	FIXED	HL70076
MSH-9.2	Event Type	R01	FIXED	HL70003
MSH-9.3	Message Structure	ORU_R01	FIXED	HL70354
MSH-10	Message Control ID		Created by the SUT	
MSH-11.1	Processing ID	P	FIXED	HL70103
MSH-12.1	Version ID	2.5.1	FIXED	HL70104
MSH-21	Message Profile Identifier			
MSH-21.1	Entity Identifier	PHLabReport-Ack::PHLabReport-NoAck	FIXED	
MSH-21.3	Universal ID	Vendor-supplied		
MSH-21.4	Universal ID Type	Vendor-supplied		

FIXED: the test data for this field will always be the same for any data set.

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document.

Reportable Lab Results – Software Segment

Location	Data Element	Test Data
SFT-1	Software Vendor Organization	
SFT-1.1	Organization Name	Vendor Supplied
SFT-2	Software Certified Version or Release Number	Vendor Supplied
SFT-3	Software Product Name	Vendor Supplied
SFT-4	Software Binary ID	Vendor Supplied
SFT-6	Software Install Date	Vendor Supplied

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document. In the cases where the data elements are designated as Vendor-supplied, the NIST-supplied data sets provide examples that the vendor may use if they prefer.

Reportable Lab Results – Patient ID Segment

Location	Data Element	Test Data	Table #
PID-3	Patient Identifier List		
PID-3.1	ID Number	Vendor-Supplied	
PID-3.4	Assigning Authority		
PID-3.4.1	Namespace ID	Vendor-Supplied	HL70300
PID-3.4.2	Universal ID	Vendor-Supplied	
PID-3.4.3	Universal ID Type	Vendor-Supplied	HL70301
PID-3.5	ID Number Type	Vendor-Supplied	HL70203
PID-5	Patient Name		
PID-5.1	Family Name		
PID-5.1.1	Surname	Vendor-Supplied	
PID-5.2	Given Name	Vendor-Supplied	
PID-7.1	Date of Birth	Vendor-Supplied	
PID-8	Administrative Sex	Vendor-Supplied	HL70001
PID-10	Race		
PID-10.1	Identifier	Vendor-Supplied	HL70005
PID-10.2	Text	Vendor-Supplied	
PID-10.3	Name of Coding System	NIST-supplied	
PID-11	Patient Address		
PID-11.1	Street Address		
PID-11.1.1	Street or Mailing Address	Vendor-Supplied	
PID-11.3	City	Vendor-Supplied	
PID-11.4	State	Vendor-Supplied	
PID-11.5	Zip Code	Vendor-Supplied	
PID-11.6	Country	Vendor-Supplied	HL70399

Location	Data Element	Test Data	Table #
PID-11.7	Address Type	Vendor-Supplied	HL70190
PID-13	Phone Number-Home		
PID-13.2	Telecommunication Use Code	Vendor-Supplied	
PID-13.6	Area/City Code	Vendor-Supplied	
PID-13.7	Local Number	Vendor-Supplied	
PID-22	Ethnic Group		
PID-22.1	Identifier	Vendor-Supplied	HL70189
PID-22.2	Text	Vendor-Supplied	
PID-22.3	Name of Coding System	NIST-supplied	

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document. In the cases where the data elements are designated as Vendor-supplied, the NIST-supplied data sets provide examples that the vendor may use if they prefer.

Reportable Lab Results – Order Request Segment

Location	Data Element	Test Data	Table #
ORC-1	Order Control	FIXED Value = RE	HL70119
ORC-12	Ordering Provider		
ORC-12.1	ID Number	Vendor-Supplied	
ORC-12.2	Family Name	Vendor-Supplied	
ORC-12.2.1	Surname	Vendor-Supplied	
ORC-12.3	Given Name	Vendor-Supplied	
ORC-12.9	Assigning Authority		
ORC-12.9.1	Namespace ID	Vendor-Supplied	
ORC-12.9.2	Universal ID	Vendor-Supplied	
ORC-12.9.3	Universal ID Type	Vendor-Supplied	
ORC-21	Ordering Facility Name		
ORC-21.1	Organization Name	Vendor-Supplied	
ORC-21.2	Organization Name Type Code	Vendor-Supplied	HL70204
ORC-21.6	Assigning Authority		
ORC-21.6.1	Namespace ID	Vendor-Supplied	
ORC-21.6.2	Universal ID	Vendor-Supplied	
ORC-21.6.3	Universal ID Type	Vendor-Supplied	
ORC-21.7	Identifier Type Code	Vendor-Supplied	HL70203
ORC-21.10	Organization Identifier	Vendor-Supplied	
ORC-22	Ordering Facility Address		
ORC-22.1	Street Address		
ORC-22.1.1	Street or Mailing Address	Vendor-Supplied	

Location	Data Element	Test Data	Table #
ORC-22.3	City	Vendor-Supplied	
ORC-22.4	State or Province	Vendor-Supplied	
ORC-22.5	Zip Code	Vendor-Supplied	
ORC-22.7	Address Type	Vendor-Supplied	HL70190
ORC-23	Ordering Facility Phone Number		
ORC-23.6	Area/City Code	Vendor-Supplied	
ORC-23.7	Local Number	Vendor-Supplied	
ORC-24	Ordering Provider Address		
ORC-24.1	Street Address		
ORC-24.1.1	Street or Mailing Address	Vendor-Supplied	
ORC-24.3	City	Vendor-Supplied	
ORC-24.4	State or Province	Vendor-Supplied	
ORC-24.5	Zip Code	Vendor-Supplied	
ORC-24.7	Address Type	Vendor-Supplied	HL70190

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document. In the cases where the data elements are designated as Vendor-supplied, the NIST-supplied data sets provide examples that the vendor may use if they prefer.

Reportable Lab Results – Observation Request Segment

Location	Data Element	Test Data	Table #
OBR-1	Set ID - OBR	Vendor-Supplied	
OBR-3	Filler Order Number		
OBR-3.1	Entity Identifier (ST)	Vendor-Supplied	
OBR-3.2	Namespace ID (IS)	Vendor-Supplied	
OBR-3.3	Universal ID (ST)	Vendor-Supplied	
OBR-3.4	Universal ID Type	Vendor-Supplied	
OBR-4	Universal Service Identifier		
OBR-4.1	Identifier (ST)	NIST-Supplied	
OBR-4.2	Text (ST)	Vendor-Supplied	
OBR-4.3	Name of Coding System (ID)	NIST-Supplied	HL70396
OBR-4.4	Alternate Identifier (ST)	Vendor-Supplied	
OBR-4.5	Alternate Text (ST)	Vendor-Supplied	
OBR-4.6	Name of Alternate Coding System	Vendor-Supplied	
OBR-7.1	Observation Date/Time	Vendor-Supplied	
OBR-13	Relevant Clinical Information	Vendor-Supplied	
OBR-16	Ordering Provider	Vendor-Supplied	
OBR-16.1	ID Number	Vendor-Supplied	
OBR-16.2	Family Name		

Location	Data Element	Test Data	Table #
OBR-16.2.1	Surname	Vendor-Supplied	
OBR-16.3	Given Name	Vendor-Supplied	
OBR-16.9	Assigning Authority		
OBR-16.9.1	Namespace ID	Vendor-Supplied	
OBR-16.9.2	Universal ID	Vendor-Supplied	
OBR-16.9.3	Universal ID Type	Vendor-Supplied	
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-Supplied	
OBR-25	Result Status	NIST-Supplied	HL70123
OBR-31	Reason for Study		
OBR-31.1	Identifier (ST)	Vendor-Supplied	
OBR-31.2	Text (ST)	Vendor-Supplied	
OBR-31.3	Name of Coding System (ID)	Vendor-Supplied	

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document. In the cases where the data elements are designated as Vendor-supplied, the NIST-supplied data sets provide examples that the vendor may use if they prefer.

Reportable Lab Results – Observation Result Segment

Location	Data Element	Test Data	Table #
OBX-1	Set ID – OBX	Vendor-Supplied	
OBX-2	Value Type	NIST-Supplied	HL70125
OBX-3	Observation ID		
OBX-3.1	Identifier	NIST-Supplied	
OBX-3.2	Text	Vendor-Supplied	
OBX-3.3	Coding System	NIST-Supplied	
OBX-4	Observation Sub-ID	Vendor-Supplied	
OBX-5	Observation Value	NIST-Supplied	
OBX-6	Units		
OBX-6.1	Identifier	NIST-Supplied	
OBX-6.2	Text	Vendor-Supplied	
OBX-6.3	Coding System	Vendor-Supplied	
OBX-7	References Range	Vendor-Supplied	
OBX-8	Abnormal Flags/Susceptibility	Vendor-Supplied	HL70078
OBX-11	Observation Result Status	NIST-Supplied	HL70085
OBX-14.1	Date/Time of the Observation	Vendor-Supplied	
OBX-17	Observation Method	Vendor-Supplied	
OBX.17.1	Identifier	Vendor-Supplied	
OBX-19.1	Date/Time of the Analysis	Vendor-Supplied	
OBX-23	Performing Organization Name		

Location	Data Element	Test Data	Table #
OBX-23.1	Organization Name	Vendor-Supplied	
OBX-23.2	Organization Name Type Code	Vendor-Supplied	HL70204
OBX-23.6	Assigning Authority		
OBX-23.6.1	Namespace ID	Vendor-Supplied	
OBX-23.6.2	Universal ID	Vendor-Supplied	
OBX-23.6.3	Universal ID Type	Vendor-Supplied	
OBX-23.7	Identifier Type Code	Vendor-Supplied	HL70203
OBX-23.10	Organization Identifier	Vendor-Supplied	
OBX-24	Performing Organization Address		
OBX-24.1	Street Address		
OBX-24.1.1	Street or Mailing Address	Vendor-Supplied	
OBX-24.3	City	Vendor-Supplied	
OBX-24.4	State or Province	Vendor-Supplied	
OBX-24.5	Zip Code	Vendor-Supplied	
OBX-24.7	Address Type	Vendor-Supplied	HL70190

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document. In the cases where the data elements are designated as Vendor-supplied, the NIST-supplied data sets provide examples that the vendor may use if they prefer.

Reportable Lab Results – Specimen Segment

Location	Data Element	Test Data	Table #
SPM-4	Specimen Type		
SPM-4.1	Identifier	Vendor-Supplied	
SPM-4.2	Text	Vendor-Supplied	
SPM-4.3	Name of Coding System	Vendor-Supplied	HL70396
SPM-4.4	Alternate Identifier	Vendor-Supplied	
SPM-4.5	Alternate Text	Vendor-Supplied	
SPM-4.6	Name of Alternate Coding System	Vendor-Supplied	HL70396
SPM-4.7	Coding System Version ID	Vendor-Supplied	
SPM-4.8	Alternate Coding System Version ID	Vendor-Supplied	

Vendor-supplied data either are pre-existing in the EHR, are entered by the vendor into the EHR for this test, or are generated automatically by the EHR during this test.

NIST-supplied data are provided in both the Test Data Message Structures spreadsheet at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 and in TD170.306.g of this test procedure document. In the cases where the data elements are designated as Vendor-supplied, the NIST-supplied data sets provide examples that the vendor may use if they prefer.

TD170.306.g: Record Laboratory Test Results

Reportable Lab Results - Data Set #1: Lead Poisoning

- One order, one result
- ORC-12 and ORC 24 Ordering Provider Information included
- ORC-21, ORC-22 and ORC-23 Ordering Facility Information included
- OBR-16 Ordering Provider Information included
- One instance of Reason for Study
- Final result

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-1	Software Vendor Organization		
SFT-1.1	Organization Name	Vendor-supplied	NIST Lab, Inc.
SFT-2	Software Certified Version or Release Number	Vendor-supplied	3.6.23
SFT-3	Software Product Name	Vendor-supplied	A-1 Lab System
SFT-4	Software Binary ID	Vendor-supplied	6742873-12
SFT-6.1	Software Install Date	Vendor-supplied	20080303
	Patient Information		
PID-3.1	Patient ID Number	Vendor-supplied	9817566735
PID-3.4.1	Assigning Authority	Vendor-supplied	MPI
PID-3.4.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.2.1
PID-3.4.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
PID-3.5	Patient ID Number Type	Vendor-supplied	MR
	Patient Name Information		
PID-5.1.1	Patient Family Name/Surname	Vendor-supplied	Johnson
PID-5.2	Patient Given Name	Vendor-supplied	Philip
PID-7.1	Patient Date of Birth	Vendor-supplied	20070526
PID-8	Patient Administrative Sex	Vendor-supplied	Male
PID-10.1	Race Identifier	Vendor-supplied	2106-3
PID-10.2	Race Text	Vendor-supplied	White
PID-10.3	Name of Race Coding System	HL7 0005	

Location	Data Element	Test Data	NIST- Supplied Examples
PID-22.1	Ethnic Group Identifier	Vendor-supplied	N
PID-22.2	Ethnic Group Text	Vendor-supplied	Not Hispanic or Latino
PID-22.3	Name of Ethnic Group Coding System	HL7 0189	
	Patient Address/Phone Number		
PID-11.1.1	Street or Mailing Address	Vendor-supplied	3345 Elm Street
PID-11.3	City	Vendor-supplied	Aurora
PID-11.4	State	Vendor-supplied	Colorado
PID-11.5	Zip Code	Vendor-supplied	80011
PID-11.6	Country	Vendor-supplied	USA
PID-11.7	Address Type	Vendor-supplied	Mailing
PID-13	Patient Home Phone Number	Vendor-supplied	303-554-8889
PID-13.2	Telecommunication Use Code	Vendor-supplied	PRN
	Lab Order Information		
ORC-1	Order Control	RE	
	Ordering Provider Information		
ORC-12.1	ID Number	Vendor-supplied	1234
ORC-12.2.1	Family Name/Surname	Vendor-supplied	Admit
ORC-12.3	Given Name	Vendor-supplied	Alan
ORC-12.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-12.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-12.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Ordering Provider Address Information		
ORC-24.1.1	Street or Mailing Address	Vendor-supplied	4444 Healthcare Drive
ORC-24.3	City	Vendor-supplied	Ann Arbor
ORC-24.4	State or Province	Vendor-supplied	MI
ORC-24.5	Zip Code	Vendor-supplied	48103
ORC-24.7	Address Type	Vendor-supplied	Business
	Ordering Facility Information		

Location	Data Element	Test Data	NIST- Supplied Examples
ORC-21.1	Organization Name	Vendor-supplied	Level Seven Healthcare
ORC-21.2	Organization Name Type Code	Vendor-supplied	L
ORC-21.6.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-21.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-21.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
ORC-21.7	Identifier Type Code	Vendor-supplied	XX
ORC-21.10	Organization Identifier	Vendor-supplied	1234
	Ordering Facility Address/Phone Number		
ORC-22.1.1	Street or Mailing Address	Vendor-supplied	1005 Healthcare Drive
ORC-22.3	City	Vendor-supplied	Ann Arbor
ORC-22.4	State or Province	Vendor-supplied	MI
ORC-22.5	Zip Code	Vendor-supplied	48103
ORC-22.7	Address Type	Vendor-supplied	Business
ORC-23	Ordering Facility Phone Number	Vendor-supplied	734-555-3001
OBR-1	Set ID – OBR	Vendor-supplied	1
OBR-3.1	Filler Order Number Entity Identifier	Vendor-supplied	9700123
OBR-3.2	Filler Order Number Namespace ID	Vendor-supplied	Lab
OBR-3.3	Filler Order Number Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.1.6
OBR-3.4	Filler Order Number Universal ID Type	Vendor-supplied	ISO
OBR-4.1	Universal Service Identifier (LOINC)	10368-9	
OBR-4.2	Universal Service Text	Vendor-supplied	Lead BldC-mCnc
OBR-4.3	Name of Universal Service Coding System	LOINC	
OBR-4.4	Alternate Universal Service Identifier	Vendor-supplied	3456543
OBR-4.5	Alternate Universal Service Text	Vendor-supplied	Blood lead test
OBR-4.6	Name of Alternate Universal Service Coding System	Vendor-supplied	99USI
OBR-7.1	Observation Date/Time	Vendor-supplied	200808151030-0700
OBR-13	Relevant Clinical Information	Vendor-supplied	Diarrhea
	Ordering Provider Information		

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-16.1	ID Number	Vendor-supplied	1234
OBR-16.2.1	Family Name/Surname	Vendor-supplied	Admit
OBR-16.3	Given Name	Vendor-supplied	Alan
OBR-16.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
OBR-16.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBR-16.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Results Information for Lab Order		
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-supplied	200808181800-0700
OBR-25	Result Status	Final	
	Reason for Study		
OBR-31.1	Identifier	Vendor-supplied	787.91
OBR-31.2	Text	Vendor-supplied	Diarrhea
OBR-31.3	Name of Coding System	Vendor-supplied	I9CDX
	Lab Result Information		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	NM
OBX-3.1	Observation Identifier	10368-9	
OBX-3.2	Observation Text	Vendor-supplied	Lead BldC-mCnc
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	50	
OBX-6.1	Units Identifier	ug/dL	
OBX-6.2	Units Text	Vendor-supplied	micro-gram per deci-liter
OBX-6.3	Units Coding System	Vendor-supplied	UCUM
OBX-7	References Range	Vendor-supplied	<9 ug/dL: Acceptable background lead exposure
OBX-8	Abnormal Flags	Vendor-supplied	Above High Normal
OBX-11	Observation Result Status	Final	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	200808151030-0700

Location	Data Element	Test Data	NIST- Supplied Examples
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	200808181800-0700
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Specimen Information		
SPM-4.1	Specimen Type Identifier	Vendor-supplied	122554006
SPM-4.2	Specimen Type Text	Vendor-supplied	Capillary blood specimen
SPM-4.3	Name of Specimen Type Coding System	Vendor-supplied	SCT
SPM-4.4	Specimen Type Alternate Identifier	Vendor-supplied	BLDC
SPM-4.5	Specimen Type Alternate Text	Vendor-supplied	Blood capillary
SPM-4.6	Name of Alternate Specimen Type Coding System	Vendor-supplied	HL70070
SPM-4.7	Specimen Type Coding System Version ID	Vendor-supplied	20080131
SPM-4.8	Alternate Specimen Type Coding System Version ID	Vendor-supplied	2.5.1

Reportable Lab Results - Data Set #2: Lead Poisoning

- One order, one result
- ORC-12 and ORC 24 Ordering Provider Information included
- ORC-21, ORC-22 and ORC-23 Ordering Facility Information included
- OBR-16 Ordering Provider Information included
- Three Instances of Reason for Study
- Final result

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-1	Software Vendor Organization		
SFT-1.1	Organization Name	Vendor-supplied	NIST Lab, Inc.
SFT-2	Software Certified Version or Release Number	Vendor-supplied	3.6.23
SFT-3	Software Product Name	Vendor-supplied	A-1 Lab System
SFT-4	Software Binary ID	Vendor-supplied	6742873-12
SFT-6.1	Software Install Date	Vendor-supplied	20080303
	Patient Information		
PID-3.1	Patient ID Number	Vendor-supplied	9817566735
PID-3.4.1	Assigning Authority	Vendor-supplied	MPI
PID-3.4.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.2.1
PID-3.4.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
PID-3.5	Patient ID Number Type	Vendor-supplied	MR
	Patient Name Information		
PID-5.1.1	Patient Family Name/Surname	Vendor-supplied	Johnson
PID-5.2	Patient Given Name	Vendor-supplied	Philip
PID-7.1	Patient Date of Birth	Vendor-supplied	20070526
PID-8	Patient Administrative Sex	Vendor-supplied	Male
PID-10.1	Race Identifier	Vendor-supplied	2106-3
PID-10.2	Race Text	Vendor-supplied	White
PID-10.3	Name of Race Coding System	HL7 0005	
PID-22.1	Ethnic Group Identifier	Vendor-supplied	N
PID-22.2	Ethnic Group Text	Vendor-supplied	Not Hispanic or Latino

Location	Data Element	Test Data	NIST- Supplied Examples
PID-22.3	Name of Ethnic Group Coding System	HL7 0189	
	Patient Address/Phone Number		
PID-11.1.1	Street or Mailing Address	Vendor-supplied	3345 Elm Street
PID-11.3	City	Vendor-supplied	Aurora
PID-11.4	State	Vendor-supplied	Colorado
PID-11.5	Zip Code	Vendor-supplied	80011
PID-11.6	Country	Vendor-supplied	USA
PID-11.7	Address Type	Vendor-supplied	Mailing
PID-13	Patient Home Phone Number	Vendor-supplied	303-554-8889
PID-13.2	Telecommunication Use Code	Vendor-supplied	PRN
	Lab Order Information		
ORC-1	Order Control	RE	
	Ordering Provider Information		
ORC-12.1	ID Number	Vendor-supplied	1234
ORC-12.2.1	Family Name/Surname	Vendor-supplied	Admit
ORC-12.3	Given Name	Vendor-supplied	Alan
ORC-12.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-12.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-12.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Ordering Provider Address Information		
ORC-24.1.1	Street or Mailing Address	Vendor-supplied	4444 Healthcare Drive
ORC-24.3	City	Vendor-supplied	Ann Arbor
ORC-24.4	State or Province	Vendor-supplied	MI
ORC-24.5	Zip Code	Vendor-supplied	48103
ORC-24.7	Address Type	Vendor-supplied	Business
	Ordering Facility Information		
ORC-21.1	Organization Name	Vendor-supplied	Level Seven Healthcare
ORC-21.2	Organization Name Type Code	Vendor-supplied	L

Location	Data Element	Test Data	NIST- Supplied Examples
ORC-21.6.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-21.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-21.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
ORC-21.7	Identifier Type Code	Vendor-supplied	XX
ORC-21.10	Organization Identifier	Vendor-supplied	1234
	Ordering Facility Address/Phone Number		
ORC-22.1.1	Street or Mailing Address	Vendor-supplied	1005 Healthcare Drive
ORC-22.3	City	Vendor-supplied	Ann Arbor
ORC-22.4	State or Province	Vendor-supplied	MI
ORC-22.5	Zip Code	Vendor-supplied	48103
ORC-22.7	Address Type	Vendor-supplied	Business
ORC-23	Ordering Facility Phone Number	Vendor-supplied	734-555-3001
OBR-1	Set ID - OBR	Vendor-supplied	1
OBR-3.1	Filler Order Number Entity Identifier	Vendor-supplied	9700123
OBR-3.2	Filler Order Number Namespace ID	Vendor-supplied	Lab
OBR-3.3	Filler Order Number Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.1.6
OBR-3.4	Filler Order Number Universal ID Type	Vendor-supplied	ISO
OBR-4.1	Universal Service Identifier (LOINC)	10368-9	
OBR-4.2	Universal Service Text	Vendor-supplied	Lead BldC-mCnc
OBR-4.3	Name of Universal Service Coding System	LOINC	
OBR-4.4	Alternate Universal Service Identifier	Vendor-supplied	3456543
OBR-4.5	Alternate Universal Service Text	Vendor-supplied	Blood lead test
OBR-4.6	Name of Alternate Universal Service Coding System	Vendor-supplied	99USI
OBR-7.1	Observation Date/Time	Vendor-supplied	200808151030-0700
OBR-13	Relevant Clinical Information	Vendor-supplied	Diarrhea, lethargy, abdominal pain X 2 days
	Ordering Provider Information		
OBR-16.1	ID Number	Vendor-supplied	1234

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-16.2.1	Family Name/Surname	Vendor-supplied	Admit
OBR-16.3	Given Name	Vendor-supplied	Alan
OBR-16.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
OBR-16.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBR-16.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Results Information for Lab Order		
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-supplied	200808181800-0700
OBR-25	Result Status	Final	
	Reason for Study		
OBR-31[1].1	Identifier	Vendor-supplied	787.91
OBR-31[1].2	Text	Vendor-supplied	Diarrhea
OBR-31[1].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[2].1	Identifier	Vendor-supplied	780.79
OBR-31[2].2	Text	Vendor-supplied	Lethargy
OBR-31[2].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[3].1	Identifier	Vendor-supplied	789.00
OBR-31[3].2	Text	Vendor-supplied	Abdominal pain
OBR-31[3].3	Name of Coding System	Vendor-supplied	I9CDX
	Lab Result Information		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	NM
OBX-3.1	Observation Identifier	10368-9	
OBX-3.2	Observation Text	Vendor-supplied	Lead BldC-mCnc
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	50	

Location	Data Element	Test Data	NIST- Supplied Examples
OBX-6.1	Units Identifier	ug/dL	
OBX-6.2	Units Text	Vendor-supplied	micro-gram per deci-liter
OBX-6.3	Units Coding System	Vendor-supplied	UCUM
OBX-7	References Range	Vendor-supplied	<9 ug/dL: Acceptable background lead exposure
OBX-8	Abnormal Flags	Vendor-supplied	Above High Normal
OBX-11	Observation Result Status	Final	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	200808151030-0700
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	200808181800-0700
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Specimen Information		
SPM-4.1	Specimen Type Identifier	Vendor-supplied	122554006
SPM-4.2	Specimen Type Text	Vendor-supplied	Capillary blood specimen

Location	Data Element	Test Data	NIST- Supplied Examples
SPM-4.3	Name of Specimen Type Coding System	Vendor-supplied	SCT
SPM-4.4	Specimen Type Alternate Identifier	Vendor-supplied	BLDC
SPM-4.5	Specimen Type Alternate Text	Vendor-supplied	Blood capillary
SPM-4.6	Name of Alternate Specimen Type Coding System	Vendor-supplied	HL70070
SPM-4.7	Specimen Type Coding System Version ID	Vendor-supplied	20080131
SPM-4.8	Alternate Specimen Type Coding System Version ID	Vendor-supplied	2.5.1

Reportable Lab Results - Data Set #3: Lead Poisoning

- One order, one result
- ORC-12 and ORC 24 Ordering Provider Information included
- ORC-21, ORC-22 and ORC-23 Ordering Facility Information included
- OBR-16 Ordering Provider Information included
- Three Instances of Reason for Study
- Corrected Result

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-1	Software Vendor Organization		
SFT-1.1	Organization Name	Vendor-supplied	NIST Lab, Inc.
SFT-2	Software Certified Version or Release Number	Vendor-supplied	3.6.23
SFT-3	Software Product Name	Vendor-supplied	A-1 Lab System
SFT-4	Software Binary ID	Vendor-supplied	6742873-12
SFT-6.1	Software Install Date	Vendor-supplied	20080303
	Patient Information		
PID-3.1	Patient ID Number	Vendor-supplied	9817566735
PID-3.4.1	Assigning Authority	Vendor-supplied	MPI
PID-3.4.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.2.1
PID-3.4.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
PID-3.5	Patient ID Number Type	Vendor-supplied	MR
	Patient Name Information		

Location	Data Element	Test Data	NIST- Supplied Examples
PID-5.1.1	Patient Family Name/Surname	Vendor-supplied	Johnson
PID-5.2	Patient Given Name	Vendor-supplied	Philip
PID-7.1	Patient Date of Birth	Vendor-supplied	20070526
PID-8	Patient Administrative Sex	Vendor-supplied	Male
PID-10.1	Race Identifier	Vendor-supplied	2106-3
PID-10.2	Race Text	Vendor-supplied	White
PID-10.3	Name of Race Coding System	HL7 0005	
PID-22.1	Ethnic Group Identifier	Vendor-supplied	N
PID-22.2	Ethnic Group Text	Vendor-supplied	Not Hispanic or Latino
PID-22.3	Name of Ethnic Group Coding System	HL7 0189	
	Patient Address/Phone Number		
PID-11.1.1	Street or Mailing Address	Vendor-supplied	3345 Elm Street
PID-11.3	City	Vendor-supplied	Aurora
PID-11.4	State	Vendor-supplied	Colorado
PID-11.5	Zip Code	Vendor-supplied	80011
PID-11.6	Country	Vendor-supplied	USA
PID-11.7	Address Type	Vendor-supplied	Mailing
PID-13	Patient Home Phone Number	Vendor-supplied	303-554-8889
PID-13.2	Telecommunication Use Code	Vendor-supplied	PRN
	Lab Order Information		
ORC-1	Order Control	RE	
	Ordering Provider Information		
ORC-12.1	ID Number	Vendor-supplied	1234
ORC-12.2.1	Family Name/Surname	Vendor-supplied	Admit
ORC-12.3	Given Name	Vendor-supplied	Alan
ORC-12.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-12.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-12.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO

Location	Data Element	Test Data	NIST- Supplied Examples
	Ordering Provider Address Information		
ORC-24.1.1	Street or Mailing Address	Vendor-supplied	4444 Healthcare Drive
ORC-24.3	City	Vendor-supplied	Ann Arbor
ORC-24.4	State or Province	Vendor-supplied	MI
ORC-24.5	Zip Code	Vendor-supplied	48103
ORC-24.7	Address Type	Vendor-supplied	Business
	Ordering Facility Information		
ORC-21.1	Organization Name	Vendor-supplied	Level Seven Healthcare
ORC-21.2	Organization Name Type Code	Vendor-supplied	L
ORC-21.6.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-21.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-21.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
ORC-21.7	Identifier Type Code	Vendor-supplied	XX
ORC-21.10	Organization Identifier	Vendor-supplied	1234
	Ordering Facility Address/Phone Number		
ORC-22.1.1	Street or Mailing Address	Vendor-supplied	1005 Healthcare Drive
ORC-22.3	City	Vendor-supplied	Ann Arbor
ORC-22.4	State or Province	Vendor-supplied	MI
ORC-22.5	Zip Code	Vendor-supplied	48103
ORC-22.7	Address Type	Vendor-supplied	Business
ORC-23	Ordering Facility Phone Number	Vendor-supplied	734-555-3001
OBR-1	Set ID - OBR	Vendor-supplied	1
OBR-3.1	Filler Order Number Entity Identifier	Vendor-supplied	9700123
OBR-3.2	Filler Order Number Namespace ID	Vendor-supplied	Lab
OBR-3.3	Filler Order Number Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.1.6
OBR-3.4	Filler Order Number Universal ID Type	Vendor-supplied	ISO
OBR-4.1	Universal Service Identifier (LOINC)	10368-9	
OBR-4.2	Universal Service Text	Vendor-supplied	Lead BldC-mCnc

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-4.3	Name of Universal Service Coding System	LOINC	
OBR-4.4	Alternate Universal Service Identifier	Vendor-supplied	3456543
OBR-4.5	Alternate Universal Service Text	Vendor-supplied	Blood lead test
OBR-4.6	Name of Alternate Universal Service Coding System	Vendor-supplied	99USI
OBR-7.1	Observation Date/Time	Vendor-supplied	200808151030-0700
OBR-13	Relevant Clinical Information	Vendor-supplied	Diarrhea, lethargy, abdominal pain X 2 days
	Ordering Provider Information		
OBR-16.1	ID Number	Vendor-supplied	1234
OBR-16.2.1	Family Name/Surname	Vendor-supplied	Admit
OBR-16.3	Given Name	Vendor-supplied	Alan
OBR-16.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
OBR-16.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBR-16.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Results Information for Lab Order		
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-supplied	200808181800-0700
OBR-25	Result Status	Corrected	
	Reason for Study		
OBR-31[1].1	Identifier	Vendor-supplied	787.91
OBR-31[1].2	Text	Vendor-supplied	Diarrhea
OBR-31[1].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[2].1	Identifier	Vendor-supplied	780.79
OBR-31[2].2	Text	Vendor-supplied	Lethargy
OBR-31[2].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[3].1	Identifier	Vendor-supplied	789.00
OBR-31[3].2	Text	Vendor-supplied	Abdominal pain

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-31[3].3	Name of Coding System	Vendor-supplied	I9CDX
	Lab Result Information		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	NM
OBX-3.1	Observation Identifier	10368-9	
OBX-3.2	Observation Text	Vendor-supplied	Lead BldC-mCnc
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	25	
OBX-6.1	Units Identifier	ug/dL	
OBX-6.2	Units Text	Vendor-supplied	micro-gram per deci-liter
OBX-6.3	Units Coding System	Vendor-supplied	UCUM
OBX-7	References Range	Vendor-supplied	<9 ug/dL: Acceptable background lead exposure
OBX-8	Abnormal Flags	Vendor-supplied	Above High Normal
OBX-11	Observation Result Status	Corrected	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	200808151030-0700
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	200808181800-0700
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236

Location	Data Element	Test Data	NIST- Supplied Examples
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Specimen Information		
SPM-4.1	Specimen Type Identifier	Vendor-supplied	122554006
SPM-4.2	Specimen Type Text	Vendor-supplied	Capillary blood specimen
SPM-4.3	Name of Specimen Type Coding System	Vendor-supplied	SCT
SPM-4.4	Specimen Type Alternate Identifier	Vendor-supplied	BLDC
SPM-4.5	Specimen Type Alternate Text	Vendor-supplied	Blood capillary
SPM-4.6	Name of Alternate Specimen Type Coding System	Vendor-supplied	HL70070
SPM-4.7	Specimen Type Coding System Version ID	Vendor-supplied	20080131
SPM-4.8	Alternate Specimen Type Coding System Version ID	Vendor-supplied	2.5.1

Reportable Lab Results - Data Set #4: Anthrax

- One order, one result
- ORC-12 and ORC 24 Ordering Provider Information included
- ORC-21, ORC-22 and ORC-23 Ordering Facility Information included
- OBR-16 Ordering Provider Information included
- Three instances of Reason for Study
- Final result

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-1	Software Vendor Organization		
SFT-1.1	Organization Name	Vendor-supplied	NIST Lab, Inc.
SFT-2	Software Certified Version or Release Number	Vendor-supplied	3.6.23
SFT-3	Software Product Name	Vendor-supplied	A-1 Lab System

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-4	Software Binary ID	Vendor-supplied	6742873-12
SFT-6.1	Software Install Date	Vendor-supplied	20080303
	Patient Information		
PID-3.1	Patient ID Number	Vendor-supplied	5667351009
PID-3.4.1	Assigning Authority	Vendor-supplied	MPI
PID-3.4.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.2.1
PID-3.4.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
PID-3.5	Patient ID Number Type	Vendor-supplied	MR
	Patient Name Information		
PID-5.1.1	Patient Family Name/Surname	Vendor-supplied	Anderson
PID-5.2	Patient Given Name	Vendor-supplied	Janet
PID-7.1	Patient Date of Birth	Vendor-supplied	September 30, 1986
PID-8	Patient Administrative Sex	Vendor-supplied	Female
PID-10.1	Race Identifier	Vendor-supplied	2106-3
PID-10.2	Race Text	Vendor-supplied	White
PID-10.3	Name of Race Coding System	HL7 0005	
PID-22.1	Ethnic Group Identifier	Vendor-supplied	N
PID-22.2	Ethnic Group Text	Vendor-supplied	Not Hispanic or Latino
PID-22.3	Name of Ethnic Group Coding System	HL7 0189	
	Patient Address/Phone Number		
PID-11.1.1	Street or Mailing Address	Vendor-supplied	3345 16th Street
PID-11.3	City	Vendor-supplied	Fargo
PID-11.4	State	Vendor-supplied	North Dakota
PID-11.5	Zip Code	Vendor-supplied	58104
PID-11.6	Country	Vendor-supplied	USA
PID-11.7	Address Type	Vendor-supplied	Mailing
PID-13	Patient Home Phone Number	Vendor-supplied	701-454-8989
PID-13.2	Telecommunication Use Code	Vendor-supplied	PRN

Location	Data Element	Test Data	NIST- Supplied Examples
	Lab Order Information		
ORC-1	Order Control	RE	
	Ordering Provider Information		
ORC-12.1	ID Number	Vendor-supplied	1234
ORC-12.2.1	Family Name/Surname	Vendor-supplied	Admit
ORC-12.3	Given Name	Vendor-supplied	Alan
ORC-12.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-12.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-12.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Ordering Provider Address Information		
ORC-24.1.1	Street or Mailing Address	Vendor-supplied	4444 Healthcare Drive
ORC-24.3	City	Vendor-supplied	Ann Arbor
ORC-24.4	State or Province	Vendor-supplied	MI
ORC-24.5	Zip Code	Vendor-supplied	48103
ORC-24.7	Address Type	Vendor-supplied	Business
	Ordering Facility Information		
ORC-21.1	Organization Name	Vendor-supplied	Level Seven Healthcare
ORC-21.2	Organization Name Type Code	Vendor-supplied	L
ORC-21.6.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
ORC-21.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-21.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
ORC-21.7	Identifier Type Code	Vendor-supplied	XX
ORC-21.10	Organization Identifier	Vendor-supplied	1234
	Ordering Facility Address/Phone Number		
ORC-22.1.1	Street or Mailing Address	Vendor-supplied	1005 Healthcare Drive
ORC-22.3	City	Vendor-supplied	Ann Arbor
ORC-22.4	State or Province	Vendor-supplied	MI
ORC-22.5	Zip Code	Vendor-supplied	48103

Location	Data Element	Test Data	NIST- Supplied Examples
ORC-22.7	Address Type	Vendor-supplied	Business
ORC-23	Ordering Facility Phone Number	Vendor-supplied	734-555-3001
OBR-1	Set ID - OBR	Vendor-supplied	1
OBR-3.1	Filler Order Number Entity Identifier	Vendor-supplied	8778324
OBR-3.2	Filler Order Number Namespace ID	Vendor-supplied	Lab
OBR-3.3	Filler Order Number Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.1.6
OBR-3.4	Filler Order Number Universal ID Type	Vendor-supplied	ISO
OBR-4.1	Universal Service Identifier (LOINC)	22860-1	
OBR-4.2	Universal Service Text	Vendor-supplied	Bacillus Anthracis Antibody
OBR-4.3	Name of Universal Service Coding System	LOINC	
OBR-4.4	Alternate Universal Service Identifier	Vendor-supplied	5423753
OBR-4.5	Alternate Universal Service Text	Vendor-supplied	Anthrax Test
OBR-4.6	Name of Alternate Universal Service Coding System	Vendor-supplied	99USI
OBR-7.1	Observation Date/Time	Vendor-supplied	August 2, 2010 1500
OBR-13	Relevant Clinical Information	Vendor-supplied	Fever, cough, diarrhea
	Ordering Provider Information		
OBR-16.1	ID Number	Vendor-supplied	1234
OBR-16.2.1	Family Name/Surname	Vendor-supplied	Admit
OBR-16.3	Given Name	Vendor-supplied	Alan
OBR-16.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center
OBR-16.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBR-16.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Results Information for Lab Order		
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-supplied	August 2, 2010 1630
OBR-25	Result Status	Final	
	Reason for Study		
OBR-31[1].1	Identifier	Vendor-supplied	787.91
OBR-31[1].2	Text	Vendor-supplied	Diarrhea

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-31[1].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[2].1	Identifier	Vendor-supplied	780.60
OBR-31[2].2	Text	Vendor-supplied	Fever
OBR-31[2].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[3].1	Identifier	Vendor-supplied	786.2
OBR-31[3].2	Text	Vendor-supplied	Cough
OBR-31[3].3	Name of Coding System	Vendor-supplied	I9CDX
	Lab Result Information		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	ST
OBX-3.1	Observation Identifier	11469-4	
OBX-3.2	Observation Text	Vendor-supplied	Bacillus Anthracis Identified
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	Isolated	
OBX-6.1	Units Identifier		
OBX-6.2	Units Text		
OBX-6.3	Units Coding System		
OBX-7	References Range		
OBX-8	Susceptibility Flags		
OBX-11	Observation Result Status	Final	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	August 2, 2010 1500
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	August 2, 2010 1630
	Performing Organization Information		

Location	Data Element	Test Data	NIST- Supplied Examples
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Specimen Information		
SPM-4.1	Specimen Type Identifier	Vendor-supplied	122555007
SPM-4.2	Specimen Type Text	Vendor-supplied	Venous blood specimen
SPM-4.3	Name of Specimen Type Coding System	Vendor-supplied	SCT
SPM-4.4	Specimen Type Alternate Identifier	Vendor-supplied	BLDV
SPM-4.5	Specimen Type Alternate Text	Vendor-supplied	Blood venous
SPM-4.6	Name of Alternate Specimen Type Coding System	Vendor-supplied	HL70070
SPM-4.7	Specimen Type Coding System Version ID	Vendor-supplied	20080131
SPM-4.8	Alternate Specimen Type Coding System Version ID	Vendor-supplied	2.5.1

Reportable Lab Results - Data Set #5: Hepatitis C

- One order, one result
- OBR-16 Ordering Provider Information included
- Two instances of Reason for Study
- Final result

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-1	Software Vendor Organization		
SFT-1.1	Organization Name	Vendor-supplied	NIST Lab, Inc.
SFT-2	Software Certified Version or Release Number	Vendor-supplied	3.6.23
SFT-3	Software Product Name	Vendor-supplied	A-1 Lab System
SFT-4	Software Binary ID	Vendor-supplied	6742873-12
SFT-6.1	Software Install Date	Vendor-supplied	20080303
	Patient Information		
PID-3.1	Patient ID Number	Vendor-supplied	686774009
PID-3.4.1	Assigning Authority	Vendor-supplied	MPI
PID-3.4.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.2.1
PID-3.4.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
PID-3.5	Patient ID Number Type	Vendor-supplied	MR
	Patient Name Information		
PID-5.1.1	Patient Family Name/Surname	Vendor-supplied	Takamura
PID-5.2	Patient Given Name	Vendor-supplied	Michael
PID-7.1	Patient Date of Birth	Vendor-supplied	August 15, 1982
PID-8	Patient Administrative Sex	Vendor-supplied	Male
PID-10.1	Race Identifier	Vendor-supplied	2028-9
PID-10.2	Race Text	Vendor-supplied	Asian
PID-10.3	Name of Race Coding System	HL7 0005	
PID-22.1	Ethnic Group Identifier	Vendor-supplied	N
PID-22.2	Ethnic Group Text	Vendor-supplied	Not Hispanic or Latino
PID-22.3	Name of Ethnic Group Coding System	HL7 0189	
	Patient Address/Phone Number		

Location	Data Element	Test Data	NIST- Supplied Examples
PID-11.1.1	Street or Mailing Address	Vendor-supplied	3567 Maple Street
PID-11.3	City	Vendor-supplied	Oakland
PID-11.4	State	Vendor-supplied	California
PID-11.5	Zip Code	Vendor-supplied	94605
PID-11.6	Country	Vendor-supplied	USA
PID-11.7	Address Type	Vendor-supplied	Mailing
PID-13	Patient Home Phone Number	Vendor-supplied	510-665-8876
PID-13.2	Telecommunication Use Code	Vendor-supplied	PRN
	Lab Order Information		
ORC-1	Order Control		
	Ordering Provider Information		
ORC-12.1	ID Number		
ORC-12.2.1	Family Name/Surname		
ORC-12.3	Given Name		
ORC-12.9.1	Assigning Authority Namespace ID		
ORC-12.9.2	Assigning Authority Universal ID		
ORC-12.9.3	Assigning Authority Universal ID Type		
	Ordering Provider Address Information		
ORC-24.1.1	Street or Mailing Address		
ORC-24.3	City		
ORC-24.4	State or Province		
ORC-24.5	Zip Code		
ORC-24.7	Address Type		
	Ordering Facility Information		
ORC-21.1	Organization Name		
ORC-21.2	Organization Name Type Code		
ORC-21.6.1	Assigning Authority Namespace ID		
ORC-21.6.2	Assigning Authority Universal ID		

Location	Data Element	Test Data	NIST- Supplied Examples
ORC-21.6.3	Assigning Authority Universal ID Type		
ORC-21.7	Identifier Type Code		
ORC-21.10	Organization Identifier		
	Ordering Facility Address/Phone Number		
ORC-22.1.1	Street or Mailing Address		
ORC-22.3	City		
ORC-22.4	State or Province		
ORC-22.5	Zip Code		
ORC-22.7	Address Type		
ORC-23	Ordering Facility Phone Number		
OBR-1	Set ID - OBR	1	
OBR-3.1	Filler Order Number Entity Identifier	Vendor-supplied	7564832
OBR-3.2	Filler Order Number Namespace ID	Vendor-supplied	Lab
OBR-3.3	Filler Order Number Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.1.6
OBR-3.4	Filler Order Number Universal ID Type	Vendor-supplied	ISO
OBR-4.1	Universal Service Identifier (LOINC)	10676-5	
OBR-4.2	Universal Service Text	Vendor-supplied	Hepatitis C Virus RNA
OBR-4.3	Name of Universal Service Coding System	LOINC	
OBR-4.4	Alternate Universal Service Identifier	Vendor-supplied	3656643
OBR-4.5	Alternate Universal Service Text	Vendor-supplied	Hepatitis C Test
OBR-4.6	Name of Alternate Universal Service Coding System	Vendor-supplied	99USI
OBR-7.1	Observation Date/Time	Vendor-supplied	July 28, 2010 1400
OBR-13	Relevant Clinical Information	Vendor-supplied	Nausea, vomiting, abdominal pain
	Ordering Provider Information		
OBR-16.1	ID Number	Vendor-supplied	1234
OBR-16.2.1	Family Name/Surname	Vendor-supplied	Admit
OBR-16.3	Given Name	Vendor-supplied	Alan
OBR-16.9.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-16.9.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBR-16.9.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
	Results Information for Lab Order		
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-supplied	July 30, 2010 1500
OBR-25	Result Status	Final	
	Reason for Study		
OBR-31[1].1	Identifier	Vendor-supplied	787.01
OBR-31[1].2	Text	Vendor-supplied	Nausea and vomiting
OBR-31[1].3	Name of Coding System	Vendor-supplied	I9CDX
	Reason for Study		
OBR-31[2].1	Identifier	Vendor-supplied	789.0
OBR-31[2].2	Text	Vendor-supplied	Abdominal pain
OBR-31[2].3	Name of Coding System	Vendor-supplied	I9CDX
	Lab Result Information		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	NM
OBX-3.1	Observation Identifier	10676-5	
OBX-3.2	Observation Text	Vendor-supplied	Hepatitis C Virus RNA
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	850,000	
OBX-6.1	Units Identifier	iU/mL	
OBX-6.2	Units Text	Vendor-supplied	international units per mililiter
OBX-6.3	Units Coding System	Vendor-supplied	UCUM
OBX-7	References Range	Vendor-supplied	High Viral Load > or = 850000iU/mL
OBX-8	Abnormal Flags	Vendor-supplied	Above high normal
OBX-11	Observation Result Status	Final	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	July 28, 2010 1400

Location	Data Element	Test Data	NIST- Supplied Examples
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	July 30, 2010 1500
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Specimen Information		
SPM-4.1	Specimen Type Identifier	Vendor-supplied	122555007
SPM-4.2	Specimen Type Text	Vendor-supplied	Venous blood specimen
SPM-4.3	Name of Specimen Type Coding System	Vendor-supplied	SCT
SPM-4.4	Specimen Type Alternate Identifier	Vendor-supplied	BLDV
SPM-4.5	Specimen Type Alternate Text	Vendor-supplied	Blood venous
SPM-4.6	Name of Alternate Specimen Type Coding System	Vendor-supplied	HL70070
SPM-4.7	Specimen Type Coding System Version ID	Vendor-supplied	20080131
SPM-4.8	Alternate Specimen Type Coding System Version ID	Vendor-supplied	2.5.1

Reportable Lab Results - Data Set #6: Stool Culture for Diarrhea

- One order, three results (multiple OBX Segments)
- ORC-21, ORC-22 and ORC-23 Ordering Facility Information included
- One instance of Reason for Study
- Final results

Location	Data Element	Test Data	NIST- Supplied Examples
SFT-1	Software Vendor Organization		
SFT-1.1	Organization Name	Vendor-supplied	NIST Lab, Inc.
SFT-2	Software Certified Version or Release Number	Vendor-supplied	3.6.23
SFT-3	Software Product Name	Vendor-supplied	A-1 Lab System
SFT-4	Software Binary ID	Vendor-supplied	6742873-12
SFT-6.1	Software Install Date	Vendor-supplied	20080303
	Patient Information		
PID-3.1	Patient ID Number	Vendor-supplied	987488015
PID-3.4.1	Assigning Authority	Vendor-supplied	MPI
PID-3.4.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.2.1
PID-3.4.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
PID-3.5	Patient ID Number Type	Vendor-supplied	MR
	Patient Name Information		
PID-5.1.1	Patient Family Name/Surname	Vendor-supplied	Whiteagle
PID-5.2	Patient Given Name	Vendor-supplied	Adam
PID-7.1	Patient Date of Birth	Vendor-supplied	March 21, 1980
PID-8	Patient Administrative Sex	Vendor-supplied	Male
PID-10.1	Race Identifier	Vendor-supplied	1002-5
PID-10.2	Race Text	Vendor-supplied	American Indian or Alaska Native
PID-10.3	Name of Race Coding System	HL7 0005	
PID-22.1	Ethnic Group Identifier	Vendor-supplied	N
PID-22.2	Ethnic Group Text	Vendor-supplied	Not Hispanic or Latino
PID-22.3	Name of Ethnic Group Coding System	HL7 0189	

Location	Data Element	Test Data	NIST- Supplied Examples
	Patient Address/Phone Number		
PID-11.1.1	Street or Mailing Address	Vendor-supplied	354 Glacier Road
PID-11.3	City	Vendor-supplied	Anchorage
PID-11.4	State	Vendor-supplied	Alaska
PID-11.5	Zip Code	Vendor-supplied	99505
PID-11.6	Country	Vendor-supplied	USA
PID-11.7	Address Type	Vendor-supplied	Mailing
PID-13	Patient Home Phone Number	Vendor-supplied	907-755-2189
PID-13.2	Telecommunication Use Code	Vendor-supplied	PRN
	Lab Order Information		
ORC-1	Order Control	RE	
	Ordering Provider Information		
ORC-12.1	ID Number		
ORC-12.2.1	Family Name/Surname		
ORC-12.3	Given Name		
ORC-12.9.1	Assigning Authority Namespace ID		
ORC-12.9.2	Assigning Authority Universal ID		
ORC-12.9.3	Assigning Authority Universal ID Type		
	Ordering Provider Address Information		
ORC-24.1.1	Street or Mailing Address		
ORC-24.3	City		
ORC-24.4	State or Province		
ORC-24.5	Zip Code		
ORC-24.7	Address Type		
	Ordering Facility Information		
ORC-21.1	Organization Name	Vendor-supplied	Level Seven Healthcare
ORC-21.2	Organization Name Type Code	Vendor-supplied	L
ORC-21.6.1	Assigning Authority Namespace ID	Vendor-supplied	ABC Medical Center

Location	Data Element	Test Data	NIST- Supplied Examples
ORC-21.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
ORC-21.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
ORC-21.7	Identifier Type Code	Vendor-supplied	XX
ORC-21.10	Organization Identifier	Vendor-supplied	1234
	Ordering Facility Address/Phone Number		
ORC-22.1.1	Street or Mailing Address	Vendor-supplied	1005 Healthcare Drive
ORC-22.3	City	Vendor-supplied	Ann Arbor
ORC-22.4	State or Province	Vendor-supplied	MI
ORC-22.5	Zip Code	Vendor-supplied	48103
ORC-22.7	Address Type	Vendor-supplied	Business
ORC-23	Ordering Facility Phone Number	Vendor-supplied	734-555-3001
OBR-1	Set ID - OBR	Vendor-supplied	1
OBR-3.1	Filler Order Number Entity Identifier	Vendor-supplied	2233817
OBR-3.2	Filler Order Number Namespace ID	Vendor-supplied	Lab
OBR-3.3	Filler Order Number Universal ID	Vendor-supplied	2.16.840.1.113883.19.3.1.6
OBR-3.4	Filler Order Number Universal ID Type	Vendor-supplied	ISO
OBR-4.1	Universal Service Identifier (LOINC)	625-4	
OBR-4.2	Universal Service Text	Vendor-supplied	Stool culture
OBR-4.3	Name of Universal Service Coding System	LOINC	
OBR-4.4	Alternate Universal Service Identifier	Vendor-supplied	8835327
OBR-4.5	Alternate Universal Service Text	Vendor-supplied	Stool culture test
OBR-4.6	Name of Alternate Universal Service Coding System	Vendor-supplied	99USI
OBR-7.1	Observation Date/Time	Vendor-supplied	July 26, 2010 1100
OBR-13	Relevant Clinical Information	Vendor-supplied	Diarrhea X 4 days
	Ordering Provider Information		
OBR-16.1	ID Number		
OBR-16.2.1	Family Name/Surname		
OBR-16.3	Given Name		

Location	Data Element	Test Data	NIST- Supplied Examples
OBR-16.9.1	Assigning Authority Namespace ID		
OBR-16.9.2	Assigning Authority Universal ID		
OBR-16.9.3	Assigning Authority Universal ID Type		
	Results Information for Lab Order		
OBR-22.1	Results Rpt/Status Chng - Date/Time	Vendor-supplied	July 29, 2010 1500
OBR-25	Result Status	Final	
	Reason for Study		
OBR-31.1	Identifier	Vendor-supplied	787.91
OBR-31.2	Text	Vendor-supplied	Diarrhea
OBR-31.3	Name of Coding System	Vendor-supplied	I9CDX
	Lab Result Information [1]		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	ST
OBX-3.1	Observation Identifier	6331-3	
OBX-3.2	Observation Text	Vendor-supplied	Campylobacter Jejuni AB
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	Isolated	
OBX-6.1	Units Identifier		
OBX-6.2	Units Text		
OBX-6.3	Units Coding System		
OBX-7	References Range		
OBX-8	Susceptibility Flags		
OBX-11	Observation Result Status	Final	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	July 26, 2010 1100
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	July 29, 2010 1500

Location	Data Element	Test Data	NIST- Supplied Examples
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23. 6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23. 6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Lab Result Information [2)		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	ST
OBX-3.1	Observation Identifier	20995-1	
OBX-3.2	Observation Text	Vendor-supplied	Salmonella
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	Isolated	
OBX-6.1	Units Identifier		
OBX-6.2	Units Text		
OBX-6.3	Units Coding System		
OBX-7	References Range		
OBX-8	Susceptibility Flags		
OBX-11	Observation Result Status	Final	

Location	Data Element	Test Data	NIST- Supplied Examples
OBX-14.1	Date/Time of the Observation	Vendor-supplied	July 26, 2010 1100
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	July 29, 2010 1500
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Lab Result Information [3]		
OBX-1	Set ID – OBX	Vendor-supplied	1
OBX-2	Value Type	Vendor-supplied	ST
OBX-3.1	Observation Identifier	17576-0	
OBX-3.2	Observation Text	Vendor-supplied	Shigella
OBX-3.3	Observation Coding System	LOINC	
OBX-4	Observation Sub-ID	Vendor-supplied	1
OBX-5	Observation Value	Not Isolated	
OBX-6.1	Units Identifier		
OBX-6.2	Units Text		

Location	Data Element	Test Data	NIST- Supplied Examples
OBX-6.3	Units Coding System		
OBX-7	References Range		
OBX-8	Susceptibility Flags		
OBX-11	Observation Result Status	Final	
OBX-14.1	Date/Time of the Observation	Vendor-supplied	July 26, 2010 1100
OBX-17	Observation Method		
OBX.17.1	Observation Method Identifier		
OBX-19.1	Date/Time of the Analysis	Vendor-supplied	July 29, 2010 1500
	Performing Organization Information		
OBX-23.1	Performing Organization Name	Vendor-supplied	Lab
OBX-23.2	Performing Organization Name Type Code	Vendor-supplied	L
OBX-23.6.1	Assigning Authority Namespace ID	Vendor-supplied	CLIA
OBX-23.6.2	Assigning Authority Universal ID	Vendor-supplied	2.16.840.1.113883.19.4.6
OBX-23.6.3	Assigning Authority Universal ID Type	Vendor-supplied	ISO
OBX-23.7	Assigning Authority Identifier Type Code	Vendor-supplied	XX
OBX-23.10	Assigning Authority Organization Identifier	Vendor-supplied	1236
	Performing Organization Address		
OBX-24.1.1	Street or Mailing Address	Vendor-supplied	3434 Industrial Lane
OBX-24.3	City	Vendor-supplied	Ann Arbor
OBX-24.4	State or Province	Vendor-supplied	MI
OBX-24.5	Zip Code	Vendor-supplied	48103
OBX-24.7	Address Type	Vendor-supplied	Business
	Specimen Information		
SPM-4.1	Specimen Type Identifier	Vendor-supplied	252393000
SPM-4.2	Specimen Type Text	Vendor-supplied	Stool specimen
SPM-4.3	Name of Specimen Type Coding System	Vendor-supplied	SCT
SPM-4.4	Specimen Type Alternate Identifier	Vendor-supplied	STL
SPM-4.5	Specimen Type Alternate Text	Vendor-supplied	Stool

Location	Data Element	Test Data	NIST- Supplied Examples
SPM-4.6	Name of Alternate Specimen Type Coding System	Vendor-supplied	HL70070
SPM-4.7	Specimen Type Coding System Version ID	Vendor-supplied	20080131
SPM-4.8	Alternate Specimen Type Coding System Version ID	Vendor-supplied	2.5.1

CONFORMANCE TEST TOOLS

The following testing tools are available to evaluate conformance to the standards referenced in this test procedure:

- HL7 v2 – NIST provides an HL7 v2 validation tool designed specifically to support this test procedure. The tool is available in three forms:
    - Web Application
    - Desktop Java Application
    - Java class library (archive/jar file)
- All three instances can be downloaded for local installation
- NIST is making available the web-accessible version for pre-testing
- The downloadable tools and the web application validation service are available at: http://xreg2.nist.gov:8080/HL7V2MuValidation2011

Support for these tools is available by contacting:

Rob Snelick (Robert.Snelick@nist.gov)
Computer Scientist
National Institute of Standards and Technology (NIST)
Information Technology Laboratory

The following information is provided to assist the Tester in interpreting the conformance reports generated by the NIST conformance testing tools.

The NIST HL7 conformance testing tool evaluates individual conformance statements which have been derived from the standards and implementation guides identified in the Final Rule and the test data provided in this test procedure. The conformance tool evaluates the submitted HL7 message for each conformance statement, and then produces a conformance report. The Tester should consider that a report containing only Affirmative and Warning messages indicates general conformance to the standard and test data expectations. If reported, Errors should be considered as significant departures from the standard or test data requirements which need to be corrected in order to claim conformance. ATCBs will need to further analyze each error to determine if, in the context of meeting the criterion and overall meaningful use objective, the error results in a failure of the Test Procedure by the EHR technology.

Document History

Version Number	Description	Date Published
0.8	Original draft version	March 22, 2010
1.0	Updated to reflect Final Rule	July 27, 2010
1.0	Updated to remove “Pending” from header	August 13, 2010
1.1	• In the Normative Test Procedures section, pages 3 to 8, the following changes were made: o VE170.306.g – 1.01 to 1.04: additional patient demographic, Performing Organization, Ordering Provider, and Ordering Facility data to be entered by Vendor o VE170.306.g – 1.05: additional Vendor-supplied laboratory test order and result data to be identified to the Tester for recording in the existing patient record o DTR170.306.g – 3: Electronically Submit Laboratory Test Results ▪ Inspection Test Guide - Corrected numbering typos; Deleted IN170.306.g – 3.02 second option: “The Tester shall visually inspect the submitted lab result message to verify that the LOINC codes entered during the DTR170.306.g – 1: Electronically Record Laboratory Test Results test are contained in the message” • In the Test Data section, pages 11-16, the following changes were made: o Content of the Test Data Message Structure tables in TDMS170.306.g: Submit Laboratory Test Results was updated to match the downloadable tools and the web application validation service available at http://xreg2.nist.gov:8080/HL7V2MuValidation2011 o A Test Data Message Structure table with Data Elements from the HL7 SFT Software Segment was added	September 8, 2010

Version Number	Description	Date Published
	• In the Test Data section, pages 17-50, the following changes were made: o North Dakota Zip Code corrected from 54102 to 58102 (page 33) o California Zip Code corrected from 94607 to 94605 (page 39) o Column for HL7 message "Location" added to all data set tables o Data Elements were added to all data set tables to match all HL7 message Locations included in the test procedure for message Segments SFT, PID, ORC, OBR, OBX, and SPM o NIST-supplied examples for Vendor-supplied test data provided for the Data Elements matching all HL7 message Locations included in the test procedure for message Segments SFT, PID, ORC, OBR, OBX, and SPM where non-Vendor-supplied test data is required o LOINC codes were added for both the OBR and OBX segments, and LOINC codes were changed for the Stool Culture for Diarrhea data set: o The following Data Sets were deleted: ▪ Lead Poisoning & Pertussis ▪ Malaria & Anthrax ▪ Pertussis o Added three Data Sets for Lead Poisoning o Modified the following Data Sets ▪ Anthrax ▪ Hepatitis C ▪ Stool Culture for Diarrhea o Changed all Performing Organization Addresses o Added Performing Organization Information for all data sets o Added Ordering Provider Information for all data sets	
1.1	In the Referenced Standards section • Added explanatory verbiage In the Test Data Message Structure section • Changed MSH 5 from "Sending Facility" to "Receiving Application" • Changed MSH 6 from "Sending Facility" to "Receiving Facility" • Added PID-13.2 Telecommunication Use Code In the Test Data section • Added PID-13.2 Telecommunication Use Code	September 24, 2010