CalREDIE HL7 2.5.1 ELR2PH Companion Guide

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Revision History

Date	Document Version	Profile Version	Release Status	Person Updating	Description
06-29-2011	1.00	1.00	Test Phase	E. Haas	Version 1.00 for test phase.
09-13-2011	1.01	1.01	Production	E. Haas	Begin draft of v 1.01 for production.
10/17/2011	1.01	1.01	Production	E. Haas	Published v 1.01 along with rev. list and production document showing markup between version 1.00 and 1.01.
10/23/2011	1.01	1.01CA	Draft	P. Duffey	California changes to include deprecated and optional fields and components not supported, but required as placeholders; also converted some optional fields/field components to RE or CE for California use. Incorporated V2.7 conditionals C (RE/X); C(R/RE), C(R/X). Replaced existing descriptive information with the Excel Version of the V1.01CA Segment elements for the above data usages for clarity and consistency.
10/29/2011	1.01	1.01CA	Draft	P. Duffey	For the CWE.7 and CWE.8 components, changed Data usage from C(R/X) to RE for LTIAPH compatibility. Added to Common Core Data Elements list PID.15, PID.16, PID.23, PID.24, PID.25 and NK1.20 as California-specific requirements.
11/09/2011	1.01	1.01	LTIAPH Production version.	E. Haas	Updated data and document title in footer. Updated PLT-40 to LOINC 68991-9 Note: these changes were also incorporated into the CA draft.
11/24/2011	1.01	1.01	LTAPH Production version	E. Haas	Correction of typos. Including CE to RE for SPM.22 and SPM.24 to be consistent throughout document and removed reference to conditionality in comments for this element. Note: These changes were incorporated into the CA Draft as well (PD).

Date	Document Version	Profile Version	Release Status	Person Updating	Description
12/5/2011	1.01	1.01	LTIAPH Production version	E. Haas	Correction of Usage types in static definition tables: PV1.3 and PV1.4 usage changed from to C(RE/O), PV1.3.6.11 usage changed from RE to C(RE/X). OBR.26.1.7, OBR.26.1.8, OBR.31.7 and OBR.31.8 from C(RE/X) to RE. Changed the phrase for all CWE.7 and CWE.8 data type element from C(R/X) to RE ".If no local coding system version is known, default to the string value "v unknown" to "If no local coding system version is known, *suggest using* the string value "v unknown". Remove from LTIAPH Implementation Conventions section: "Use Lab Sender Profile for Sender and ELR receiver Profile for Agency since contradicts usage single profile for both parties discussed in introductory section. Note: These changes were incorporated into the CA Draft as well (PD).
12/22/2011	1.01	1.01CA.R1	Draft	P. Duffey	Moved CA tables into this copy of the 12/5/2011 revised LTIAPH production document; changed the LTIAPH cover page; re-titled as a CA Companion Guide, removed references to LTIAPH as requested by E. Haas; initiated edits and comparisons with content from the 10/29 P. Duffey revision. Reviewed the imported tables and added missing cardinalities (as requested by users). Reviewed the narratives describing usage changes and matched the comments with the actual changes implemented in the segment tables. Work remains to be done to complete the document comparison and make any critical changes. Appendices B, C, and D need to be added to the table of contents. Pagination will have to be checked and page numbers revised accordingly. Adjustments to the document formatting will be needed (this document is presented as landscape, but formatting of paragraphs, etc. appears to be for a portrait orientation. However, the document must be regarded (change added 1/10/2012, PD) as an in-process draft at this time.
1/20/2010	1.01	1.01CA.R1	Draft	P. Duffey	Completed format changes to fit landscape orientation; standardized on Calibri font for text and Cambria fonts for headings. Addressed comments inserted by R. Lutolf in narratives and in comments sections of tables, which required some narrative changes. Made text modifications to improve clarity; added SPM examples for use of LOINC code in SPM.4 with SNOMED code in SPM.8. Some cosmetic changes remain to be addressed; may be some error correction needed here and there.

Date	Document Version	Profile Version	Release Status	Person Updating	Description
02/21/2012	1.01	1.01CA.R1	Draft	S. Pon, et. All.	Re-formatted 01/20/2012 document, and re-titled it to permit publication on the CDPH ELR website. Current title: "ELR2PH HL7 2.5.1 Implementation Guide Draft CalREDIE"
03/05/2012	1.01	1.01CA.R1	draft	P. Duffey	Cross-mapped errata developed from 1/20/2012 version to the 2/23/2012 version and made corrections. These were mainly changes to narrative, not including text within the segment tables with one or two exceptions.
05/22/2012	1.01	1.01CA.R1	draft	P. Duffey	Document re-pagination, revised title, added corrections and additions to table element comments, updated errata list as of 05/22/2012. Continuing review for additional errata .Prepared and updated a companion errata list detailing the location and nature of changes/corrections made.
06/08/2012	1.01	1.01CA.R2	draft	P. Duffey	Revised the title, header and footer; made additional corrections consistent with the most current HL7 ver. 2.5.1 ORU^R01 ELR2PH guide errata list (Oct. 2012).Made adjustments to positioning,, necessitating updating of pagination and page references, etc. Assigned new Revision number (R2); included a tabular list of corrected errata including text revisions and re-titling as Appendix C (starting on page 183).
07/23/2012	1.01	1.01CA R2	draft	P. Duffey	Added reference to PHVS_Microorganism_CDC_V5 to the Value Set for OBX.5; Changed Comment in OBX.25.0 to point out that with OBX.15 not supported, the OBX.25.9 component would not be populated; changed the comment in SPM.6 to indicate examples of the kinds of additives or preservatives that might be cited; added the PHVS_AdditiveOrPreservative to the SPM.6 value set.
08/30/2012	1.01	1.01CA R2	draft	P. Duffey	Corrected HL7 element ORC.12.14 LTIAPH Definition from patient identifier to assigning facility identifier. Page 83. Corrected HL7 element name for ORC.23.1 from Street Address to Telephone Number; replaced Comment with the correct comment for Telephone Number, Page 89..

Table of Contents

Terms and Acronyms

This section defines the terms and acronyms that are commonly used throughout this Implementation Guide.

CDPH: An acronym for the California Department of Public Health.

CLIA: An acronym for the Clinical Laboratory Improvement Act.

CMS: An acronym for the Center for Medicare Services**.**

DCDC: An acronym for the Division of Disease Control, Center for Infectious Diseases (CID), California Department of Public Health.

Coded Element: A message element that consists of a code with associated components and sub-components.

Common Core Data Elements: The minimal set of data elements required for a meaningful electronic laboratory report (ELR) message.

CRSWG: An acronym for the Case Reports Standardization Work Group.

CSTE: An acronym for the Council of State and Territorial Epidemiologists.

EHR: An acronym for Electronic Health Record.

ELR: An acronym for Electronic Laboratory Report.

ELR2PH: An acronym for Electronic Laboratory Reporting to Public Health.

ELR SharePoint Site: A website maintained by CDPH/DCDC for state and partner organizations providing documents, etc. required for participation in ELR2PH.

GUID: An acronym for Globally Unique Identifier- used to uniquely identify individual HL7 message instances.

HL7: An acronym for the Health Level 7 medical messaging system and the organization that created and supports it**.**

IG: An acronym for Implementation Guide.

ISO: An acronym for International Standards Organization; an organization that assigns Universal Identifiers (i.e., OIDs, etc.).

LabCOP: An acronym for the Laboratory Community of Practice workgroup.

LTIAPH: An acronym for the Laboratory Technical Implementation Assistance for Public Health, and APHL/CDC joint project for implementation of ELR2PH messaging**.**

NHSN: An acronym for the National Healthcare Safety Network.

NIST: An acronym for the National Institute of Standards and Technology.

OID: An acronym for Object Identifier, which is a code number identifying an object used in ELR2PH messaging.

OIDs: The plural of OID.

ONC: An acronym for the Office of the National Coordinator, which sets the requirement for “Meaningful Use messaging.

Organization OID: An Object Identifier specific to an organization.

ORU^R01: An HL7 message naming component that identifies one among several HL7 Unsolicited Observation Report message variants.

PHCR: An acronym for Public Health Case Report(ing).

PHLabReport-Ack: An identifier field in MSH.21 of an HL7 message sent by a laboratory to a receiver to elicit an acknowledgement or in a reply message sent by a receiver to a laboratory sender to acknowledge that the message was received.

PHLabReport-NoAck: An identifier field in an HL7 message sent by a laboratory to a receiver to notify the receiver that no acknowledgement is required. Similarly, it can be used by an ELR receiver in an HL7 response message to the sender to indicate that the sender need not acknowledge the message.

PHLabReport-Batch: An Identifier in MSH.21 indicating to the receiver that the message being sent is a batch message (not used in California).

Plas: An abbreviated LOINC specimen designator used in the LOINC System component indicating that the specimen is plasma.

RCMT: An acronym for the national Reportable Condition Mapping Table work group that defines the set of reportable conditions, test request and results codes, specimen codes, etc. that must be used for ELR2PH reporting.

S & I Framework: Standards and Interoperability Framework working group for ELR2PH message harmonization.

Ser: An abbreviated LOINC specimen designator used in the LOINC System component indicating that the specimen is serum.

System/Software OID: An object identifier code intended to identify the data system or software component used to create and send or receive an HL7 message.

The Guide: An abbreviation for the HL7 message implementation guide provided for use in configuring a data system to send the ELR2PH message.

Universal ID: A unique identifier code issued by an international standards authority (usually an OID, but can be a CLIA number, NPI number, etc.) used to validate the source of the coded information being sent.

1 Introduction

In order to proceed with developing and employing the capability to implement the "HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm)" (The Guide or ELR2PH), you must obtain a legal copy of the guide directly from the HL7 organization. If your organization is a member of HL7, the ELR2PH guide may be obtained without cost; otherwise, the ELR2PH guide is obtained from the HL7 store at a nominal fee of $50. A link to purchase the HL7 guide is as follows: https://www.hl7.org/store/index.cfm; and may also be found at the CDPH CalREDIE ELR SharePoint site. The link to the CDPH CalREDIE site is as follows; http://www.cdph.ca.gov/Pages/DEFAULT.aspx.Search using the key word "ELR". Once there, look for the link "HL7 ELR Implementation Guide" toward the bottom of the page.

This California guide is intended for use as a companion to the nationally, ONC-mandated ELR2PH guide, and is not intended as a substitute or replacement for that guide. Rather, this companion guide is intended as an aid in constraining the requirements of the ELR2PH guide for use with the CalREDIE system. The companion guide includes recommended constraints, provides some elements converted from usage "O" to usage "RE" or "CE" to allow for inclusion of data elements jurisdictionally required by the California Disease Reporting System, but not mandated by the ELR2PH Guide. Elements unique to this implementation are highlighted in the segment tables below and in the "Common Core Data Elements" table through the use of highlighting the element rows in "**Olive**" background or in some instances using **bold** "**Olive**" font on a white background. Similarly, elements, whether considered optional, deprecated, or not supported in the Guide, but that are interspersed among supported elements **are highlighted in Yellow Background and bold red font, with the field lengths and cardinalities specified as (0..0) and [0..0], respectively. Usages are designated as "X" as a reminder to include the delimiters ("|", "^""&") as needed to assure the correct order of the elements in the message**. Element components that are unsupported and are also terminal to supported components within a complex coded element (components, sub-components) are not included in the segment tables; similarly, elements including all their components and sub-components that are terminal to a message segment (i.e., no following, supported elements) are also not included in the segment tables. A reminder of which elements are not included is shown at the foot of each segment table in which terminal elements, etc. are not supported. This companion guide has been harmonized to permit the Lab Sender and Lab Receiver to employ this single constrained message.

The goal of this document is to provide a single, constrained messaging profile usable with the ELR2PH HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm). This approach provides a baseline profile while allowing flexibility to accommodate individual implementations or use of a common profile; as long as the ELR2PH message validation requirements as specified by ONC and CMS are met. For that purpose, CDC PHIN VADS provides an on-line MQF validator tool that validates both for

message structure and vocabulary (the link is as follows: https://phinmqf.cdc.gov/.) The NIST validator required for CMS validation is found at URL:http://xreg2.nist.gov:8080/HL7V2MuValidation2011/ - message%2Ffiles.htm%3Fts%3D1329233995493. Please be aware that the NIST validator is incomplete and does not do a thorough message validation. Our understanding is that It will not be modified further. However it is needed only to demonstrate the ability to meet CMS requirements, but does not assure that all message requirements will be met. The MQF validator does a much more complete validation, but still has some issues, which are described in an errata document that will be available in the CDPH CalREDIE ELR site and will be updated as the errata are corrected

This document grew out of a need to describe the APHL/LTIAPH pilot implementation of HL7 messages for ELR reporting of reportable laboratory results from public health laboratories to their jurisdictional public health agencies. However, the intent also was to create a document that could be generalized for ELR2PH reporting from all California reporting laboratory partners to their jurisdictional public health agencies. A Constrained HL7 message profile is a precise and unambiguous specification of an HL7 standard message that has been analyzed for use within a particular set of requirements. It is a particular style or usage of a standard HL7 message, driven by use-case analysis and interaction modeling. An HL7 message guide defines both the static structure and content of the message and the dynamic message definition, such as defining the communication of a message from the sending application to one or more receiving applications. Refer to the ELR2PH HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm) for the discussion of scope and conventions, the messaging infrastructure, use of escape sequences, data types, use case analysis, interaction modeling and the dynamic message definitions. This document will focus on the Static Definitions, vocabulary and messaging conventions for correct implementation of the ELR2PH message.

1.1 Unsolicited Results from Laboratories to Public Health Agencies

The ELR2PH HL7 2.5.1 guide “contains the necessary specifications for laboratory results reporting to local, state, territorial and federal health agencies.” using a constrained ORU^R01 message for transmitting laboratory results from the testing source to Public Health. In order to create this document, the following assumptions were made:

1.1.1 Notes for Developers

- ☐ The Focus is on ORU^R01 for ELR2PH reporting (No Lab to EHR)

- ☐ This constrained profile harmonizes the Lab Sender Profile and the ELR Receiver Profile into a single profile. The following elements in the ELR Receiver profile conformance usages were changed to harmonize with the LAB Sender Profile:
    - Changed MSH.17 Country Code sender usage from “O” to “RE”.
    - Changed PV1.3 from “O” to “C(RE/X)”
    - Changed OBR.24 Order Diagnostic Service Section ID receiver usage from “O” to “RE”
    - Changed ORC.5 Order Status usage from “O” to “RE”
    - Changed SPM.22 and SPM.24 usages from “O” to RE
    - Changed Non-OBX.5 CWE data type elements 10,11,13,and 14 relating to the Second alternative Code triplet from usage “O” to the following: RE (component 10), “C(RE/X)” (Components 11 and 13), “C(R/X)” (Components 12 and 14)
    - Changed EIP data type element 1 – Placer Assigned Identifier from “O” to “RE”.
- ☐ NHSN no longer supports the ELR2PH HL7 2.5.1 ORU^R01 message. Accordingly, the NHSN-harmonized conditionalities related to the Lab Sender implementation are for the most part ignored.
    - Changes are:
        - XPN – extended person name data type element 1 - Family name; and element 2 - Given name usages were changed from “CE” to “RE”.
        - CWE data type element 7 - Coding System Version ID and element 8 – Alternate Coding System Version ID conformance usages were changed from “CE” to “RE”.
        - MSH.17 – Country Code sender usage was changed from “R” to “RE”. Please note that this will be hard-coded as “USA” and is not to be left empty.
        - PID.18 – Patient Account Number usage was changed from “C” to “O”. Note: Treat as usage “X”
        - PID.31 - Identity Unknown Indicator was changed from usage “C” to “O”. Note: Treat as usage “X”
        - OBR.28 – Result Copies was changed from usage “RE” to “O”. Note: Treat as usage “X”
        - DR data type element 1 - Range Start Date/Time usage changed from “R” to “RE”
        - XCN data type element 12 - Check Digit scheme usage was changed from “CE” to “O”. Note: Treat as usage “X”
    - With the above exceptions regarding the NHSN, the underlying conformance rules (usage) in ELR2PH (“R”, “CE”, “C”, “RE”, “X”) will not be changed in order to preserve cross jurisdictional interoperability, although the Conditional conformance rules are subsequently further refined - see the following bulleted items.
    - All undefined elements (O) in ELR2PH for the LAB Sender Profile will not be supported; i.e., changed to usage “X”, with the following exceptions:
        - For LTIAPH use, ORC.5 Order Status usage was changed from “O” to “RE”
        - For LTAPH use, SPM.22 usage was changed from “O” to “RE” and SPM.24 changed from usage “O” to “C(RE/X)”
        - **For CDPH use, PID.15 – Primary Language was changed from “O” to “’RE”.**
        - **For CDPH use, PID.16 – Marital Status was changed from “O” to “RE”.**

- **For CDPH use, PID.23 – Birth Place was changed from "O" to "RE".**
- **For CDPH use, PID.24 – Multiple Birth Indicator was changed from "O" to "RE".**
- **For CDPH use, NK1.20 – Primary Language was changed from "O" to "RE".**
- Some ordering information may or may not be included in the message; (i.e., OBR.2, OBR.16, OBR.17 are Usage RE, so may be left empty if the information is not available). Element ORC.2 is a conditional that must contain the same information as shown in OBR.2.

☐ Specimens submitted and received may only be from human clinical samples. Associated animal rabies submissions are not being received or recorded at this time and information concerning other animal specimen submissions will not be considered.

☐ The "Ack" message itself is not described in this document. Refer to the ELR2PH guide, chapter 5 sections 5.3 and 5.4 for this information.

☐ The Batch message is not described in this document. Refer to Chapter 5, Sections 5.17 and 5.18 of the 2010 ELR2PH guide for this information. California currently does not receive batch ELR2PH messages.

☐ All undefined truncation behavior for the ELR Receiver regarding component length (i.e., where the data length specified **does not** include the **# or =** signs after the length statement) will be "truncation allowed". – See the length rules on page 27 for further discussion.

2 Common Core Data Elements for Jurisdictional Reportable Lab Results and CLIA requirements

The following list of common core data elements was assembled as follows: Data elements that are needed by local public health agencies were identified by reviewing the LTIAPH ELC grantee work group responses to appropriate questionnaires and by reviewing local jurisdictional codes. In addition, the CLIA requirements define what data elements must appear on a laboratory result report. This list was further refined by cross referencing to the S & I Framework Lab Results Initiative Final Use case table 13.1 Message Content Requirements. It was also compared to the CSTE Document, "Common Core Data Elements Recommendations for ELR and Case Reporting; and cross-referenced to the "Case Reports Standardization Workgroup (CRSWG)" recommendations along with references to some comments in Appendix D of the 2010 HL7 2.5.1 ELR2PH IG.

In many instances, some of these values may be unknown or not provided by the ordering party. Where the usage rule for the Common Core data elements is "RE" (Required/Empty) the conformance rule is "need to have"; i.e., if you have it, send it. If the field is not populated it will be assumed that the data is not provided to the lab or is submitted as "unknown". Therefore, a place is needed in the laboratory and receiver system database for these data elements. This is in contrast to other "RE" data elements in the message, which can be considered "nice to have"; however, for all usage RE data components described in the constrained segment tables described below, the lab database must nonetheless be able to store and the system must be able to send such data to the receiver. While the data elements must be shown to be supported in order to pass CMS validation for meaningful use, nothing will be assumed if the field is not populated. Further guidance is given for transmitting data elements within OBX segments in the program specific vocabulary section of this document. Please note that rows highlighted in olive highlighting with bold black text represent California-Specific data elements that are requested in addition to the core ELR2PH required or conditional data elements or components.

2.1 Table of Common Core Data Elements

Data Element	ELR251 Element	ELR251 Element Name	ELR251 Lab Sender and ELR Receiver Usage	Jurisdictional Requirement	CLIA Requirement	Comments
Patient Identifier List	PID.3	Patient Identifier List	R	Yes	Yes	
Patient's Name	PID.5	Patient Name	R	Yes	Yes	
Patient DOB	PID.7	Date/Time of Birth	RE	Yes		
Patient Sex	PID.8	Administrative Sex	RE	Yes		
Patient Race	PID.10	Race	RE	Yes		
Patient's Address	PID.11	Patient Address	RE	Yes		
Patient Tel Number	PID.13, PID.14	Phone Number – Home, Phone Number – Business	RE	Yes		
Primary Language	**PID.15**	**Language**	**RE**	**Yes**		**California Requirement**
Marital Status	**PID.16**	**Marital Status**	**RE**	**Yes**		**California Requirement**
Patient Ethnicity	PID.22	Ethnic Group	RE	Yes		
Birthplace	**PID.23**	**Birthplace**	**RE**	**Yes**		**California Requirement**
Multiple Birth Indicator	**PID.24**	**Multiple Birth Indicator**	**RE**	**Yes**		**California Requirement**
Birth Order	**PID.25**	**Birth Order**	**RE**	**Yes**		**California Requirement**
Primary Language	**NK1.20**	**Language**	**RE**	**Yes**		**California Requirement**
Test Performed	OBX.3	Observation Identifier	R	Yes		

Results	OBX.5	Observation Value	C(R/X)	Yes	Yes	
Units	OBX.6	Units	C(R/RE)	Yes		*Required if results are numeric(quantitative)*
Reference Range	OBX.7	Reference Range	RE		Yes	Required if results are numeric(quantitative)
Report Status	OBX.11	Observation Result Status	R		Yes	
Date test performed	OBX.19	Date/Time of the Analysis	RE	Yes		Element Not in 231
Name (ID) of Laboratory	OBX.23	Performing Organization Name	R	Yes	Yes	Element Not in 231
Address of Laboratory	OBX.24	Performing Organization Address	R	Yes	Yes	Element Not in 231
Name and Address of Provider performing Test	OBX.25	Performing Organization Medical Director	RE	Yes	Yes	Element Not in 231
Specimen Collection Date	OBR.7, OBX.14, SPM17.1	Observation Date/Time, Date/Time of the Observation, Specimen Collection Date/Time	R	Yes		See Implementation guideline in Program Specific Vocabulary Section
Pregnancy status	OBX segment	NA	NA	Yes		See Implementation guideline in Program Specific Vocabulary Section
The name of the reportable disease.	OBX segment	NA	NA	Yes		This may be provided in OBR.31 - Reason for Study
Specimen Source	SPM4	Specimen Type	R	Yes	Yes	Either Specimen type or Source site could describe Specimen source.
Specimen Source	SPM.8	Specimen Source Site	RE	Yes	Yes	Either Specimen type or Source site

Patient Age	OBX segment	NA	NA	Yes		Needed if DOB not provided, See Implementation guideline in Program Specific Vocabulary Section
Referring Clinician	ORC.12,OBR.16	Ordering Provider	RE	Yes		
Referring Clinician Phone	ORC.14,OBR.17	Call Back Phone Number, Order Callback Phone Number	RE	Yes		
Referring Clinician Address	ORC.24	Ordering Provider Address	RE	Yes		
Specimen Reject Reason	SPM.21	Specimen Reject Reason	RE		Yes	Usually not a use case for ELR2PH reporting
Specimen Quality	SPM.22	Specimen Quality	RE		Yes	Usually not a use case for ELR2PH reporting
Specimen Condition	SPM.24	Specimen Condition	RE		Yes	Usually not a use case for ELR2PH reporting. Harmonized with S+I Framework

2.2 Obtaining Object Identifiers (OIDs) and access to the OIDs registry

Based on feedback from participating state laboratories, it has become apparent there is little guidance regarding the generation, identification, and distribution of OIDs. OIDs are required for all Universal Identifier fields in the guide. Hence, the ability to identify who should issue OIDs and how and where to maintain an OID registry is important. Currently, the CDC maintains an OID registry for CLIA-registered public health and clinical labs in the United States, and has issued OIDs for most if not all of them. Unfortunately, access to the registry (PHINDir) is limited. PHLIP has extended this registry to also include public health agency requests for OIDS on behalf of its public health and clinical partners. This service can be accessed on the LTIAPH SharePoint site at the following link:

http://www.aphlweb.org/aphl_departments/Strategic_Initiatives_and_Research/Informatics_Program/Projects/ltiaph/Shared%20Documents/ELRWorkgroup/Lab%20messaging%20OIDs-%20Facs,%20Apps,%20PHINMS.xlsx

It should be noted that at least three different categories of OIDs are used in the ELR2PH message, including the following:

2.2.1 Organization OIDs:

Each organization submitting or receiving a message must have an assigned OID; if your organization does not have one, it will be necessary to obtain one.

2.2.2 System or Software OIDs:

Each data system from which information is obtained for the message (i.e., EHR for patient, next of kin and patient visits);and LIMS for test requests and results; and also for data broker or other software packages employed in the assembly and generation or modification of the ELR2PH message also must have assigned OIDS. Again, if your data systems as described above do not have assigned OIDs, you will need to obtain OID registry numbers for them.

2.2.3 Coded Element OIDs:

Please refer to Chapter 6 in the ELR2PH guide for Code Systems and Value sets used in the ELR2PH message. Standard Code systems used here, including HL7 reference tables, LOINC, SNOMED and other standard tables including PHVS tables are all assigned OIDs that are listed in chapter 6 of the ELR2PH guide. In addition, there are numerous mandated PHVS code sets for things like test requests, results, specimen types, sources, modifiers, etc., as well as RCMT tables for nationally notifiable diseases containing specified test request and results codes, and specimen codes, etc.. Some of these tables are composites, so may contain more than one OID identifier. Please note that all of the HL7 tables that may be used as a source of a code also referenced in HL7 table 0396 will have a table 0396 code system name as well as an associated OID.

OID's can be used to populate MSH.4. However, for populating MSH.4, California requires that you use your laboratory CLIA ID number. MSH.4.1 is populated with the organization short name (field length is [1..20], MSH4.1 is populated with the CLIA ID number, and MSH.4.3 is populated with "CLIA" in place of "ISO".

3 Message Structure

3.1 Message Format Table

Segment in Standard	Name	Cardinality	Lab Result Sender Usage	Notes
MSH	Message Header	[1..1]	R	
SFT	Software Segment	[1..*]	R	
PATIENT_RESULT Group Begin		[1..1]	R	Limit Patient_Result group Cardinality from [1..*] to [1..1]; i.e., one Patient_Group and Order_Observation Group per header.
PATIENT Group Begin		[1..1]	R	
PID	Patient Identification	[1..1]	R	
NTE	Notes and Comments for PID	[0..*]	RE	For EHR messages, only one NTE per PID is allowed. This limit does not apply to ELR2PH messages, for which there are no limits on the number of NTEs associated with PID, OBR, or OBX segments.
NK1	Next of Kin	[0..*]	RE	For Laboratory Results messages, NK1 can be used to document patient's next of kin, parent/guardian information when reporting tests for children or when reporting results for animal testing (i.e., tests for animal rabies) and can be used to identify the owner or custodian of the animal tested.
PATIENT Group End				
ORDER_OBSERVATION Group Begin		[1..*]	R	
ORC	Order Common	[0..1]	C(R/RE)	ELR Condition predicate: The first ORDER_OBSERVATION group must contain an ORC segment (containing ordering facility information) if no ordering provider information is present in OBR- 16 or OBR-17.

OBR	Observations Request	[1..1]	R	
NTE	Notes and Comments for OBR	[0..*]	RE	For laboratory ELR2PH messages, there is no limit to the number of NTE segments that may be included in the Observation Group.
OBSERVATION Group Begin		[0..*]	C(R/RE)	Harmonized condition predicate: May be empty for OBR-25 Result statuses of “I", "S" and "X"; otherwise, it is required.
OBX	Observation related to OBR	[1..1]	R	
NTE	Notes and Comments	[0..*]	RE	Notes for OBX segments conveying test results must be addressed to the results only. No limit on the number of notes.
OBSERVATION Group End	OBSERVATION Group End			
SPECIMEN Group Begin	SPECIMEN Group Begin	[0..*]	C(R/RE)	ELR Condition predicate: Required for the parent Order_Observation Group in the message.
SPM	Specimen Information related to OBR	[1..1]	R	
OBX	Observation related to Specimen	[0..*]	RE	Note: OBX segments associated with SPM segments do not carry test results. Accordingly, NTE segments may not be used with these OBX segments.
SPECIMEN Group End				
ORDER_ OBSERVATION Group End				
PATIENT_RESULT Group End				

3.3 Message Profile Identifiers used in MSH.21

The following message profile identifiers are available based on the particular use case and messaging context. Both Lab ELR Sender and ELR Receiver OIDS are included, since each may be in a position to send an ACK/NACK message. Please note that examples also are provided in the HL7 2.5.1:ORU^R01 February 2010 Informative Document on pages 70-71 that have no associated OID values; there are example messages on pages 191-194 of the above document that contain illustrative “placeholder” OID values that are invalid, so should not be used. Correct OID values are shown in the table below.

Entity Identifier	Profile used	Universal ID (OID)	Description
PHLabReport-Ack.	Lab Sender	2.16.840.1.113883.9.10	Individual message with acknowledgement using either the Lab Sender or ELR Receiver Profile to send ORU^R01 message from the LIMS/EHR to the local public health agency. Note that for the constrained profile the Lab Sender and ELR Receiver Profiler are harmonized, so either Profile identifier can be used.
	ELR Receiver	2.16.840.1.113883.9.11	
PHLabReport-NoAck.	Lab Sender	2.16.840.1.113883.9.10	Individual message without acknowledgement using either the Lab Sender or ELR Receiver Profile to send ORU^R01 message from the LIMS/EHR to the local public health agency. Note: For the constrained profile, the Lab ELR Sender and ELR Receiver Profiles are harmonized so either Profile identifier can be used.
	ELR Receiver	2.16.840.1.113883.9.11	
PHLabReport-Batch	Lab Sender	2.16.840.1.113883.9.10	Batched message using either the Lab ELR Sender or ELR Receiver Profile to send ORU^R01 message(s) from the LIMS/EHR to the local public health agency. Note: For the constrained profile the Lab Sender and ELR Receiver Profiles are harmonized so either Profile identifier can be used. **However, California does not receive batch messages, which are not supported at this time**.
	ELR Receiver	2.16.840.1.113883.9.11	

3.4 Static Definitions for Segments, Fields, Components and Subcomponents

For Clarity, many unsupported data elements ("X" usage) have been omitted from the following tables. However, in a pipe-delimited (ER7) message type, unsupported elements retain their field delimiters (|) which are included in the message structure as place-holders to mark their expected positions, but do not retain the component, sub-component or repeat delimiters (~, ^, &), and are not populated. In this Guide, such of these non-supported elements that are intervening between supported elements are shown highlighted in yellow background with **bold**, **red font** to mark their positions and indicate their "X" usage status. The exception is if the "X" elements are at the end of a segment with no following supported elements (designated as usage R, C, RE, CE or C(a/b)); In that case, the "X" elements may (should) be omitted from the message. Terminal elements that are not used are identified immediately following the end of each segment table (see the constrained segment tables section beginning on page 29); a note follows each segment table to indicate which elements were omitted, if any). Similarly, for complex data types, any trailing components or sub-components that are not populated and which have no following populated components or sub-components also should be deleted.

In addition, this Guide pre-adopts the notation for conditional statements from v2.7 (under ballot 10/2011) to ensure greater clarity about the usage rules required when the condition is met and when the condition is not met (Chapter 2 page 15) in: http://www.hl7.org/documentcenter/public/ballots/2011SEP/downloads/V271_N1_2011SEP.zip)

An element with a conditional usage code has an associated condition predicate that determines the operational requirements (usage) of the element.

- ☐ If the condition predicate associated with the element is true, follow the rules for "a" which shall be one of "R", "RE", "O" or X":
- ☐ If the condition predicate associated with the element is false, follow the rules for "b" which shall be one of "R", "RE", "O" or X".
- ☐ Usage for components "a" and "b" shall be different and defined by the message profile."

The former usages "C" and "CE" are now defined as either C(R/X), C(RE/X), or C(R/RE) with the following rules:

- ☐ C(R/X) is interpreted as follows. If the condition predicate associated with the element is true, then the usage for the element is "R" - Required. If the condition predicate associated with the element is false, then the usage for the element is "X" – Not Supported.
- ☐ C(RE/X) is interpreted as follows. If the condition predicate associated with the element is true, then the usage for the element is RE – Required but may be empty. If the condition predicate associated with the element is false, then the usage for the element is element is X – Not Supported.

- C(R/RE) is interpreted as follows. If the condition predicate associated with the element is true, then the usage for the element is R-Required. If the condition predicate associated with the element is false, then the usage for the element is RE –Required but may be empty.

3.5 Column Definitions for the Static Message Definition Table

- **Seq**: Sequence of the elements as they are numbered in the HL7 segment.
- **Len**: Length; the HL7 Version 2.5.1 ELR2PH Guide adopted the V2.7 Length standards. See Chapter 2, section 2.1.3, pages 10 and 11 of the 2010 HL7 2.5.1 ELR2PH Guide for further discussion of length conventions.
    - Maximum lengths of the elements: Lengths are provided only for primitive data types.
    - The length attribute also applies to data type attribute tables and segment attribute tables.
    - With certain restrictions described below, lengths should be considered recommendations, not absolutes. However, while the receiver can truncate, lengths may only be truncated when the length designation does not end with a truncation designator.
    - With regard to fields, components and sub-components that are longer than the recommended length, the receiver should continue to process a message even when a field, component, or sub- component length exceeds the maximum recommended length identified in this specification, in which case, the data would of necessity be truncated.
    - Please see the 2010 HL7 Version 2.5.1 ELR2PH guide, Appendix C, Section C.3.3 regarding Conformance Length (C.3.3.1) and Truncation of Data (C.3.3.2) for documentation on how lengths are handled in this companion guide.
    - The length attribute may contain a character indicating how the data may be truncated by a receiver. The truncation characters are defined as follows:
        - = Truncation not allowed.
        - # Truncation allowed
        - No character indicates the truncation behavior is not defined, in which case, truncation when necessary is not prohibited.
- **DT**: Refers to data types used for HL7 elements, components and sub-components.
- **Lab Result Sender** and **ELR2PH Receiver Usages:** These usages indicate if the field is required, optional, or conditional in a segment. These values have been defined using the following definitions. Note that these definitions are interpreted from standard HL7:
    - **R;** Required: Must always be populated. When testing against the NIST structural validator only, fields or components designated as usage “R” may be populated with double quotation marks (“”) if no specific escape

value is delineated in the Description column of the table. For some components, a specified value (described in the adjacent table row description column) must be used as a recognized escape value intended to show that the value, though required, is not available. **Caution: DO NOT use double quotes in any field when sending live messages unless you want to cause the information to be deleted from the receiving data system.**

- **RE**; Required, but may be empty: (no values, no quotes) These are usually considered as "nice to have"; **except where it is indicated they are a jurisdictional or CLIA requirements, whereupon they become "must have"; in other words, you need to send the data if you have it.** If the field is not populated it will be assumed the data is not provided to the lab or was submitted as "unknown".
- **O**; Optional: There are no optional (more correctly, undefined) elements in this constrained Lab Sender profile. Optional components have either been converted to RE to be used to meet jurisdictional requirements or are treated as usage 'X' in this companion guide.
- **C(a/b);** Conditional. The usage code has an associated condition predicate; if true (See section 2.B.7.9, Condition Predicate in V2.7.1 Chapter 2B"). If the condition predicate associated with the element is true, follow the rules for "a" which may be one of "R", "RE", or "X". If the condition predicate associated with the element is false, follow the rules for "b" which may be one of "R", "RE", or "X".
- **X** Not used: These elements have been omitted from the guide for clarity where feasible, but if intervening between supported elements are shown highlighted in yellow background with bold red font to indicate placement of their required delimiters only.

Note: A required field in an optional segment does not mean the segment must be present in the message. It means that if the segment is present, the required fields within that segment must be populated. The same applies to required components of optional fields. If the field is being populated, then the required components must be populated. The same applies to required sub-components.

- ☐ **Value Set**: The set of coded values to be used with the field. The value set attribute applies only to the data type attribute tables and the segment attribute tables. The value set may equate with an entire code system, part of a code system, or codes drawn from multiple code systems where clearly stipulated.
- ☐ **HL7 Element Name**: HL7 name for the element.
- ☐ **LTIAPHDef:** Contextual Definition for the element.
- ☐ **Hard Code:** Indicates whether a data component value can be pre-defined; i.e., "hard coded" or set as static.
- ☐ **Hard Code Value:** Describes the value to be hard coded, if any.
- ☐ **Example data:** Sample data in pipe-delimited (ER7) format known to be compliant with the NIST and MQF requirements.
- ☐ **Comments:** Descriptions, comments and explanatory notes useful in guiding implementation of the HL7 ELR2PH message

4 Constrained Segment Tables

Below are the constrained table values and message structure for an HL7 Version 2.5.2 ORU^R01 ELR2PH harmonized laboratory sender/receiver message.

4.1 MSH Segment

MSH											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..1	[1..1]	ST	R	None cited	Field Separator	The HL7 field separator	Yes	|	|	
2	4..5	[1..1]	ST	R	None cited	Encoding Characters	The HL7 encoding characters	Yes	^~\&	^~\&	The MQF validation tool currently fails when the truncation character, #, is present. For now use only the five characters "|^~\&".
3		[1..1]	HD	R	None cited	Sending Application	The PHIN namespace ID and OID of your LIMS	Yes	Your lims^Your LIMS assigned OID String^ISO	NapaGen_LIMS^2.16.840.1.114222.4.1.10412^ISO	The sending app is your LIMS.
3.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID of your LIMS	Yes	Your LIMS Name	NapaGen_LIMS	
3.2	1..199=	[1..1]	ST	R	None cited	Universal ID	OID of your LIMS	Yes	Your LIMS assigned OID String	2.16.840.1.114222.4.1.10412	For staging use 2.16.840.1.114222.xxxxx
3.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**ISO**	Yes	**ISO**	**ISO**	

MSH											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
4		[1..1]	HD	R	None cited	Sending Facility	The PHIN namespace ID and OID of your Lab	Yes	Your Lab Facility Name>^ Your Facility's Assigned CLIA Number^ CLIA	NapaCo_PHL^2.16.840.1.114222.4.1.104^ISO	While nationally either of an OID or a CLIA ID is acceptable, **your CLIA ID is required in California, because the CA REDIE system requires the Laboratory CLIA ID. Please do not send an OID identifier, as it will cause a message rejection.**
4.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Abbreviated form of your lab facility name	Yes	Your Lab Facility Name	Your Lab facility Name	Limit to no more than 20 characters.
4.2	1..199=	[1..1]	ST	R	None cited	Universal ID	OID of your Lab	Yes	Your Assigned Lab Facility CLIA Number	e.g., **0D1234567**	For reporting in California, this **must** be your lab CLIA number, which is required by the Cal REDIE disease reporting system.
4.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**CLIA**	Yes	**CLIA**	**Use CLIA**	If you use an OID in 4.2, then use ISO here; if you use a CLIA number in 4.2, then use 'CLIA' here.
5		[1..1]	HD	R	None cited	Receiving Application	The PHIN namespace ID and OID for the app that receives the message	Yes	CDPH CA REDIE^2.16.840.1.114222.4.3.3.10.1.1^ISO	CDPH CA REDIE ^ 2.16.840.1.114222.4.3.3.10.1.1^ISO	Receiving app. could be a local jurisdiction Disease Surveillance and Outbreak Management system (OMS) like MAVEN; or a State Disease reporting system (in CA that will be CA REDIE for reportable infectious disease data.) Assumption: Only sending to a single ELR receiver. Other receivers may have non-PHIN generated OIDs (i.e., HL7-generated).
5.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID of the receiving app	Yes	CDPH CA REDIE	CDPH CA REDIE	Length is 20= Lengths should be considered recommendations, not absolutes. The receiver can truncate fields, components and sub-components t may be longer than the recommended length.
5.2	1..199=	[1..1]	ST	R	None cited	Universal ID	OID of the receiving app	Yes	2.16.840.1.114222.4.3.2.2.3.600.4	2.16.840.1.114222.4.3.3.10.1.1	Must be an OID for ELR.
5.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**ISO**	Yes	**ISO**	**ISO**	Default value is 'ISO'

MSH											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
6		[1..1]	HD	R	None cited	Receiving Facility	The PHIN namespace ID and OID of the receiving facility	Yes	CDPH_CID^2.16.840.1.114222.4.1.214104 ^ISO	CDPH_CID^ 2.16.840.1.114222.4.1.214104 ^ISO	Assumption: Only sending to single ELR receiver. May have a non-PHIN generated OID; i.e., generated by another ISO such as HL7, etc.
6.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID of the receiving facility	Yes	CDPH_CID	CDPH_CID	CDPH Organization Identifier has not yet been assigned will edit when we have the information
6.2	1..199=	[1..1]	ST	R	None cited	Universal ID	OID of receiving facility	Yes	2.16.840.1.114222.4.1.214104	2.16.840.1.114222.4.1.214104	
6.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**ISO**	Yes	**ISO**	**ISO**	Default to ISO
7	4..24	[1..1]	DTM	R	None cited	Date/Time Of Message	Date and time the message was created by the sending system	No		**20110208132554-0800**	**Max length <u>not</u> increased to 26 to be backward compatible with ELR 231 and 23z. the HL7 standard 4…24 requirement has been retained.**
8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Security**	**X**	**X**	**X**	**X**	**Optional element. Not Supported. However, although the Field is not populated, the field separator character "|" for this data element must be present as a placeholder.**
9		[1..1]	MSG	R	None cited, but HL70076 contains the permissible types	Message Type	The type of HL7 message you are sending	Yes	ORU^R01^ORU_R01	ORU^R01^ORU_R01	vs ORU^R01 in v 2.3.1 or 2.3.z ORU^R01^ORU_R01 for the result message and ACK^R01^ACK for the acknowledgement message are all that are supported here.
9.1	3..3	[1..1]	ID	R	**HL70076**	Message Code		Yes	**ORU**	**ORU**	**Can/should/recommend default this to ORU.**
9.2	3..3	[1..1]	ID	R	**HL70003**	Trigger Event		Yes	**R01**	**R01**	**Can/should/recommend default this to RO1**
9.3	3..7	[1..1]	ID	R	**HL70354**	Message Structure		Yes	**ORU_R01**	**ORU_R01**	**Can/should/recommend default this to ORU_RO1**

MSH											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
10	1..199 =	[1..1]	ST	R	None cited	Message Control ID	A unique ID for each message sent	No		20110208132554.23456	**Recommended to use a counter, record number or a GUID. (Also can use a date with timestamp+Specimen ID). This is to be an automated a system-generated ID.**
11		[1..1]	PT	R	**HL70103**	Processing ID		Yes	**P**	**P**	T for training/test and P for production
11.1	1..1	[1..1]	ID	R	**HL70103**	Processing ID		Yes	P	P	T for training/test and P for production
12.1	3..5	[1..1]	ID	R	None cited	Version ID		Yes	2.5.1	2.5.1	Default to 2.5.1
13	**0..0**	**0..0**	**X**	**X**	**X**		**Sequence Number**	**X**	**X**	**X**	**Optional element. Not Supported. The Field is not populated, but the field separator character "|" for this data element must be present as a placeholder.**
14	**0..0**	**0..0**	**X**	**X**	**X**		**Continuation ptr.**	**X**	**X**	**X**	**Optional element. Not Supported. The Field is not populated, but the field separator character "|" for this data element must be present as a placeholder.**
15	2..2	[0..1]	ID	C(R/RE)	**HL70155**	Accept Acknowledgment Type		Yes	**NE**	**NE**	IF not expecting ACKs use "NE" Never. IF expecting ACKs use AL. See MSH.21. Harmonized condition predicate: Required when MSH-21 profile ID is PHLabReport-Ack or USLabReport. Otherwise, it may be empty or “NE”.
16	2..2	[0..1]	ID	C(R/RE)	**HL70155**	Application Acknowledgement Type		Yes	**NE**	**NE**	IF not expecting ACKs use "NE" Never, IF expecting ACKs use AL, see MSH.21. Harmonized condition predicate: Required when MSH-21 profile ID is PHLabReport-Ack or USLabReport, otherwise it may be empty or “NE”.
17	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country Code		Yes	USA	USA	Core Data: Default to ‘USA’ Note: in the HL7ELR2PH guide, this is usage “R:.
18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Character Set**	**X**	**X**	**X**	**X**	**Not Supported. The Field is not populated, but the field separator character "|" for this data element must be present as a placeholder.**

MSH											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Principal Language of Message**	**X**	**X**	**X**	**X**	**Optional element. Not supported. Not Supported. The Field is not populated, but the field separator character "|" for this data element must be present as a placeholder. Language of message is assumed to be English.**
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Alternate Character Set Handling Scheme**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" for this data element must be present.**
21		[1..*]	EI	R	None cited	Message Profile Identifier	Information about the ELR message profile	Yes	PHLabReport-NoAck^^2.16.840.1.113883.9.10^ISO. **PLEASE NOTE- this is an initial default until an acknowledgement protocol has been developed.**	PHLabReport-NoAck^^2.16.840.1.113883.9.10^ISO	PHLabReport-Ack Lab Sender: PHLabReport-Ack^^2.16.840.1.113883.9.10^ISO ELR Receiver : PHLabReport-Ack^^2.16.840.1.113883.9.11^ISO PHLabReport-NoAck Lab Sender : PHLabReport-NoAck^^2.16.840.1.113883.9.10^ISO ELR Receiver : PHLabReport-NoAck^^2.16.840.1.113883.9.11^ISO PHLabReport-Batch Lab Sender : PHLabReport-Batch^^2.16.840.1.113883.9.10^ISO ELR Receiver : PHLabReport-Batch^^2.16.840.1.113883.9.11^ISO
21.1	1..199=	[1..1]	ST	R	None cited	Entity Identifier	The name of the ELR message profile	Yes	PHLabReport-NoAck	PHLabReport-NoAck	* PHLabReport-Ack * PHLabReport-NoAck * PHLabReport-Batch
21.2	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID for PHIN message profiles	No			Leave this empty for LTIAPH implementation.

MSH											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
21.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	OID for ELR message profile	Yes	2.16.840 .1.11388 3.9.10	2.16.840.1.113883.9.10	* Lab Sender = 2.16.840.1.113883.9.10 * ELR Receiver= 2.16.840.1.113883.9.11
21.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	ISO	ISO	

Note: All supported elements and components and intervening "'x" elements are present in the above table. There are no unsupported terminal elements.

Example:

MSH|^~\&|NapaGen_LIMS^2.16.840.1.114222.4.1.10412^ISO|NapaGen^2.16.840.1.114222.4.1.104^ISO|NapaCoDOH_OMS^2.16.840.1.114222.4.1.151^ISO|NapaCoDOH^2.16.840.1.114222.4.1.150^ISO|20110208132554-0400||ORU^R01^ORU_R01|20110208132554.23456|P|2.5.1|||NE|NE|USA||||PHLabReport-NoAck^^2.16.840.1.114222.4.10.3^ISO

4.2 SFT Segment

SFT											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1		[1..1]	XON	R	None cited	Software Vendor Organization	Name of your LIMS or Interface Engine vendor	Yes	your lims or interface engine vendor	Orion Health	See the HL7.2.5.1 ELR2PH Guide Introduction to the SPM segment (Chapter 5 of the ELR2PH guide. The LIMs software and, if used, the HL7 middleware application (i.e., data broker) and any gateway that transforms the message is required to add an SFT to identify itself. Bridges and intermediary applications may do so, but are not required. Note that SPM has no "Set ID" component.
1.1	1..50#	[0..1]	ST	C(R/RE)	None cited	Organization Name	Name of your LIMS or Interface Engine vendor	Yes	your lims or interface engine vendor	Orion Health	Can have more than one SFT segment. See the HL7 2.5.1 ELR2PH Guide, Chapter 5, for the Introduction to the segment. Length 50 can be truncated.
1.2	1..20=	[0..1]	IS	RE	**HL70204**	Organization Name Type Code		No		**L**	This component can be empty. Send it if you have it. Use 'L' from HL7 Table 0204 for "Legal name".
1.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**ID Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Use XON-10 Organization Identifier. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
1.4	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
1.5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**

SFT											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1.6		[0..1]	HD	C(R/X)	None cited	Assigning Authority		No		Your Organization Name^ Your ISO-Assigned organization OID String^ISO	Name of the entity that assigned the ID in SFT.1.10. Condition: If SFT.1.10 is populated with an organization identifier, then SFT.1.6 must be populated. Else SFT.1.6 is not populated.
1.6.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		No		Your Organization Name	This sub-component can be empty if no organization identifier was assigned in SFT.1.10.
1.6.2	1..199 =	[1..1]	ST	R	None cited	Universal ID		No		Your ISO-Assigned organization OID String; e.g., 2.16.840.1.113000.00.0.0 (Not a real OID)	This sub-component can be empty if no organization identifier was assigned in SFT.1.10
1.6.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type		No		**ISO**	This sub-component can be empty if no organization identifier was assigned in SFT.1.10.
1.7	2…5=	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		No		**XX**	Condition: if SFT.1.10 is populated with an organization identifier code, then SFT.1.7 must be populated. Else SFT.1.7 is not populated.
1.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Assigning Facility**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
1.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
1.10	1..20=	[0..1]	ST	RE	None cited	Organization Identifier		No	A Code Assigned by your organization	1234	This component may be empty if no organization identifier was assigned.
2	1..15#	[1..1]	ST	R	None cited	Software Certified Version or Release Number		Yes	your software s release or version number	4.0	Can be hardcoded since relatively static, but may need periodic updates.

SFT											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3	1..20#	[1..1]	ST	R	None cited	Software Product Name		Yes	your LIMS or interface engine product name	Orion Rhapsody	Assigned Length was too short for this field but truncation allowed in IG. Increased field length to 50.
4	1..20#	[1..1]	ST	R	None cited	Software Binary ID		Yes	Binary id if you have it or default to "binary ID unknown".	"Binary ID unknown".	Binary ID is a 20 digit code supplied by the vendor for each release of software. If you don't know it, use the text string “binary ID unknown". The Value is not being validated by conformance tools, MQF or NIST so should be O.K.
5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Software Product Information.**	**X**	**X**		**X**	**Optional Element. Not Supported. The Field is not populated, but the field separator character "|" for this data element must be present as a placeholder.**
6	4..24	[0..1]	DTM	RE	None cited	Software Install Date		Yes	your software install date	20110101	O.K. if empty. Send it if you have it.

Note: All supported elements, components and intervening “X” elements are present in the above table. There are no unsupported terminal components.

Example:

SFT|Orion Health^L^^^^NapaGen&111.111.111&ISO^XX^^^1234|4.0|Orion Rhapsody|binary ID unknown||20110101

4.3 PID Segment

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID – PID	The Set ID of this PID segment	Yes	1	1	Literal Value: '1'
2	**0..0**	**[0..0]**	**X**	**X**	**X**	**Patient Identifier**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3.1. See PID-3 Patient Identifier List. Not Supported. The Field is not populated, but the field separator character "|" for this data element must be present as a placeholder.**
3		[1..*]	CX	R	None cited	Patient Identifier List	The patient ID (or list of patient IDs if more than one is used)	No		987654321A^^^NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO^PI~45AQ12345^^^Napa General Hosp&2.16.840.1.113883.19.3.2.1&ISO^MR	This element is a common core data element - Need to send it if you have it. This Field is repeatable. Can be used for many different patient/person identifiers including ssn, driver's license, medical record numbers, etc.
3.1	1..15=	[1..1]	ST	R	None cited	ID Number	Patient ID	No		987654321	The ID Number component combined with the Assigning Authority component must uniquely identify the associated object.
3.2	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
3.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
3.4		[1..1]	HD	R	None cited	Assigning Authority	The PHIN namespace ID and OID for the LIMS	No	your system/app/org name&2.16.840.1.114222.xxxxx&ISO	NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID Number in component 1. I.e. the LIMS. May be able to Hardcode this if your system always assigns the PID.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.4.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID for your LIMS	No	your system/app/org name	NapaCo_PHL_LIMS	May be able to Hardcode this if your system always assigns the PID.
3.4.2	1..199=	[1..1]	ST	R	None cited	Universal ID	OID for your LIMS	No	2.16.840.1.114222.xxxxx	2.16.840.1.114222.4.1.10412	May be able to Hardcode this if your system always assigns the PID.
3.4.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	**Required; default to ISO**
3.5	2..5	[1..1]	ID	R	**HL70203**	Identifier Type Code	The HL7 identifier type for the Patient ID	No	**PI**	**PI**	PI = patient internal Identifier, May be able to Hardcode this if your system always assigns the PID
3.6		[0..1]	HD	RE	None cited	Assigning Facility	The facility that assigned the patient identifier. (Not needed in most states)	No			The Assigning Facility identifies the place or location that the ID Number was assigned for use. (Not needed in most states)
3.6.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		No			The facility name goes here.
3.6.2	1..199=	[1..1]	ST	R	None cited	Universal ID		No			The assigned facility OID goes here.
3.6.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**ISO**	Yes	**ISO**		**ISO**
4	**0..0**	**[0..0]**	**X**	**X**	**X**	**Alternate Patient ID**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3.1. See PID-3. The field is not populated, but the field separator character "|" for this data element must be present as a placeholder.**
5		[1..*]	XPN	R	None cited	Patient Name	Patient name (or anonymous PHLIP default string "~^^^^^^U")	Yes	patient name or "~^^^^^^U"	Everyman^Adam^A^^^^L	Required if component PID.5.7, name type code, is anything but “S” (Pseudonym) or “U” (unknown). Condition: If PID.5.7 is not "S" or "U" and If sub-component PID.5.1.1 is populated, then Component PID.5.1 is automatically populated. Else PID.5.1 is not populated. NOTE: When the name of the patient is not known, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. Repeatable field.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
5.1			FN	RE	None cited	Family Name	Last Name	No		Everyman	
5.1.1	1..50#	[1..1]	ST	R	None cited	Surname	Last Name	No		Everyman	231 Last Name maps to this field.
5.2	1..30#	[0..1]	ST	RE	None cited	Given Name	First Name	No		Adam	Send it if you have it.
5.3	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof	Middle Initial/Middle Name	No		A	Send it if you have it.
5.4	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)	Suffix	No			This component may be empty.
5.5	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)	Prefix	No			This component may be empty.
5.6	**0..0**	**[0..0]**	**X**	**X**	**X**	**State Value Set**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present.**
5.7	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code	The Name Type Code from HL7 Table 200	No		**L**	Defaults to “L" (legal name) if empty.
5.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
5.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
5.10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder. See XPN-12 Effective Date and XPN-13 Expiration Date components.**
5.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
5.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
5.13	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
5.14	1..199 #	[0..1]	ST	RE	None cited	Professional Suffix		No			This component may be empty. Suggest using values from HL7 table 360.
6		**[0..1]**	XPN	RE	None cited	Mother's Maiden Name		No		Mum^Martha^M^^^^M	
6.1			FN	RE	None cited	Family Name		No		Mum^Martha^M^^^^M	This component may be empty. It is populated from the sub-element below.
6.1.1	1..50#	[1..1]	ST	R	None cited	Surname		No		Mum	Required subcomponent. Send it if you have it. Else populate with "Unknown" or use an alphanumeric code string if appropriate.
6.2	1..30#	[0..1]	ST	RE	None cited	Given Name		No		Martha	This component may be empty. Send it if you have it.
6.3	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof		No		M	This component may be empty. Send it if you have it.
6.4	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)		No			This component may be empty
6.5	1..50#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)		No			This component may be empty
6.6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Degree (e.g., MD)**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
6.7	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code		No		**M**	**Name type code is constrained to the value "M." (Maiden Name).**
6.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
6.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
6.10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder. See XPN-12 Effective Date and XPN-13 Expreation Date components.**
6.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
6.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
6.13	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional Component. Not Supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
6.14	1..199 #	[0..1]	ST	RE	**None Cited: Recommend HL70360**	Professional Suffix		No			This component may be empty. Not Needed for ELR.
7	4..24	[0..1]	DTM	RE	None cited	Date/Time of Birth	Date/Time Of Birth	No		19640619	This element is a common core data element - Need to send it if you have it. If a birth date is not provided in the PID, use "Patient reported age" in the “Epidemiologically important information for public health reporting” Order_Observation Segment. See the example in the special vocabulary section. The Maximum length of this component has been increased to be compatible with ELR231 and 23Z

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
8	1..20=	[0..1]	IS	RE	**HL70001**	Administrative Sex	Sex code from HL7 table 0001	No		**M**	This element is a common core data element - Need to send it if you have it.
9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Patient Alias**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.4. See PID-5 Patient Name. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
10		[0..*]	CWE	RE	**PHVS_RaceCategory_CDC_V1**	Race	Race	No		2106-3^White^CDCREC^W^White^L^04/24/2007^v unknown	This element is a common core data element - Need to send it if you have it assume a standard codes populate the first triplet and the local code the second triplet
10.1	1..20=	[0..1]	ST	RE	None cited	Identifier	Race code (from CDCREC)	No		2106-3	. In California, this information is required, so the component should be populated. Send it if you have it.
10.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Race name (from CDCREC)	No		White	Condition: If PID.10.1 is populated, PID.10.2 may be populated. Else PID.10.2 is not populated.
10.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	Race coding system	Yes	**CDCREC**	**CDCREC**	Condition: If PID.10.3.1 is populated, PID.10.3 must be populated. Else PID.10.3 is not populated. If you put a standard race code in PID 10.1, you must put CDCREC in PID 10.3.
10.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	Local race code	No		W	A Local code goes here. This component may be empty. Send it if you have it.
10.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local race name	No		White	Condition: If PID.10.4 is populated, PID.10.5 may be populated. Else PID.10.5 is not populated.
10.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	Local race coding system	Yes	**L**	**L**	Condition: If you put a local race code in PID.10.4, you must put "L" in PID.10.6. Else do not populate PID.10.6. Alternatively, you can leave PID.10.4-10.6 empty if a standard code was provided in PID.10.1.
10.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID	Standard coding system version	Yes	04/24/2007	04/24/2007	Recommended if a coding system is identified in component PID.10.3. This can be Hardcoded.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
10.8	1..10=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system version	Yes	your local code version or "v unknown "	V unknown	Recommended if a coding system is identified in PID.10.6. This can be Hardcoded. If no local coding system version is known, suggest using the string value ”v unknown”
10.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If PID.10.1 and PID.10.4 are both empty, then PID.10.9 must be populated. Else PID.10.9 may be populated. Send it if you have it.
10.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			This component may be empty. Send it if you have it.
10.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: If PID.10.10 is populated, then PID.10.11 may be populated. Else PID.10.11 is not populated.
10.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if PID.10.10 is populated, then PID.10.12 must be populated. Else PID.10.12 is not populated.
10.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it
10.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No			Condition: If PID.10.3 is populated, then PID.10.14 must be populated. Else PID.10.14 is not populated.
11		[0..*]	XAD	RE	None cited	Patient Address	Patient Address	No		2222 Home Street^^Napa^CA^94558^USA^H^^06055	For California, this element is a common core data element - Need to send it if you have it.
11.1		[0..1]	SAD	RE	None cited	Street Address	Street Address	No		2222 Home Street	Auto populated from sub-components below.
11.1.1	1..120 #	[1..1]	ST	R	None cited	Street or Mailing Address		No		2222 Home Street	For California, treat as required. Send it if you have it.
11.2	1..120 #	[0..1]	ST	RE	None cited	Other Designation	Other Designation	No			This sub-component may be empty. Send it if you have it.
11.3	1..50#	[0..1]	ST	RE	None cited	City	City	No		Napa	For California, treat as required. Send it if you have it.
11.4	1..50#	[0..1]	ST	RE	**PHVS_State_FIPS_5-2_V1**	State or Province	State or Province FIPS 5-2	No		CA	Use the FIPS 5-2 two character codes here (e.g., CA for California).

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
11.5	1..12=	[0..1]	ST	RE	**US Zip+4 or Canadian Postal Code Tables.**	Zip or Postal Code	Zip or Postal Code	No		94558	US Zip Codes, Zip+4 and Canadian Postal Codes are supported in ELR messages. Useful tools: For US, use http://www.zip-codes.com/search.asp For Canada, use http://www.canada411.ca/area-code-lookup/
11.6	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country	Country	No		**USA**	Usually this will be "USA", but it might be another country code from ISO 3166-1.
11.7	1..3	[0..1]	ID	RE	**HL70190**	Address Type	Address Type code from HL7 Table 190	No		**H**	Typical values from HL7 Table 190 are "H" (Home), "L" (Legal Address), "M" (Mailing), "C" (Current Or Temporary) etc.
11.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Other Geographic Designation**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" must be present as a placeholder.**
11.9	1..20=	[0..1]	IS	RE	**PHVS_County_FIPS_6-4**	County/Parish Code	County code from FIPS6_4	No		**06055**	Use FIPS 6-4 codes. Send it if you have it.
12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Country Code**	**X**	**X**	**X**	**X**	**Deprecated as of HL7Version 2.3. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. See PID-11 Patient Address, Component 9 County/Parish Code.**
13		[0..*]	XTN	RE	None cited	Phone Number – Home		No		^PRN^PH^^1^707^2272608	This element is a common core data element - Send it if you have it.
13.1	**0..0**	**[0..0]**	**X**	**X**	**X**	**Telephone Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
13.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code		No		**PRN**	For example PRN = Primary Residence Number. Should use 'NET' if component 4 (Email Address) is present.
13.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type		No		**PH**	For example PH = phone. Should use 'Internet' if component 4 (Email Address) is present.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
13.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address		No			Condition: If PID.13.7 (local number) is not populated, then PID.13.4 (Email Address) is populated. Else PID.13.4 is not populated.
13.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful**	Country Code		Yes	1	1	Condition: If PID.13.7 is populated, then PID.13.5 must be populated. Else PID.13.5 is not populated. **http://travel.airwise.com/info/intl_numbers.html**
13.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code		No		707	Condition: If PID.13.7 (Local Number) is populated, PID.13.6 may be populated. Else PID.13.6 is not populated.
13.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number		No		2272608	Condition: if PID.13.4 (Email Address) is not populated, then PID.13.7 (Local Number) must be populated. Else PID.13.7 is not populated.
13.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension		No			Condition: if PID.13.7 (Local Number) is populated, then PID.13.8 may be populated. Else PID.13.8 is not populated.
13.9	1..199 #	[0..1]	ST	RE	None cited	Any Text		No			For example: “Regular hours 8 am to 5 pm.”
14		[0..*]	XTN	RE	None cited	Phone Number – Business		No		^WPN^PH^^1^707^6374377	See comments for PID 13.
14.1	**0..0**	**[0..0]**	**X**	**X**	**X**	**Telephone Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
14.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code		No		**WPN**	For example WPN = Workplace Number. Should use ‘NET’ if component 4 (Email Address) is present.
14.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type		No		**PH**	For example PH = phone. Should use ‘Internet’ if component 4 (Email Address) is present.
14.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address		No			Condition: If PID.14.7 (local number) is not populated, then PID.14.4 (Email Address) is populated. Else PID.13.4 is not populated.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
14.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful.**	Country Code		No		**1** Note: will fail validation if a phone number is present but the country code is not populated here.	Condition: If PID.14.7 is populated, then PID.14.5 must be populated. Else PID.14.5 is not populated. Useful website for country dialing code: **http://travel.airwise.com/info/intl_numbers.html**
14.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code		No		707	Condition: If PID.14.7 (Local Number) is populated, PID.14.6 may be populated. Else PID.14.6 is not populated.
14.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number		No		6374377	Condition: if PID.14.4 (Email Address) is not populated, then PID.14.7 (Local Number) must be populated. Else PID.14.7 is not populated.
14.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension		No			Condition: if PID.14.7 (Local Number) is populated, then PID.14.8 may be populated. Else PID.14.8 is not populated.
14.9	1..199 #	[0..1]	ST	RE	None cited	Any Text		No			For example: “Regular hours 8 am to 5 pm.”
15		**[0..*]**	**CWE**	**RE**	**See 15.1 below**	**Primary Language**		**No**		**eng^English^ISO6392^ ^^^3/29/2007**	**Need primary language for communication with the patient (i.e., phone, e-mail, Letter, etc.). Blank field defaults to English.**
15.1	**1..20=**	**[0..1]**	**ST**	**RE**	**PHVS_ Language_ISO_639-2_Alpha3**	**Identifier**		**No**		**eng**	**This component may be empty; Send it if you have it.**
15.2	**1..199 #**	**[0..1]**	**ST**	**C(RE/X)**		**Text**		**No**		**English**	**Condition: If PID.15.1 is populated, PID.15.2 may be populated. Else PID.15.2 is not populated.**
15.3	**1..12**	**[0..1]**	**ID**	**C(R/X)**	**HL70396**	**Name of Coding System**		**Yes**		**ISO6392**	**Condition: If PID.15.1 is populated, PID.15.3 must be populated. Else PID.15.3 is not populated.**
15.4	**1..20=**	**[0..1]**	**ST**	**RE**	None cited	**Alternate Identifier**		**No**		**Local Code if available.**	**Condition: If PID.15.4 is populated, PID.15.5 may be populated. Else PID.15.5 is not populated.**
15.5	**1..199 #**	**[0..1]**	**ST**	**C(RE/X)**	None cited	**Alternate Text**		**No**		**Local Text if Available**	**Condition: If PID.15.4 is populated, PID.15.5 may be populated. Else PID.15.5 is not populated.**
15.6	**1..12**	**[0..1]**	**ID**	**C(R/X)**	**HL70396**	**Name of Alternate Coding System**		**No**		**L**	**Condition: If PID.15.4 is populated, PID.15.6 must be populated. Else PID.15.6 is not populated (Use "L" (Local) here).**

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
15.7	**1..10=**	**[0..1]**	**ST**	**RE**	None cited	**Coding System Version ID**		**No**		**'20080708**	**This component may be empty. Send it if you have it.**
15.8	**1..20=**	**[0..1]**	**ST**	**RE**	None cited	**Alternate Coding System Version ID**		**No**		**Can use "v unknown" here if no code available.**	**This component may be empty. Send it if you have it.**
15.9	**1..199 #**	**[0..1]**	**ST**	**C(R/RE)**	None cited	**Original Text**		**No**		**E.g., Patient speaks a language xyz for which there is not listed standard code system and with which sender has no local code.**	**Condition: If PID.15.1 and PID.15.4 are not populated, PID.15.9 must be populated. Else PID.15.9 may be populated or not. Send it if you have it.**
15.10	**1..20=**	**[0..1]**	**ST**	**RE**	None cited	**Second Alternate Identifier**		**No**			**Most LIMS will not have a second alternate coding system. This component may be empty.**
15.11	**1..199 #**	**[0..1]**	**ST**	**C(RE/X)**	None cited	**Second Alternate Text**		**No**			**Condition: if PID.15.10 is populated, PID.15.11 may be populated. Else PID.15.11 is not populated.**
15.12	**1..12**	**[0..1]**	**ID**	**C(R/X)**	**HL70396**	**Name of Second Alternate Coding System**		**No**			**Condition: if PID.15.10 is populated, then PID.15.12 must be populated. Else PID.15.12 is not populated.**
15.13	**1..10=**	**[0..1]**	**ST**	**RE**	None cited	**Second Alternate Coding System Version ID**		**No**			**This component may be empty. Send it if you have it.**
15.14	**1..199 =**	**[0..1]**	**ST**	**C(R/X)**	None cited	**Coding System OID**		**Yes**		**2.16.840.1.113883.6.100**	**Condition: If PID.15.3 is populated, then PID.15.14 also must be populated. Else PID.15.14 is not populated. See Chapter 6 of the federal ELR2PH guide for a list of OIDs for the required HL7 and PHVS tables.**
16		**[0..1]**	**CWE**	**RE**	None cited	**Marital Status**		**No**		**U^Unmarried^HL70002 ^^^^2.5.1^^Not Married**	**Marital status is requested. This element may be left blank, but please send it if you have it.**
16.1	**1..20=**	**[0..1]**	**ST**	RE	**HL70002**	**Identifier**		**No**		**U**	**This component may be empty; Send it if you have it. Assume use of standard code here.**
16.2	**1..199 #**	**[0..1]**	**ST**	**C(RE/X)**	None cited	**Text**		**No**		**Unmarried**	**Condition: If PID.16.1 is populated, PID.16.2 may be populated. Else PID.16.2 is not populated.**
16.3	**1..12**	**[0..1]**	**ID**	**C(R/X)**	**HL70396**	**Name of Coding System**		**Yes**		**HL70002**	**Condition: If PID.16.1 is populated, PID.16.3 must be populated. Else PID.16.3 is not populated.**

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
16.4	**1..20=**	**[0..1]**	**ST**	**RE**	None cited	**Alternate Identifier**		**No**		**Local code here if available.**	**May be empty; please send it if you have it. Use a local code here.**
16.5	**1..199 #**	**[0..1]**	**ST**	**C(RE/X)**	None cited	**Alternate Text**		**No**		**Local Text here if available.**	**Condition: If PID.16.4 is populated, PID.16.5 may be populated. Else PID.16.5 is not populated.**
16.6	**1..12**	**[0..1]**	**ID**	**C(R/X)**	**HL70396**	**Name of Alternate Coding system**		**Yes**	**L**	**L**	**Condition: If PID.16.4 is populated, PID.16.6 must be populated. Else PID.16.6 is not populated. Use "L" (Local) if populated.**
16.7	**1..10=**	**[0..1]**	**ST**	**RE**	None cited	**Coding System Version ID**		**No**		**HL7 v2.5**	**This component may be empty. Send it if you have it.**
16.8	**1..20=**	**[0..1]**	**ST**	**RE**	None cited	**Alternate Coding System Version ID**		**No**		**V unknown**	**This component may be empty. Send it if you have it.**
16.9	**1..199 #**	**[0..1]**	**ST**	**C(R/RE)**	None cited	**Original Text**		**No**		**Not Married**	**Condition: If PID.16.1 and PID.16.4 are not populated, PID.16.9 must be populated. Else PID.16.9 may be populated. If all you have is text put it here.**
16.10	**1..20=**	**[0..1]**	**ST**	**RE**	None cited	**Second Alternate Identifier**		**No**			**Most LIMS will not have a second alternate coding system. This element can be empty.**
16.11	**1..199 #**	**[0..1]**	**ST**	**C(RE/X)**	None cited	**Second Alternate Text**		**No**			**Condition: If PID.16.10 is populated, then PID.16.11 may be populated. Else PID.16.11 is not populated.**
16.12	**1..12**	**[0..1]**	**ID**	**C(R/X)**	**HL70396**	**Name of Second Alternate Coding System**		**No**			Condition: if PID.16.10 is populated, then PID.16.12 must be populated. Else PID.16.12 is not populated.
16.13	**1..10=**	**[0..1]**	**ST**	**RE**	None cited	**Second Alternate Coding System Version ID**		**No**			**This component may be empty. Send it if you have it.**
16.14	**1..199 =**	**[0..1]**	**ST**	**C(R/X)**	None cited	**Coding System OID**		**Yes**		**2.16.840.1.113883.12.2**	**Condition: If PID.16.3 is populated, then PID.16.14 also must be populated. Else PID.16.14 is not populated. See Chapter 6 of the federal ELR2PH guide for a list of OIDs for the required HL7 and PHVS tables.**
17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Religion**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Patient Account Number**	**X**	**X**	**X**	**X**	**NHSN no longer supports HL7 Version 2.x; not needed. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
19	**0..0**	**[0..0]**	**X**	**X**	**X**	**SSN Number-Patient**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3.1. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. See PID-3 Patient Identifier List.**
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Driver's License Number-Patient**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. See PID-3 Patient Identifier List.**
21	**0..0**	**[0..0]**	**X**	**X**	**X**	**Mother's identifier**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present.**
22		[0..*]	CWE	RE	**See 22.1 below**	Ethnic Group	Patient's ethnicity	No		2186-5^Not Hispanic or Latino^HL70189^N^Not Hispanic^L^2.5.1^v unknown	This element is a common core data element - send it if you have it. Assume a standard code populates the first triplet and a local code the second. Note: The coding system is still undefined in MQF/PHINVADS. **MQF validates against PHVS_EthnicityGroupCDC_v1, so use the following codes: 213 5-2 if t if Hispanic or Latino or 2186-5 if not Hispanic or Latino.**
22.1	1..20=	[0..1]	ST	RE	**PHVS_EthnicityGroup_CDC_V1**	Identifier	Ethnicity Code	No		**2186-5**	The value and coding system is still undefined in MQF/PHINVADS. Choices are "H" – Hispanic or Latino, "N" – Not Hispanic or Latino, "U" Unknown.
22.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Ethnicity name	Yes		Not Hispanic or Latino	Condition: If PID.22.1 is populated, then PID.22.2 may be populated. Else PID.22.2 is not populated.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
22.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	Ethnicity code system	Yes	**CDCREC**	**CDCREC**	The value and coding system is still undefined in MQF/PHINVADS. Condition: if PID.22.2 is populated, PID.22.3 must be populated. Else PID.22.3 is not populated.
22.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	Local ethnicity code	No		N	If an alternate identifier (local) code is supported, PID.22.4 may be populated.
22.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local ethnicity name	No		Not Hispanic or Latino	Condition: If PID.22.4 is populated, PID.22.5 may be populated. Else PID.22.5 is not populated.
22.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	Local coding system	Yes	**L**	**L**	Condition: If PID.22.4 is populated, PID.22.6 must be populated. Else PID.22.6 is not populated.
22.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID	Standard Coding System Version	Yes	2.5.1 or 1.1	2.5.1 or 1.1	Recommended if a coding system is identified in component 3. This can be Hardcoded
22.8	1..10=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system version	Yes	your local code version or "v unknown "	v unknown	Recommended if a coding system is identified in component 6. This can be Hardcoded. If no local coding system version is known, suggest using the string value ”v unknown”
22.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If PID.22.1 and PID.22.4 are not populated, then PID.22.9 must be populated. Else PID.22.9 may be populated or not. Send it if you have it.
22.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate Identifier. This component may be empty. Send it if you have it.
22.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: If PID.22.10 is populated, then PID.22.11 may be populated. Else PID.22.11 is not populated.
22.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: If PID.22.10 is populated, then PID.22.12 must be populated. Else PID.22.12 is not populated.
22.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
22.14	1..199 =	[0..1]	ST	C(RE/X)	None cited	Coding System OID		No		2.16.840.1.113883.6.238	Condition: If PID.22.3 is populated, then PID.22.14 must be populated. Else PID22.14 is not populated.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
23	**1..250 #**	**[0..1]**	**ST**	**RE**	None cited	**Birth Place**		**No**		**Chicago**	**May be empty. Send it if you have it.**
24	**1..1**	**[0..1]**	**ID**	**RE**	**HL70136**	**Multiple Birth Indicator**		**No**		**N**	**May be empty. Send it if you have it.**
25	**1..2=**	**[0..1]**	**NM**	**RE**	None cited	**Birth Order**		**No**		**1**	**May be empty. Send it if you have it.**
26	**0..0**	**[0..0]**	**X**	**X**	**X**	**Citizenship**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
27	**0..0**	**[0..0]**	**X**	**X**	**X**	**Veterans Military Status**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
28	**0..0**	**[0..0]**	**X**	**X**	**X**	**Nationality**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.4. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. See PID-10 Race, Pid-22 Ethnic group, and PID-26 Citizenship.**
29	4..24	[0..1]	DTM	RE	None cited	Patient Death Date and Time	Date (or date and time) of patient's death	No		If you have a date and time of patient death, put it here.	The Max length has not been increased to 26 for backward compatibility with v231 and v23z. Note, the GMT offset is required (-0800).
30	1..1	[0..1]	ID	RE	**HL70136**	Patient Death Indicator	Patient death indicator	No		If the date and time of death is known, please set this indicator to yes or true. Else it should be null or false.	If PID.29 is populated, then this field must be set to "Y".
31	1..1	[0..1]	ID	RE	**HL70136**	Identity Unknown Indicator		No			This element may be empty. However, please send if available.
32	**0..0**	**[0..0]**	**X**	**X**	**X**	**Identity Reliability Code**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
33	4..24	[0..1]	DTM	RE	None cited	Last Update Date/Time		No		201102081000-0800	When updating demographic information update this field to flag receiver of new information. Note: the GMT offset (-0800) is required.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
34		[0..1]	HD	C(R/RE)	None cited	Last Update Facility	The PHIN namespace ID and OID of your Lab	Yes		NapaGen_Lab^2.16.840.1.113883.19.3.1^ISO	Condition: If PID.33 is populated, PID.34 must be populated. Else PID.34 may be populated. Hardcoded. Send it if you have it.
34.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	The PHIN namespace ID of your Lab	Yes		NapaGen_LAB	This component may be empty. Send it if you have it.
34.2	1..199=	[1..1]	ST	R	None cited	Universal ID	OID of your Lab	Yes	2.16.840.1.114222.xxxxx	2.16.840.1.114222.4.1.104	The assigned OID string goes here.
34.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**ISO**	Yes	**ISO**	**ISO**	Defaults to ISO
35		[0..1]	CWE	RE	**PHVS_Animal_CDC**	Species Code		No		84923006^Aberdeen Angus cattle breed^SCT	Population of this field supports animal rabies testing as it relates to human rabies testing. It is not populated unless Rabies is the suspected disease condition.
35.1	1..20=	[0..1]	ST	RE	None cited	Identifier		No		84923006	This component may be empty. Send it if you have it. If populated, assume the standard code populates the first triplet and a local code the second triplet.
35.2	1..199#	[0..1]	ST	C(RE/X)	None cited	Text		No		Aberdeen Angus cattle breed	Condition: If PID.35.1 is populated, then PID.35.2 may be populated. Else PID.35.2 is not populated.
35.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**SCT**	Condition: If PID.35.1 is populated, then PID.35.3 must be populated. Else PID.35.3 is not populated.
35.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier		No		AC	This component may be empty. Send it if you have it.
35.5	1..199#	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		Aberdeen Angus Cow	Condition: If PID.35.4 is populated, then PID.35.5 may be populated. Else PID.35.5 is not populated
35.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		**L**	Condition: If PID.35.4 is populated, then PID.35.6 must be populated. Else PID.35.6 is not populated. Use “L” Local) here.
35.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID	Standard Coding System Version	Yes		'20100731	Recommended if a coding system is identified in component 3. This can be Hardcoded.

PID											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
35.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system Version	Yes		'1102010	Recommended if a coding system is identified in component 6. This can be Hardcoded. If no local coding system version is known, suggest using the string value "v unknown"
35.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Sick Cow	Condition: If PID.35.1 and PID.35.4 are both empty, then PID.35.9 must be populated. Else PID.35.3 may be populated. Send it if you have it.
35.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			This component may be empty. Send it if you have it.
35.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: If PID.35.10 is populated, then PID.35.11 may be populated. Else PID.35.11 is not populated.
35.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: If PID.35.10 is populated, then PID.35.12 must be populated. Else PID.35.12 is not populated.
35.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
35.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.6.96	Condition: If PID.35.3 is populated, then PID.35.14 must be populated. Else PID.35.14 is not populated.

Note: The unsupported, terminal PID Fields 36-39 were removed. Intervening unsupported "X" elements and their components are present.

Example:

PID|1||987654321A^^^NapaGen_EHR&2.16.840.1.114222.4.1.10412&ISO^PI^NapaGen Hospital&2.16.840.1.114222.4.1.10412&ISO||Everyman^Adam^A^^^^L^^^^^^^BS|Mum^Martha^M^^^^M|20050602|M||2106-3^White^CDCREC^^^^04242007|2222 Home Street^^Ann Arbor^MI^99999^USA^H^^06055||^PRN^PH^^1^555^5552004|^WPN^PH^^1^955^5551009^1234^Hours 9am to 5 pm M-F|eng^English^ISO6392^^^^3292007^^^^^^2.16.840.1.113883.12.2|B^Unmarried^HL70002^^^^2.5.1^^Not Married||||||N^Not Hispanic or Latino^HL70189^^^^2.5.1|Chicago|N|1|||||N|||200808151000-0800|Reliable^2.16.840.1.113883.19.3.1^ISO|84923006^Aberdeen Angus cattle breed^SCT^AC^Aberdeen Angus Cow^L^20100731^1102010^Sick Cow^^^^^2.16.840.1.113883.6.96

4.4 NTE Segment

NTE											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID – NTE	The sequence number of the NTE segment	No		1	Initial value is '1', and is incremented for each additional NTE segment added.
2	1..1	[0..1]	ID	RE	**HL70105**	Source of Comment	Where the comment originated	No		**L**	Use "L" (Filler) if the comment originated in your LIMS. Other possibilities are "P" (Placer), if the comment came from the submitter, or O (Other).
3	1..65536	[1..*]	FT	R	None cited	Comment	The comment	No		Comment goes here. It can be a very long comment.	This is an FT (formatted text) field. It can contain either plain text or plain text along with HL7 formatting codes such as \.br\ (Line break), \.in5\ (Indent 5 spaces), etc. this field can repeat.
4		[0..1]	CWE	RE	**HL70364**	Comment Type		No		RE^Remark^HL70364^^^^2.5.1	for example: RE remark
4.1	1..20=	[0..1]	ST	RE	None cited	Identifier		No		RE	This component may be empty. If populated, assume Standard Code in first triplet: Required if a coding system is identified in component 3. Can be Hardcoded.
4.2	1..199#	[0..1]	ST	C(RE/X)	None cited	Text		No		Remark	Condition: if NTE.4.1 is populated, NT.4.2 may be populated. Else NTE.4.2 is not populated.
4.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**HL70364**	Condition: If NTE.4.1 is populated, NTE.4.3 must be populated. Else NTE.4.3 is not populated.
4.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier		No			For ELR this element can be empty. If populated, us a local code.
4.5	1..199#	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No			Condition: if NTE.4.4 is populated, NTE.4.5 may be populated. Else NTE.4.5 is not populated.
4.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No			Condition: If NTE.4.4 is populated, NTE.4.6 must be populated. Else NTE.4.6 is not populated.
4.7	1..10=	[0..1]	ST	RE	**HL7194**	Coding System Version ID		Yes	2.5.1	**2.5.1**	This component may be empty. Send it if you have it.

NTE											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
4.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes	local coding system version or "v unknown "		This component may be empty. Send it if you have it.
4.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If NTE.4.1 and NTE.4.4 are not populated, NTE.4.9 must be populated. Else NTE.4.9 may be populated. Send it if you have it.
4.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
4.11	1..199 #	[0..1]	ST	C(RE/x)	None cited	Second Alternate Text		No			Condition: if NTE.4.10 is populated, NTE.4.11 may be populated. Else NTE.4.11 is not populated.
4.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if NTE.4.10 is populated, then NTE.4.12 must be populated. Else NTE.4.12 is not populated.
4.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
4.14	1..199 =	[0..1]	ST	C(RE/X)	None cited	Coding System OID		No		2.16.840.1.113883.12.364	Condition: If NTE.4.3 is populated, then NTE.4.14 also must be populated. Else NTE.4.14 is not populated. Note: See the federal ELR2PH guide, Chapter 6 for coding system OIDs.

Note: There are no unsupported terminal components and no intervening unsupported elements. All supported elements and components are present.

Example:

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1^v unknown^^^^^^2.16.840.1.113883.12.364

4.5 NK1 Segment

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID – NK1		No		1	
2		[0..*]	XPN	C(R/X)	None cited	Name	Next of Kin Name of patient	No		Mum^Martha^M^^^^L	For minors, this is the name of a parent or guardian. For animals, this is the "owner". Use this field for person(s) or use NK1-13 for organizations. This field is repeatable. Condition: if NK1.2.1 is populated, NK1.2 is populated. Else NK1.2 is not populated.
2.1		[0..1]	FN	RE	None cited	Family Name	Next of Kin Last Name	No		Mum^Martha^M	This component may be empty. Send it if you have it.
2.1.1	1..50#	[1..1]	ST	R	None cited	Surname	Next of Kin Last Name	No		Mum	231 lastname maps to this field
2.2	1..30#	[0..1]	ST	RE	None cited	Given Name	Next of Kin First Name	No		Martha	This component may be empty. Send it if you have it.
2.3	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof	Next of Kin Middle Initial/Middle Name	No		M	This component may be empty. Send it if you have it.
2.4	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)		No			This component may be empty.
2.5	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)		No			This component may be empty.
2.6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Degree(e.g., MD)**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
2.7	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code	The Name Type Code from HL7 Table 200	No		**L**	Defaults to “L” (legal name) if empty. If a name is provided, always populate this component.
2.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder. CA REDIE calculates this value from the address.**

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
2.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
2.10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
2.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
2.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
2.13	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data Component must be present as a placeholder.**
2.14	1..199#	[0..1]	ST	RE	**HL70360**	Professional Suffix		No			Not needed for Next of Kin. If populated, suggest using values from HL7 table 360.
3		[0..1]	CWE	RE	**HL70063**	Relationship	Next of Kin relationship to patient	No		**MTH**^Mother^HL70063^^^^2.5.1	Relationship between the next of kin/related party and the patient. It is of particular importance when documenting the parent or guardian of a child patient or the owner of an animal patient. Assume the standard codes populate the first triplet and the local codes the second triplet.
3.1	1..20=	[0..1]	ST	RE	None cited	Identifier	Next of Kin relationship code HL7 table 0063	No		MTH	Examples include “MTH”- Mother, “FTH”-Father, “GRD”-Guardian, “OWN”-Owner, “OTH”- other, “UNK”-Unknown.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Text name of relationship code HL7 table 0063	No		Mother	Condition: If NK1.3.1 is populated, then NK1.3.2 may be populated. Else NK1.3.2 is not populated.
3.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	relationship coding system	Yes	**HL70063**	**HL70063**	Condition: if NK1.3.1 is populated, then NK1.3.3 must be populated. Else NK1.3.3 is not populated.
3.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	Local Next of Kin Relationship code	No			This component may be empty. If your system supports a local code, put it here.
3.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local Next of Kin Relationship text name	No			Condition: If NK1.3.4 is populated, then NK1.3.5 may be populated. Else NK1.3.5 is not populated.
3.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	Local coding system	Yes	**L**	**L**	Condition: If NK1 3.4 is populated, then you NK1 3.6 must be populated ("L"). Else NK1. 3.6 is not populated.
3.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID	Standard coding system version	Yes	2.5.1	2.5.1	This component may be empty. Send it if you have it.
3.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system version	Yes	2011	2011	This component may be empty. Send it if you have it.
3.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If NK1.3.1 and NK1.3.4 are not populated, NK1.3.9 must be populated. Else NK1.3.9 may be populated. If all you have is text put it here.
3.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This element may be empty.
3.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: If NK1.3.10 is populated, then NK1.3.11 may be populated. Else NK1.3.11 is not populated.
3.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if NK1.3.10 is populated, then NK1.3.12 must be populated. Else NK1.3.12 is not populated.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.13	1..10=	[0..1]	ST	C(RE/X)	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
3.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		Yes		2.16.840.1.113883.12.63	Condition: If NK1.3.3 is populated, then NK1.3.14 must be populated. Else NK1.3.14 is not populated. See Chapter 6 of the federal ELR2PH guide for a list of OIDs for the required HL7 and PHVS tables.
4		[0..*]	XAD	RE	None cited	Address	Next of Kin Address	No		1566 Ash Street^^Napa^CA^94558 ^USA^H^^06055	This field can repeat. It is populated from NK1.4.1.
4.1		[0..1]	SAD	RE	None cited	Street Address		No		1566 Ash Street	This field is populated by NK1.4.1.1 below.
4.1.1	1..120 #	[1..1]	ST	R	None cited	Street or Mailing Address		No		1566 Ash Street	Required. Send it if you have it. (A work address is preferred, but it can be either a work address or a home address.)
4.2	1..120 #	[0..1]	ST	RE	None cited	Other Designation		No		Apt B	This component may be empty. Send it if you have it.
4.3	1..50#	[0..1]	ST	RE	None cited	City		No		Napa	California requires the City; please populate.
4.4	1..50#	[0..1]	ST	RE	**PHVS_State_FIPS_5-2_V1**	State or Province		No		**CA**	Use the FIPS 5-2 two character codes here (e.g., CA for California)
4.5	1..12=	[0..1]	ST	RE	**US Zip+4 or Canadian Postal Code Tables.**	Zip or Postal Code		No		94558	US Zip Codes, Zip+4 and Canadian Postal Codes are supported in ELR messages. Useful tools: http://www.zip-codes.com/search.asp or for Canada, use http://www.canada411.ca/area-code-lookup/
4.6	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country		No		**USA**	Usually this will be USA, but it might be another country code from ISO 3166-1.
4.7	1..3	[0..1]	ID	RE	**HL70190**	Address Type	**Address Type code from HL7 Table 190**	No		**H**	For example "H" (Home). Typical values from HL7 Table 190 are "H" (Home), "L" (Legal Address), "M" (Mailing), "C" (Current Or Temporary) etc.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
4.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Other Geographic Designation**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder. CA REDIE calculates this value from the address.**
4.9	1..20=	[0..1]	IS	RE	**PHVS_County_FIPS_6-4**	County/Parish Code	**PHVS_County_FIPS_6-4**	No		**06055**	Use FIPS 6-4 codes.
5		[0..2]	XTN	RE	None cited	Phone Number	Next of Kin Phone number	No		^PRN^PH^^1^707^2522610	Preferred to use a work phone number if available. The Example shown here is for a home phone number. NOTE: NK1.5 can repeat. The example at the end of segment also includes a work telephone number. The second NK1-5 is coded as follows: "^WPN^PH^^1^510^5551212^123^Hours 9am to 5pm M-F"
5.1	**0..0**	**[0..0]**	**X**	**X**	**X**	**Country Code**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
5.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code		No		PRN	For example PRN = Primary Residence Number. Should use 'NET' if component 4 (Email Address) is present.
5.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type		No		PH	For example PH = phone. Should use 'Internet' if component 4 (Email Address) is present.
5.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address		No			Condition: If NK1.5.7 (local number) is not populated, then NK1.5.4 must be populated. Else if NK1.5.7 is populated, NK1.5.4 (Email Address) is not populated.
5.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful**	Country Code		No		1	Condition: If NK1.5.7 (Local Number) is populated, NK1.5.5 must be populated. Else NK1.5.5 is not populated. Useful website: **http://travel.airwise.com/info/intl_numbers.html**

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
5.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code		No		707	Condition: If NK1.5.7 (Local Number) is populated, NK1.5.6 may be populated. Else NK1.5.6 is not populated.
5.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number		No		2522610	Condition: if NK1.5.4 (Email Address) is not populated, NK1.3.7 (Local Number) must be populated. Else if NK1.5.4 (Email Address) is populated, NK1.5.7 is not populated.
5.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension		No			Condition: If NK1.5.7 is populated, Nk1.5.8 may be populated. Else NK1.5.8 is not populated.
5.9	1..199 #	[0..1]	ST	RE	None cited	Any Text		No			For example: “Regular hours 8 am to 5 pm.”
6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Business Phone Number**	**X**	**X**	**X**	**X**	**Element not Supported. Use NK1-5. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**
7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Contact Role**	**X**	**X**	**X**	**X**	**Not Supported. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**
8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Start Date**	**X**	**X**	**X**	**X**	**Not Supported. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**
9	**0..0**	**[0..0]**	**X**	**X**	**X**	**End Date**	**X**	**X**	**X**	**X**	**Not Supported. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**
10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Next of Kin/Associated PartiesJob Title**	**X**	**X**	**X**	**X**	**Not Supported. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**
11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Next of Kin/Associated Parties Job Code/Class**	**X**	**X**	**X**	**X**	**Not Supported. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**
12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Next of Kin Associated Parties Employee Number**	**X**	**X**	**X**	**X**	**Not Supported. This element is not populated, but the element separator character "|" for this data field must be present as a placeholder.**

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
13		[0..1]	XON	C(R/X)	None cited	Organization Name – NK1	Name of organization	No			Condition: If an organization is an associated party to the patient, populate this field Else, use field NK1.2 for persons. Note: this element would only be used if an organization such as an adult Assisted living organization, etc. was responsible for the patient.
13.1	1..50#	[0..1]	ST	C(R/RE)	None cited	Organization Name	Name of the Organization	No			Condition: If NK1.13.10 is populated with an organization identifier (XX), then NK1.13.1 may be populated. Else NK1.13.1 is not populated. Send it if you have it.
13.2	1..20=	[0..1]	IS	RE	**HL70204**	Organization Name Type Code		Yes	**D, A or L**	**D**	Example "L" Legal Name, "A" Alias Name, "D" Display Name. If an organization name is provided in NK12.1, then this component should also be populated.
13.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**ID Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder. Use XON-10 "Organization Identifier".**
13.4	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
13.5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
13.6		[0..1]	HD	C(R/X)	None cited	Assigning Authority		No			The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID in NK1.13.10. Condition: Required if NK1.13.10 (Organization Identifier) is populated.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
13.6.1	1..20=	[0..1]	IS	RE	Local	Namespace ID	The assigning authority for the Ordering Facility ID	No		Name of the Organization or System that assigned the Ordering Facility ID	You can leave this element empty if you don't know it. Send it if you have it.
13.6.2	1..199 =	[1..1]	ST	R	None cited	Universal ID	The assigning authority OID	No		Assigned OID String	Required. . Send it if you have it.
13.6.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	Defaults to "ISO"
13.7	2..5	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		No			Condition: If NK1.13.10 (Organization Identifier) is populated, then NK1.13.7 must be populated. Else NK1.13.7 is not populated.
13.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Assigning Facility**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
13.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
13.10	1..20=	[0..1]	ST	RE	None cited	Organization Identifier	Organization Identifier (ID)	No		The code assigned by the organization to identify whatever it is that is being identified.	Can be numbers and letters. Replaces the third and fourth component of the XON data type used in HL7 v 2.3.1 and v 2.3.z.
14	**0..0**	**[0..0]**	**X**	**X**	**X**	**Marital Status**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Administrative Sex**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Date/Time of Birth**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
17	0..0	[0..0]	X	X	X	Living Depencency	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.
18	0..0	[0..0]	X	X	X	Ambulatory Status	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.
19	0..0	[0..0]	X	X	X	Citizenship	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.
20		[0..1]	CWE	RE		Primary Language		No		eng^English^ISO6392^^^^3292007^^English^^^^2.16.840.1.113883.12.2	Need the primary language for communication with the Next of Kin (i.e., phone, e-mail, Letter, etc.). Blank field defaults to English.
20.1	1..20=	[0..1]	ST	RE	PHVS_Language_ISO_639-2_Alpha3	Identifier		No		eng	This component may be empty; Send it if you have it. Else it defaults to "eng".
20.2	1..199#	[0..1]	ST	C(RE/X)	None cited	Text		No		English	Condition: If NK1.20.1 is populated, Nk1.20.2 may be populated. Else NK1.20.2 is not populated.
20.3	1..12	[0..1]	ID	C(R/X)	HL70396	Name of Coding System		Yes	ISO6392	ISO6392	Condition: If NK1.20.1 is populated, NK1.20.3 must be populated. Else NK1.20.3 is not populated.
20.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier		No		A local code	May be empty. Use only if the PHVS table does not have a listing for the patient's primary language.
20.5	1..199#	[0..1]	ID	C(RE/X)	None cited	Alternate Text		No		Local Text	Condition: If NK1.20.4 is populated, NK1.20.5 may be populated. Else NK1.20.5 is not populated.
20.6	1..12	[0..1]	ST	RE	HL70396	Coding System Version ID		No		L	Condition: If NK1.20.4 is populated, NK1.20.6 must be populated. Else NK1.20.6 is not populated. Use "L" (Local) here.
20.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		Yes	20080708	20080708	This component may be empty. Send it if you have it.
20.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
20.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		English	Condition: If NK1.20.1 and NK1.20.4 are not populated, NK1.20.9 must be populated. Else NK1.20.9 may be populated. Send it if you have it.
20.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No		A local code	Most LIMS will not have a second alternate coding system. This element can be empty.
20.11	1..199 #	[0..1]	ST	RE	None cited	Second Alternate Text		No		Local Text	Condition: if NK1.20.10 is populated, NK1.20.11 may be populated. Else NK1.20.11 is not populated.
20.12	1..12	[0..1]	ID	C(R/X)	HL70396	Second Alternate Coding System Name		No		Would be L (local code)	Condition: if NK1.20.10 is populated, then NK1.20.12 must be populated. Else NK1.20.12 is not populated.
20.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
20.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		Yes	2.16.840.1.113883.6.100	2.16.840.1.113883.6.100	Condition: If NK1.20.3 is populated, then NK1.20.14 must be populated. Else NK1.20.14 is not populated. See Chapter 6 of the federal ELR2PH guide for a list of OIDs for the required HL7 and PHVS tables.
21	0..0	[0..0]	X	X	X	Living Arrangement	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.
22	0..0	[0..0]	X	X	X	Publicity Code	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.
23	0..0	[0..0]	X	X	X	Protection Indicator	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.
24	0..0	[0..0]	X	X	X	Student Indicator	X	X	X	X	Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
25	**0..0**	**[0..0]**	**X**	**X**	**X**	**Religion**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
26	**0..0**	**[0..0]**	**X**	**X**	**X**	**Mother's Maiden Name**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
27	**0..0**	**[0..0]**	**X**	**X**	**X**	**Nationality**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
28	**0..0**	**[0..0]**	**X**	**X**	**X**	**Ethnic Group**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
29	**0..0**	**[0..0]**	**X**	**X**	**X**	**Contact Reason**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
30		[0..*]	XPN	C(R/X)	None cited	Contact Person's Name	Contact person name for organization in NK1.13	No			This field may be empty if contact not known. Condition: If NK1.13 is populated, then NK1.30 must be populated. Else NK1.30 is not populated. Note: NK1.30 is populated from NK1.30.1 below.
30.1		[0..1]	FN	RE	None cited	Family Name	Contact Person Last Name	No			Condition: If NK1.13 (Organization Name) is populated, then NK1.30.1 must be populated. Else NK1.30.1 is not populated. If a contact person is not known, default to "Unavailable".
30.1.1	1..50#	[1..1]	ST	R	None cited	Surname	Contact Person Last Name	No			231 Last Name maps to this field
30.2	1..30#	[0..1]	ST	RE	None cited	Given Name	Contact Person First Name	No			This component may be empty; send it if you have it.
30.3	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof	Contact Person Middle Name or Initial	No			This component may be empty. Send it if you have it.
30.4	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)		No			This component may be empty.

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
30.5	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)		No			This component may be empty.
30.6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Degree (e.g., MD)**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
30.7	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code	The Name Type Code from HL7 Table 200	No			Defaults to ”L” (legal name) if empty.
30.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
30.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5 Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder. See XPN-12 Effective Date and XPN=13 Expiration date.**
30.10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder. See XPN-12 Effective Date and XPN-13 Expiration Date.**
30.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
30.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
30.13	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional component. Not Supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
30.14	1..199 #	[0..1]	ST	RE	**HL70360**	Professional Suffix		No			This component may be empty. Suggest using values from HL7 table 360.
31		[0..2]	XTN	RE	None cited	Contact Person's Telephone Number		No			This field may be empty. Send it if you have it.
31.1	**0..0**	**[0..0]**	**X**	**X**	**X**	**Telephone Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
31.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code		No			For example "PRN" = Primary Residence Number. Should use 'NET' if component 4 (Email Address) is present.
31.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type		No			For example PH = phone. Should use 'Internet' if component 4 (Email Address) is present.
31.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address		No			Condition: If NK1.31.7 (local number) is not populated, then NK1.31.4 (Email Address) must be populated. Else if NK1.31.7 (Local Number) is populated, then NK1.31.4 is not populated.
31.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful**	Country Code		No		**Generally will be "1" for USA.**	Condition: If NK1.31.7 (Local Number) is populated, then NK1.31.5 must be populated. Else NK2.31.5 is not populated. An available on-line source for country calling codes is the following: **http://travel.airwise.com/info/intl_numbers.html**
31.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code		No			Condition: If NK1.31.7 is populated, then NK1.31.6 may be populated. Else NK1.31.6 is not populated.
31.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number		No			Condition: If NK1.31.4 (Email Address) is not populated, then NK1.31.7 (Local Number) must be populated. Else if NK1.31.4 (Email Address) is populated, then NK1.31.7 is not populated. An available on-line source for country calling codes is the following:

NK1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
31.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension		No			Condition: if NK1.31.7 (Local Number) is populated, then NK1.31.8 may be populated. Else NK1.31.8 is not populated.
31.9	1..199 #	[0..1]	ST	RE	None cited	Any Text		No			For example: “Regular hours 8 am to 5 pm.”
32		[0..1]	XAD	RE	None cited	Contact Person’s Address		No			This element may be empty if the Organization address not known.
32.1		[0..1]	SAD	RE	None cited	Street Address		No			Nk1.32.1 is populated from NK1.32.1.1
32.1.1	1..120 #	[1..1]	ST	R	None cited	Street or Mailing Address		No			Required field. Street number and name or P.O. Box with street name goes here.
32.2	1..120 #	[0..1]	ST	RE	None cited	Other Designation		No			May be empty. Send it if you have it.
32.3	1..50#	[0..1]	ST	RE	None cited	City		No			California requires the City; please populate.
32.4	1..50#	[0..1]	ST	RE	**PHVS_State_FIPS_5-2_V1**	State or Province		No			Use the FIPS 5-2 two character codes here (e.g., CA for California)
32.5	1..12=	[0..1]	ST	RE	**US Zip+4 or Canadian Postal Code Tables**	Zip or Postal Code		No			US Zip Codes, Zip+4 and Canadian Postal Codes are supported in ELR messages. Useful tools: http://www.zip-codes.com/search.asp, http://www.canada411.ca/area-code-lookup/
32.6	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country		No			Usually this will be USA, but it might be another country code from ISO 3166-1.
32.7	1..3	[0..1]	ID	RE	**HL70190**	Address Type		No			Example values are “B” Firm/Business, “M” Mailing, “O” Office.
32.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Other Geographic Designation**	**x**	**x**	**x**	**x**	**Optional component. Not supported. This component is not populated, but the component separator character “^” for this data component must be present as a place holder. CA REDIE calculates this value from the address.**
32.9	1..20=	[0..1]	IS	RE	**PHVS_County_FIPS_6-4**	County/Parish Code		No		**0655**	use FIPS 6-4 codes

Note: The unsupported terminal NK1 Subcomponents 32.10 through 32.14 and the unsupported terminal fields from 33 through 39 were removed. Fields following NK1.20 are only populated if an organization rather than an individual is the NK1 contact; i.e., an adult or other care or assisted living facility. All intervening unsupported elements and unsupported components intervening in supported elements are present.

Example:

NK1|1|Mum^Martha^M^^^^L|MTH^Mother^HL70063^^^^2.5.1|123 Anystreet^Apt B^Anytown^CA^99999^USA^H^^06055|^PRN^PH^^1^555^5552006~^WPN^PH^^1^510^5551212^123^Hours 9am to 5pm M-F||||||||||||||eng^English^ISO6392^^^^3292007^^English^^^^^2.16.840.1.113883.12.2PV1 Segment

4.6 PV1 Segment

PV1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID - PV1				1	Initiates with “1” and increments by 1 for each subsequent PV1 segment added.
2	1..20=	[1..1]	IS	R	**HL70004**	Patient Class				Example not shown	Populate with codes from HL70004.
3		[0..1]	PL	C(RE/X)		Assigned Patient Location				4E^234^A^^^N&Nursing Station 4&HL70305	Condition: If PV1.2 is populated with "inpatient", then PV1.3 must be populated.
3.1	1..20=	[0..1]	IS	RE	**HL70302**	Point of Care				4E	May be left empty. Send it if you have it.
3.2	1..20=	[0..1]	IS	RE	**HL70303**	Room				1234	This component may be empty. Send it if you have it.
3.3	1..20=	[0..1]	IS	RE	**HL70304**	Bed				A	Component may be empty. Send it if you have it.
3.4	**0..0**	**[0..0]**	**X**	**X**	**X**	**Facility**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" must be present as a placeholder.**
3.5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Location Status**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" must be present as a placeholder.**
3.6		[0..1]	CWE	RE	**HL70305**	Person Location Type				N	This component may be empty. Send it if you have it.
3.6.1	1..20=	[0..1]	ST	RE	None cited	Identifier				N	This component may be empty. Send it if you have it.
3.6.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text				Nursing Station 4	Condition: If PV1.3.6.1 is populated, then PV1.3.6.2 may be populated. Else PV1.3.6.2 is not populated.
3.6.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System				**HL70305**	Condition: If PV1.3.6.1 is populated, then PV1.3.6.3 must be populated. Else PV1.3.6.3 is not populated.
3.6.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier				Local code goes here if available	May be empty. Send it if you have it.
3.6.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text				Local text goes here if available	Condition: If PV1.3.6.4 is populated, PV1.3.6.5 may be populated. Else Pv1.3.6.5 is not populated.
3.6.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System				**L**	Condition: If PV1.3.4 is populated, PV1.3.6.6 must be populated. Else PV1.3.6.6 is not populated. Use "L" (localCode).

PV1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.6.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID				3.5.1	This component may be empty. Send it if you have it.
3.6.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID				V unknown	This component may be empty. Send it if you have it.
3.6.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text				Station 4 Bed A	If PV1.3.6.1 and PV1.3.6.4 are both empty, then PV1.3.6.9 must be populated. Else PV1.3.6.9 may be populated.
3.6.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier					Most systems do not support a second alternate identifier. This field may be empty.
3.6.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text					If PV1.3.6.10 is populated, PV1.3.6.11 may be populated. Else, PV1.3.6.11 is not populated.
3.6.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System					Condition: If PV1.3.6.10 is populated, PV1.3.6.12 must be populated. Else PV1.3.6.12 is not populated.
3.6.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID					This component may be empty. Send it if you have it.
3.6.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		Yes	2.16.840.1.113883.12.305	2.16.840.1.113883.12.305	Condition: If PV1.3.6.3 is populated, then PV1.3.6.14 must be populated. Else PV2.3.6.14 is not populated. See Chapter 6 of the federal ELR2PH guide for a list of OIDs for the required HL7 and PHVS tables.
4	1..20=	[0..1]	IS	C(RE/X)	**PHVS_AdmissionType_ahl7_2x_V1 or HL70007**	Admission Type				R	Condition: If PV1.2 is populated with “inpatient”, then PV1.4 must be populated. Else PV1.4 is not populated.
5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Preadmit Number**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Prior Patient Location**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Attending Doctor**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**

PV1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Referring Doctor**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Consulting Doctor**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
10	1..20=	[0..1]	IS	RE	**Local**	Hospital Service					This field may be empty.
11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Temporary Location**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Preadmit Test Indicator**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
13	**0..0**	**[0..0]**	**X**	**X**	**X**	**Readmission Indicator**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
14	**0..0**	**[0..0]**	**X**	**X**	**X**	**Admit Source**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Ambulatory Status**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
16	**0..0**	**[0..0]**	**X**	**X**	**X**	**VIP Indicator**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Admitting Doctor**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Patient Type**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
19		[0..1]	CX	RE	None cited	Visit Number					This field may be empty.
19.1	1..15=	[1..1]	ST	R	None cited	ID Number				1234	If a visit ID number is provided, you must send it.

PV1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
19.2	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" must be present as a placeholder.**
19.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" must be present as a placeholder.**
19.4		[1..1]	HD	R	None cited	Assigning Authority				Organization Name&OID string&ISO	This can be a person, organization or software that assigned the ID number in PV1.19.1
19.4.1	1..20=	[0..1]	IS	RE	Local	Namespace ID				Organization Name	Name of the hospital, clinic, etc.
19.4.2	1..199 =	[1..1]	ST	R	None cited	Universal ID				Assigned Organization OID String	Can be a OID string, an employee number, an NPI number, etc.
19.4.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type				**ISO**	Appropriate to the choice of authority.
19.5	2..5	[1..1]	ID	R	**HL70203**	Identifier Type Code				**XX**	XX for organization, other HL70203 value for persons, etc.
19.6		[0..1]	HD	RE	None cited	Assigning Facility				Organization Name^OID string^ISO	Name of the hospital, clinic, etc. with OID and ID Type.
19.6.1	1..20=	[0..1]	IS	RE	Local	Namespace ID				Organization Name	Name of the hospital, clinic, etc.
19.6.2	1..199 =	[1..1]	ST	R	None cited	Universal ID				Assigned OID String	Assigned OID string.
19.6.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type				**ISO**	Defaults to "ISO".
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Financial Class**	**X**	**X**	**X**	**X**	**Optional element. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
21	**0..0**	**[0..0]**	**X**	**X**	**X**	**Charge Price Indicator**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
22	**0..0**	**[0..0]**	**X**	**X**	**X**	**Courtesy Code**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
23	**0..0**	**[0..0]**	**X**	**X**	**X**	**Credit Rating**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**

PV1											
Seq	Len	Cardinality	DT	Lab Result Sender Usage	Value Set	HL7 Element Name	LTIAPH Def.	Hard Code	Hard Code Value	Example data	Comments
24	0..0	[0..0]	X	X	X	Contract Code	X	X	X	X	Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
25	0..0	[0..0]	X	X	X	Contract Effective Date	X	X	X	X	Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
26	0..0	[0..0]	X	X	X	Contract Amount	X	X	X	X	Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
27	0..0	[0..0]	X	X	X	Contract Period	X	X	X	X	Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
28	0..0	[0..0]	X	X	X	Interest Code	X	X	X	X	Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
29	0..0	[0..0]	X	X	X	Transfer to Bad Debt Code	X	X	X	X	Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
30	0..0	[0..0]	X	X	X	Transfer to Bad Debt Code	X	X	X	X	Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
31	0..0	[0..0]	X	X	X	Bad Debt Agency Code	X	X	X	X	Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
32	0..0	[0..0]	X	X	X	Bad Debt Transfer Amount	X	X	X	X	Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
33	0..0	[0..0]	X	X	X	Bad Debt Recovery Amount	X	X	X	X	Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.
34	0..0	[0..0]	X	X	X	Delete Account Indicator	X	X	X	X	Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.

PV1											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
35	**0..0**	**[0..0]**	**X**	**X**	**X**	**Delete Account Date**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
36	1..20=	[0..1]	IS	RE	**HL70112 or PHVS_DischargeDisposition_HL7_2x_V1**	Discharge Disposition		No		**30**	This field may be empty.
37	**0..0**	**[0..0]**	**X**	**X**	**X**	**Discharged to Location**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
38	**0..0**	**[0..0]**	**X**	**X**	**X**	**Diet Type**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
39	**0..0**	**[0..0]**	**X**	**X**	**X**	**Servicing Facility**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
40	**0..0**	**[0..0]**	**X**	**X**	**X**	**Bed Status**	**X**	**X**	**X**	**X**	**Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
41	**0..0**	**[0..0]**	**X**	**X**	**X**	**Account Status**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
42	**0..0**	**[0..0]**	**X**	**X**	**X**	**Pending Location**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
43	**0..0**	**[0..0]**	**X**	**X**	**X**	**Prior Temporary Location**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the field separator character "|" must be present as a placeholder.**
44	4…24	[0..1]	DTM	RE	None cited	Admit Date/Time				200808151000-0800	This field may be empty. Send it if you have it.
45	4…24	[0..1]	DTM	RE	None cited	Discharge Date/Time				200808151000-0800	This field may be empty. Send it if you have it.

Note: The remaining unsupported terminal PV1 Fields 46 through 52 were removed. Note: This segment is not required for ELR. All intervening unsupported “X” elements are present as are non-terminal unsupported “X” components of supported data elements.

Example: PV1|1|O|4E^234^A^^^N&Nursing Station 4&HL70305|R|||||||||||||||||||||||||||||30|||||||200808151000-0800|200808151200-0800

4.7 ORC Segment

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	2..2	[1..1]	ID	R	**HL70119**	Order Control	The HL7 Order Control Codes from Table 0119	Yes	**RE**	**RE**	HL7 Order Control Codes indicate the order action to be performed, i.e., the circumstances of the order that is contained in this message. For ELR messages the Order Control Code is “RE” (Observations/Performed Service to follow).
2		[0..1]	EI	C(R/RE)	None cited	Placer Order Number	The submitter's order number information for the test	No		23456^NapaGen_EHR^ OID here^ISO	This field is the same as OBR-2. It is for information about the order number on the submitter form, if there is one, or the order number on the electronic order. If there is no Submitter Order Number, you can leave ORC-2 empty.
2.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The submitter's order number string	No		23456	Required. Send it if you have it.
2.2	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID	The namespace ID for the assigner of the submitter's order number	No		NapaGen_EHR	Assigner is an application. May be left empty if not known.
2.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	The namespace OID for the assigner of the submitter's order number	No		OID here	For now MQF tool allows any string in this field.
2.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	ISO	**ISO**	Defaults to ISO

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3		[1..1]	EI	R	None cited	Filler Order Number	Filler Order Number and PHIN namespace info	No		56789PHL222^NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO	This field is the same as OBR-3. It contains the Filler Order Number the LIMS namespace ID and OID.
3.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The order number in the LIMS	No		56789PHL222	This filler number should be a system-generated number from the LIMS. If someone asks for the result for order# 12345, the lab should be able to find the test result from the order number.
3.2	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID	The namespace ID of the LIMS	Yes	your LIMS	NapaCo_PHL_LIMS	May be empty; send it if you have it.
3.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	The OID of the LIMS	Yes	e.g., 2.16.840.1.114222.xxxxx	2.16.840.1.114222.4.1.10412	The assigned OID string goes here.
3.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	Defaults to “ISO”.
4		[0..1]	EI	RE	None cited	Placer Group Number		No		Group No^Entity Name^Assigned OID string^ISO	For ELR this element can be empty. May see this used with ELINCS Messages
4.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier		No		The placer-assigned group number, if any; e.g., 12345	Only populated if a Placer Group Number is provided.
4.2	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID		No		Name of the entity that assigned the placer group number.	Only populated if a Placer Group Number is provided.
4.3	1..199 =	[1..1]	ST	R	None cited	Universal ID		No		Assigned OID string for the entity.	Only populated if a Placer Group Number is provided.
4.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type		No		**ISO**	Only populated if a Placer Group Number is provided.
5	1..2	[0..1]	ID	RE	**HL70038**	Order Status	The order status code from HL7 Table 0038	No		**CM**	The Lab Sender and ELR Receiver Usages have been changed from "O" (undefined), to "RE" (required but may be empty). Regarding the order status, This will probably be "CM" (Order is completed). Other values from HL7 Table 0038 include "A" (Some, but not all, results available), "RP" (Order has been replaced).

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Response Flag**	**X**	**X**	**X**	**X**	**Optional field. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Quantity/Timing**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. See TQ1 and TQ 2 Segments (Not supported in the ELR2PH message.)**
8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Parent**	**X**	**X**	**X**	**X**	**Optional field not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. Use OBR.29 instead.**
9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Date/Time of Transaction**	**X**	**X**	**X**	**X**	**The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. Use OBR.22 instead.**
10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Entered By**	**X**	**X**	**X**	**X**	**Optional field not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. Use OBR.29 instead.**
11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Verified By**	**X**	**X**	**X**	**X**	**Optional field not supported. The field is not populated, but the Field separator character "|" for this data field must be present as a placeholder. Use OBR.29 instead.**
12		[0..*]	XCN	C(R/RE)	None cited	Ordering Provider	Physician or other provider who ordered the test	No		1497805436^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^^MD	This element is a common core data element - need to send it if you have it. Condition: If OBR.16 (Ordering Provider) is populated, then ORC.12 will contain the same value. If all you have is a single field text name, put it here.
12.1	1..15 =	[0..1]	ST	RE	None cited	ID Number	Provider ID	No		1497805436	String length is only 15 with no truncation allowed. If length is exceeded, the expected ELR receiver behavior is to not truncate.
12.2		[0..1]	FN	RE	None cited	Family Name	Ordering provider's last name	No		Artze	

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
12.2.1	1..50 #	[1..1]	ST	R	None cited	Surname	Ordering provider's last name	No		Artze	Maps to Last name in HL7 2.3.1 If all you have is a single text field put it here
12.3	1..30 #	[0..1]	ST	RE	None cited	Given Name	Ordering provider's last name	No		Able	Send it if you have it.
12.4	1..30 #	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof	Ordering provider's middle Initial or middle name	No		A	Send it if you have it.
12.5	1..20 #	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)	Ordering provider's name suffix	No			Example for Mr. John Smith, Jr: The name suffix is Jr.
12.6	1..20 #	[0..1]	ST	RE	None cited	Prefix (e.g., DR)	Ordering provider's name prefix	No		DR	for example DR
12.7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Degree (e.g., MD)**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Source Table**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.9		[0..1]	HD	C(R/X)	None cited	Assigning Authority	The assigning authority for the ordering provider's ID	No		NPI&2.16.840.1.113883.4.6&ISO	The Assigning Authority component is used to identify the system, application, organization, person, etc. that assigned the ID Number in component 1. Harmonized condition: If ORC.12.1 (Number) is populated, ORC.12.9 must be populated. Else ORC.12.9 is not populated.
12.9.1	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID of the assigning authority	No		NPI	

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
12.9.2	1..199 =	[1..1]	ST	R	None cited	Universal ID	OID of the assigning authority	No		2.16.840.1.113883.4.6	NPI OID root = 2.16.840.1.113883.4.6
12.9.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	ISO	**ISO**	Defaults to "ISO"
12.10	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code		Yes	**L**	**L**	"L" = Legal name
12.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Identifier Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.13	2..5	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		No		**MR**	Send it if you have it.
12.14		[0..1]	HD	RE	None cited	Assigning Facility	The facility that assigned the HL70203 identifier coder. (Not needed in most states)	No		Napa_Gen^Assigned Oid String^ISO	The name of the Assigning Facility that designated the place or location where the ID Number was assigned for use. (Not needed in most states.)
12.14.1	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID		No		Napa_Gen	Put the institution's PHIN ID here.
12.14.2	1..199 =	[1..1]	ST	R	None cited	Universal ID		No		2.16.840.1.113883.4.6	Put the PHIN-assigned OID string here
12.14.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type		No		**ISO**	Defaults to "ISO"
12.15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
12.17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder. See XCN-19 Effective Date and XCN-20 Expiration Date components.**
12.18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
12.21	1..199 #	[0..1]	ST	RE	**HL70360**	Professional Suffix	Ordering provider's name suffix	No		**MD**	Examples: “MD”, “DO”, “PA”, “NP”
13	**0..0**	**[0..0]**	**X**	**X**	**X**	**Enterer’s Location**	**X**	**X**	**X**	**X**	**Optional component. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
14		[0..2]	XTN	C(R/RE)	None cited	Call Back Phone Number	Submitter's contact info	No		^WPN^PH^^1^707^2643378	This element is a common core data element - Need to send it if you have it. Condition: If OBR.17 (Callback Phone Number) is populated, ORC.14 will contain the same value. This component may have up to 1 repeat.

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
14.1	**0..0**	**[0..0]**	**X**	**X**	**X**	**Telephone Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. The component is not populated, but the component separator character "^" for this data component must be present as a place holder.**
14.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code		No		**WPN**	Examples: WPN (Work number), ASN (Answering service), BPN (Beeper number), NET (Email address) Should use 'NET' if component 4 (Email Address) is present
14.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type		No		**PH**	Examples: BP (Beeper), CP (Cell phone), PH (Telephone), Internet (for email addresses)
14.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address		No			Condition: ORC.14.4 must be populated if ORC.14.7 (local number) is not present. Else ORC.14.4 is not populated.
14.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful**	Country Code		Yes	1	1	Condition: If ORC.14.7 is populated, ORC.14.5 must be populated. Else, if ORC.4 is populated, ORC.14.5 is not populated. Within the US the code is 1. Example: 1-800-234-5678. IF an International dialing code is needed, try **http://travel.airwise.com/info/intl_numbers.html**
14.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code		No		707	Condition: If ORC.14.7 (Local Number) is populated, ORC.14.6 may be populated. Else, ORC.14.6 is not populated.
14.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number		No		2643378	Condition: If ORC.14.4 is not populated, ORC.14.7 must be populated. Else if ORC.14.4 is populated, ORC.14.7 is not populated.
14.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension		No			Condition: If ORC.14.7 is populated, ORC.14.8 may be populated. Else ORC.14.8 is not populated.
14.9	1..199 #	[0..1]	ST	RE	None cited	Any Text		No			For example: Normal business hours are 9 am to 5 pm Monday through Friday.

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Order effective date/Time**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Order Control Code Reason**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Entering Organization**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Entering Device**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Action By**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Advanced Beneficiary Notice Code**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the Field separator character "|" for this data field must be present as a placeholder.**
21		[0..*]	XON	R	None cited	Ordering Facility Name	Name of the facility that placed the order	No		Napa General Hospital Lab^D^^^^NPI&2.16.840.1.113883.4.6&ISO^NPI^^^1255402921	ELR Cardinality: ELR supports a single ordering facility name.
21.1	1..50 #	[0..1]	ST	C(R/RE)	None cited	Organization Name	Name of the organization	No		Napa General Hospital Lab	Condition: ORC.21.1 Must be populated if there is no Organization Identifier in component ORC.21.10. Else ORC.21.1 may be populated. Send it if you have it.
21.2	1..20 =	[0..1]	IS	RE	**HL70204**	Organization Name Type Code		Yes	**D**	**D**	Example "L" (Legal Name), "A" (Alias Name), "D" (Display Name).

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
21.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**ID Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Use Xon-10 Organization Identifier. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
21.4	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
21.5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
21.6		[0..1]	HD	C(R/X)	None cited	Assigning Authority		No		NPI&2.16.840.1.113883.4.6&ISO	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID in component 10. Condition: If ORC.21.10 (Organization Identifier) is populated, then ORC.21.6 must be populated. Else ORC.21.6 is not populated.
21.6.1	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID	The assigning authority for the Ordering Facility ID assigned to the order	No		**Napa General Hospital**	You can leave this element empty if you don't know it
21.6.2	1..199 =	[1..1]	ST	R	None cited	Universal ID	The assigning authority OID	No		2.16.840.1.113883.4.6	2.16.840.1.113883.4.6 is the NPI OID root.
21.6.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	ISO	**ISO**	Defaults to ISO
21.7	2..5	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		No		**XX**	Condition: Required if ORC.21.10 (Organization Identifier) is populated, then ORC.21.7 must be populated. Else, ORC.21.7 is not populated. Examples include: NPI National provider identifier, XX Organization identifier.

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
21.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Assigning Facility**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
21.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
21.10	1..20 =	[0..1]	ST	RE	None cited	Organization Identifier	The ORDER (ID) assigned to the order	No		1255402921	Can be numbers and letters; replaces the third and fourth component of the XON data type used in 2.3.1 and 2.3.z.
22		[0..1]	XAD	R	None cited	Ordering Facility Address	Address of the facility that placed the order	No		2217 Trancas^Suite 22^Napa^CA^94558^USA^M	ELR Cardinality: ELR supports a single ordering facility address.
22.1		[0..1]	SAD	RE	None cited	Street Address	Street Address	No		2217 Trancas	Although indicated as usage RE, the address information is required. You need to send it. This component is populated by the three-sub components below.
22.1.1	1..120#	[0..1]	ST	R	None cited	Street or Mailing Address		No		2217 Trancas	An address is required here.
22.2	1..120#	[0..1]	ST	RE	None cited	Other Designation	Other Designation	No		Suite 22	This isn't needed for most addresses. It could be a district name, building name, floor number, suite number, P.O. box, etc. Send it if you have it.
22.3	1..50#	[0..1]	ST	RE	None cited	City	City	No		Napa	California requires the city. Please send it if you have it.
22.4	1..50#	[0..1]	ST	RE	**PHVS_State_FIPS_5-2_V1**	State or Province	State or Province	No		**CA**	Use the FIPS 5-2 two character codes here (e.g., CA for California). It is expected to be populated.
22.5	1..12 =	[0..1]	ST	RE	**US Zip+4 or Canadian Postal Code Tables**	Zip or Postal Code	Zip or Postal Code	No		**94558**	US Zip Codes, Zip+4 and Canadian Postal Codes are supported in ELR. Try the following: for US Zip Codes http://www.zip-codes.com/search.asp For Canadian codes: http://www.canada411.ca/area-code-lookup/

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
22.6	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country	Country	Yes	USA	**USA**	Assume this will be USA, so can hardcode
22.7	1..3	[0..1]	ID	RE	**HL70190**	Address Type	Address Type code from HL7 Table 190	No		**M**	Typical values for a facility address are "O" (Office), "B" (Business), "M" (Mailing), "L" (Legal Address).
22.8	**0..0**	**]0..0]**	**X**	**X**	**X**	**Other Geographic Designation**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data field must be present as a placeholder.**
22.9	1..20 =	[0..1]	IS	RE	**PHVS_County_FIPS_6-4**	County/Parish Code	County code from FIPS6_4	No		**0065**	This may be empty. Send it if you have it.
23		[0..1]	XTN	R	None cited	Ordering Facility Phone Number	Ordering Facility Phone Number	No		^WPN^PH^^1^707^5549876	This is a repeating field so you can put in an office phone and a beeper number, or an answering service number and a work number, etc. Only two instances are supported for ELR.
23.1	**0..0**	**]0..0]**	**X**	**X**	**X**	**Telephone Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder.**
23.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code	Ordering facility telecom use code from HL7 table 0201	No		**WPN**	Examples: WPN (Work number), ASN (Answering service), BPN (Beeper number), NET (Email address). Should use 'NET' if component 4 (Email Address) is present.
23.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type	Ordering facility telecom equipment type from HL7 table 0202	No		**PH**	Examples: BP (Beeper), CP (Cell phone), PH (Telephone), Internet (for email addresses). Should use 'Internet' if component 4 (Email Address) is present.
23.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address	Ordering facility email address	No			Condition: If ORC.23.7 is not populated, OBR.23.4 (Email Address) must be populated. Else if OBR.23.7 (Local Number) is populated, OBR.23.4 is not populated.

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
23.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful if needed**	Country Code	Ordering facility international dialing code	Yes	**1**	**1**	Condition: If ORC.23.7 (Local Number) is populated, ORC.23.5 must be populated. Else ORC.23.5 is not populated. Within the US the code is 1. Example: 1-800-234-5678. If a foreign calling code is needed, try: **http://travel.airwise.com/info/intl_numbers.html**
23.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code	Ordering facility area code	No		707	Condition: If ORC.23.7 is populated, ORC.23.6 may be populated. Else ORC.23.6 is not populated.
23.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number	Ordering facility phone number	No		5549876	Condition: ORC.23.7 may be populated if ORC.23.4 is not populated. Else if ORC.23.4 is populated, ORC.23.7 is not populated. If component 4 is empty, and the number is not provided or is unknown, use "5555555" as a default value.
23.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension	Extension for phone number	No			Condition: If ORC.23.7 (Local Number) is populated, ORC.23.8 may be populated. Else ORC.23.8 is not populated.
23.9	1..199 #	[0..1]	ST	RE	None cited	Any Text	Any text	No			Example: Normal Business hours: 9 am to 5 pm.
24		[0..1]	XAD	RE	None cited	Ordering Provider Address	The address of the ordering provider.	No		115 Trancas^Suite 2100^Napa^CA^94558^USA^M	This element is a common core data element - Need to send it if you have it. This Element may repeat once.
24.1		[0..1]	SAD	RE	None cited	Street Address		No		115 Trancas	This field populates from ORC.24.1.1.
24.1.1	1..120 #	[0..1]	ST	R	None cited	Street or Mailing Address		No		115 Trancas	Required. Send it if you have it.
24.2	1..120 #	[0..1]	ST	RE	None cited	Other Designation		Yes		Suite 2100	This field isn't needed for most addresses. You could put a metropolitan or micropolitan area name here, or include a suite number or P.O. box number, etc.
24.3	1..50 #	[0..1]	ST	RE	None cited	City		No		Napa	California requires the city. Please send it if you have it.
24.4	1..50 #	[0..1]	ST	RE	**PHVS_State_FIPS_5-2_V1**	State or Province		No		**CA**	Use the FIPS 5-2 two character codes here (e.g., CA for California).

ORC											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
24.5	1..12 =	[0..1]	ST	RE	**US Zip+4 or Canadian Postal Code Tables**	Zip or Postal Code		No		**94558**	US Zip Codes, Zip+4 and Canadian Postal Codes are supported in ELR. For US ZipCode use: http://www.zip-codes.com/search.asp **Or for Canadian codes use:** http://www.canada411.ca/area-code-lookup/
24.6	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country		Yes	**USA**	**USA**	Assume this will be USA, so can hardcode
24.7	1..3	[0..1]	ID	RE	**HL70190**	Address Type		No		**M**	Typical values for a facility address are "O" (Office), “B" (Business), "M" (Mailing), "L" (Legal Address).
24.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Other Geographic Designation**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present as a placeholder. CA REDIE calculates this value from the address.**
24.9	1..20 =		IS	RE	**PHVS_County_FIPS_6-4**	County/Parish Code		No		**0065**	This component may be empty. Send it if you have it.

Note: The remaining unsupported ORC Fields 25 through 31 are not included in this implementation. Unsupported ”X” intervening elements and the unsupported intervening components of supported elements preceding the above-referenced element deletions are present.

Example: ORC|RE|23456^NapaGen_EHR^2.16.840.1.114222.4.1.000^ISO |56789PHL222^NapaGen_LIMS^2.16.840.1.114222.4.1.001^ISO ||||||||1234^Artze^Able^A^Jr^Dr^^^NPI&2.16.840.1.113883.19.4.6&ISO^L^^^NPI^&2.16.840.1.113883.19.4.6&ISO^^^^^^^MD||^WPN^PH^^1^555^5551005^^Call between Noon and 6 pm|||||||Napa General Hospital^L^^^^Napa General Hospital&2.16.840.1.114222.4.1.000&ISO^XX^^^1234|2217 Trancas^Suite 22^Napa^CA^94000^USA^B

4.8 OBR Segment

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID - OBR	The sequence number of each OBR segment	No		1	The OBR Set ID will be a number like "1" or "2". There can only be one specimen per ELR Message. There can be more than one OBR segments, e.g., one for the test and one for Epi questions.
2		[0..1]	EI	RE	None cited	Placer Order Number	The submitter's order number information for the test	No		23456^NapaGen_EHR^ OID here^ISO	This field has the same data as in ORC.2. OBR.2 is for information about the order number on the submitter form, if there is one, or the order number on the electronic order. If there is no Submitter Order Number, you can leave OBR-2 empty.
2.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The submitter's order number string	No		23456	A submitter order number is required here if provided.
2.2	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	The namespac e ID for the submitter's order number	No		NapaGen_EHR	This component may be empty. Send it if you have it.
2.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	The namespac e OID for the submitter's order number	No		oid here	Should be the assigning system or organization OID string. For now, the MQF tool allows any string in this field.
2.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	Defaults to 'ISO'
3		[1..1]	EI	R	None cited	Filler Order Number	Filler Order Number and PHIN namespac e info	No		56789PHL222^NapaCo_ PHL_LIMS^2.16.840.1.1 14222.4.1.10412^ISO	This field is the same as ORC.3. It contains the Filler Order Number + the LIMS namespace ID, OID string and "ISO".

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The order number in the LIMS	No		56789PHL222	This filler number should be a system-generated number from the LIMS. If someone asks for the result for order# 12345, the lab should be able to find the test result from the order number.
3.2	1..20=	[0..1]	IS	RE	Local	Namespace ID	The namespac e ID of the LIMS	Yes	your lims	NapaCo_PHL_LIMS	This component may be empty. Send it if you have it.
3.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	The OID of the LIMS	Yes	2.16.840 .1.11422 2.xxxxx	2.16.840.1.114222.4.1.1 0412	The Placer system' or organization assigned OID string, as appropriate, is expected here.
3.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	Defaults to “ISO”
4		[1..1]	CWE	R	**PHVS_LabT estName_N ND_V1 PHVS_LabT estName_C DC_V4**	Universal Service Identifier		No		^^^1234^CT/GC NAAT^L^^2010	Assume the standard code populates the first triplet (OBR.4.1 to OBR.4.3) and the local code populates the second triplet (OBR.4 4 to OBR.4.6.) OBR.4 is for information about the ordered test. Use either the same LOINC as in OBX.3 or, if no LOINC exists, use your local code in OBR4.4.
4.1	1..20=	[0..1]	ST	RE	None cited	Identifier	Ordered test code	No		No example provided for this component.	This would be a LOINC code; in this example, a local rather than a standard code is used, so components OBR.4.1 through OBR.4.3 are left empty.
4.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Ordered test name	No		No example provided for this component	The ordered test name. Either the LOINC Long Common Name or LOINC Short name can be used here. Condition: IF OBR.4.1 is populated, OBR.4.2 may be populated. Else OBR.4.2 is not populated.
4.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	Ordered test code system	**Yes**		**LN**	This will be "LN" (for LOINC) - can be hardcoded if always populate first triplet with LN codes. Condition: If OBR.4.1 is populated, OBR.4.3 must be populated. Else OBR.4.3 is not populated.es
4.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	Local ordered test code	No		1234	If you have a local ordered test code put it in OBR.4.4. This field may be left blank if you have no local code. Send it if you have it.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
4.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local ordered test name	No		CT/GC NAAT	You should put the local ordered test name in the ELR message. Condition: If OBR.4.4 is populated, then OBR.4.5 may be populated. Else OBR.4.5 is not populated. Send it if you have it.
4.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	Local ordered test code system	Yes	L	L	This will be "L" (for Local) - can be hardcoded if always populate first triplet with LOINC and second triplet with local codes. Condition: If OBR.4.4 is populated, OBR.4.6 must be populated. Else OBR.4.6 is not populated.
4.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		Yes	2.34		This component may be empty. Send it if you have it.
4.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes	your local code version or "v unknown "	v unknown	This component may be empty. Send it if you have it., suggest using the string value ”v unknown”
4.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: if OBR.4.3 and OBR.4.6 are not populated, then OBR.9 must be populated. Else it may be populated or not. Send it if you have it.
4.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
4.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBR.4.10 is populated, OBR.4.11 may be populated. Else OBR.4.11 is not populated.
4.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if OBR.4.10 is populated, then OBR.4.12 must be populated. Else OBR.12 is not populated.
4.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
4.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No			Condition: if OBR.4.3 is populated, then OBR.4.14 must be populated. Else OBR.4.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Priority-OBR**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This field is not populated but the field separator "|" must be present as a placeholder. See TQ1-9 Priority Field (Note: TQ-1 is not supported in the ELR2PH message.)**
6	**0..0**	**[0..0]**	**X**	**X**	**X**	**Requested Date/Time**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.3. Not supported. This field is not populated but the field separator "|" must be present as a placeholder. See TQ1-8 Start Date/Time (Note: TQ-1 is not supported in the ELR2PH message.)**
7	4..24	[1..1]	DTM	R	None cited	Observation Date/Time	Date and time the specimen was collected	Yes		201102061830-0800	This element is a common core data element - Need to send it if you have it. This field must contain the same value as the first component of SPM-17 and OBX.14 If you know the date and time, you must include at least the year, month and day. Inclusion of the time with GMT offset is expected. Example: 20091124-0800. If you don't know the collection date and time use "0000". Increased max field length to 26 for backward compatibility with ELR23Z and 231.
8	4..24	[0..1]	DTM	C(R/RE)	None cited	Observation End Date/Time	End point Date and time the specimen was collected	No			Use only if the specimen was collected over a period of time.
9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Collection volume**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This field is not populated but the field separator "|" must be present as a placeholder. See SPM-12 Specimen Collection Amount.**

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Collector Identifier**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Action Code**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Danger Code**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
13	1..300 =	[0..1]	ST	RE	None cited	Relevant Clinical Information		No		Dysuria	use length of 1..300=
14	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Received Date/Time**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This field is not populated but the field separator "|" must be present as a placeholder. See SPM-18 Specimen Received Date/Time.**
15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Source**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This field is not populated but the field separator "|" must be present as a placeholder. See SPM-4 Specimen Type.**
16		[0..1]	XCN	RE	None cited	Ordering Provider	The provider who ordered the test	No		1412941681^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^^MD	This element is a common core data element - Need to send it if you have it. This is the same as ORC.12. If all you have is a single field text name then populate ORC 12.2.1 with this value. This element may repeat.
16.1	1..15=	[0..1]	ST	RE	None cited	ID Number	Ordering provider's ID	No		1497805436	String length is only 15 with no truncation. If your data exceeds this length, the expected ELR receiver behavior is to not truncate.
16.2		[0..1]	FN	RE	None cited	Family Name	Ordering provider's last name	No		Artze	May be empty; send it if you have it.
16.2.1	1..50#	[1..1]	ST	R	None cited	Surname		No		Artze	Maps to Last Name in HL7 2.3.1
16.3	1..30#	[0..1]	ST	RE	None cited	Given Name	Ordering provider's first name	No		Joanna	May be empty; send it if you have it.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
16.4	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof	Ordering provider's middle Initial or middle name	No		C	May be empty; send it if you have it.
16.5	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)	Ordering provider's name suffix	No			Example for Mr. John Smith Jr: The name suffix is Jr
16.6	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)	Ordering provider's name prefix	No		DR	for example DR
16.7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Degree (e.g., MD)**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
16.8	**O..O**	**[0..0]**	**X**	**X**	**X**	**Source Table**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
16.9		[0..1]	HD	C(R/X)	None cited	Assigning Authority	The assigning authority for the ordering provider's ID	No		I&2.16.840.1.113883.4.6 &ISO	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID Number in component 1. Harmonized condition predicate: Required if component 1 (ID Number) is populated.
16.9.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID of the assigning authority	No		NPI	**Codes from the National Provider Identifier List are preferred. The NPI website is found at: https://nppes.cms.hhs.gov/NPPES/NPIRegistryHome.do**
16.9.2	1..199 =	[1..1]	ST	R	None cited	Universal ID	OID of the assigning authority	No		2.16.840.1.113883.4.6	NPI root OID =2.16.840.1.113883.4.6
16.9.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	Defaults to 'ISO'
16.10	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code	Name type code from HL7 table 0200	Yes	**L**	**L**	Examples: L (Legal name), U (Unspecified)

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
16.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Identifier Check Digit**	**X**	**X**	**X**	**X**	**Optional for ELR Receiver so this component can be empty. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
16.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**CE for ELR Sender, but depends on XON.11, so will be empty. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
16.13	2..5	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		No		**NPI**	"NPI" (National Provider Identifier). Condition: if OBX.16.1 is populated, OBX.16.13 must be populated. Else OBX.16.13 is not populated.
16.14		[0..1]	HD	RE	None cited	Assigning Facility	Facility that assigned the patient identifier. (Not needed in most states)	No		Assigning Org Name^Assigned Org OID^ISO	The Assigning Facility identifies the place or location for which the Patient ID Number was assigned. Will probably be needed in CA since more than one facility may assign its own patient identifier; e.g. hospital assigns PT ID#, requests test from external lab which also assigns a PT ID# Lab then forwards sample to a reference lab, which also assigns its own PT ID#; This latter then submits an ELR to the local county jurisdiction. May be empty. Send it if you have it.
16.14.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		No		Assigning Org Name	This sub-component may be empty.
16.14.2	1..199 =	[1..1]	ST	R	None cited	Universal ID		No		Assigned ORG OID String	Send it if you have it.
16.14.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type		No		**ISO**	Defaults to 'ISO'. Send it if you have it.
16.15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the componentd separator "^" must be present as a placeholder.**
16.16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the componentd separator "^" must be present as a placeholder.**

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
16.17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the componentd separator "^" must be present as a placeholder.**
16.18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the componentd separator "^" must be present as a placeholder.**
16.19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the componentd separator "^" must be present as a placeholder.**
16.20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the componentd separator "^" must be present as a placeholder.**
16.21	1..199 #	[0..1]	ST	RE	**HL7360**	Professional Suffix		No			Examples: "MD", "DO", "PA", "NP".
17		[0..1]	XTN	RE	None cited	Order Callback Phone Number	Submitter's contact info	No			This element is a common core data element - Need to send it if you have it. This field may repeat once only. You can put in an office phone and a beeper number, or an answering service number and a work number, etc. You should put at least one contact number unless there is none available. This field will contain the same information as ORC.14.
17.1	**0..0**	**[0..0]**	**X**	**X**	**X**	**Telephone Number**	**X**	**X**	**X**		**Deprecated as of HL7 Version 2.3. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
17.2	3..3	[0..1]	ID	RE	**HL70201**	Telecommunication Use Code	Submitter's telecom use code from HL7 table 0201	No		**WPN**	Examples: "WPN" (Work number), "ASN" (Answering service), "BPN" (Beeper number), "NET" (Email address). Should use 'NET' if OBR.17.4 4 (Email Address) is populated.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
17.3	2..8	[0..1]	ID	RE	**HL70202**	Telecommunication Equipment Type	Submitter's telecom equipment type from HL7 table 0202	No		**PH**	Examples: "BP" (Beeper), "CP" (Cell phone), "PH" (Telephone), "Internet" (for email addresses). Should use 'Internet' if OBR.17.4 (Email Address) is populated.
17.4	1..199 =	[0..1]	ST	C(R/X)	None cited	Email Address	Submitter's email address	No			Condition: if OBR.17.7 is not populated, OBR.17.4 (Email Address) must be populated. Else if OBR.17.7 (Local Number) is populated, OBR.17.4 is not populated.
17.5	1..3=	[0..1]	NM	C(R/X)	**Intl. Calling code Website is useful**	Country Code	Submitter's international dialing code	Yes	1	1	Condition: If OBR.17.7 is populated, OBR.17.5 must be populated. Else OBR.17.5 is not populated. Within the US the code is 1. Example: 1-800-234-5678. Site is found here: **http://travel.airwise.com/info/intl_numbers.html**
17.6	1..3=	[0..1]	NM	C(RE/X)	None cited	Area/City Code	Submitter's area code	No		707	Condition: If OBR.17.7 is populated, OBR.17.6 may be populated. Else, OBR.17.6 is not populated.
17.7	1..9=	[0..1]	NM	C(R/X)	None cited	Local Number	Submitter's phone number	No		2643378	Condition: If OBR.17.4 is empty, OBR.17.7 must be populated. Else if OBR.17.4 is populated, OBR.17.7 must be empty.
17.8	1..5=	[0..1]	NM	C(RE/X)	None cited	Extension	Extension for phone number	No			Condition: If OBR.17.7 is populated, OBR.17.8 may be populated. Else OBR.17.8 is not populated.
17.9	1..199 #	[0..1]	ST	RE	None cited	Any Text	Free text for a comment or note	No			May be empty. Send it if you have it. Example: "Regular business hours 9 am to 5 pm Monday through Friday."
18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Placer Field 1**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Placer Field 2**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Filler Field 1**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
21	**0..0**	**[0..0]**	**X**	**X**	**X**	**Filler Field 2**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
22	4..24	[1..1]	DTM	R	None cited	Results Report/Status Change-Date/Time	Date/time the results were reported or status changed.	No		20110208132554-0800	Max length **Not** increased to 26 to be backward compatible with ELR231,23Z Neither NIST nor MQF validators will accept a 26 character length for the date/time field.
23	**0.0**	**[0..0]**	**X**	**X**	**X**	**Charge to Practice**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated but the field separator "|" must be present as a placeholder.**
24	2..3	[0..1]	ID	RE	**HL70074**	Diagnostic Serv Sect ID		No			This element can be empty.
25	1..1	[1..1]	ID	R	**HL70123**	Result Status	Status of the test result or observation	No		**F**	See Table 3-6 In the ELR2PH HL7 2.5.1 IG for a summary of interactions. The value set is HL70123. Use "F" for Final Results, "P" for Preliminary Results, "C" for Correction to Results.
26		[0..1]	PRL	C(R/RE)	None cited	Parent Result	The parent result	No		625-4&Bacteria identified in Stool by Culture&LN&100&enteric culture&L&2.34&v unknown	This field is only needed when a test must be linked to a "parent" test result. Condition: OBR.26 must be populated when OBR.29 is populated. Else, OBR.26 may be empty. LOINC required. LOINC is used as the coding system for this field except where the test being reported has no equivalent LOINC code. In this case, use of local codes is allowed (populated in OBR.26.1.4.) If no local code is available, then a text description in OBR.26.1.9 can be used, but is not used to populate either OBR.26.1.3 or OBR.26.1.4. However, this should only occur for new tests that have not yet been coded.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
26.1		[1..1]	CWE	R	None cited	Parent Observation Identifier	OBX-3 field of the parent result	No		625-4&Bacteria identified in Stool by Culture&LN&100&enteric culture&L&2.34&v unknown^1^Salmonella enterica subsp. Enterica	Assume the standard code populates the first triplet and the local code the second. LOINC is required here or a local code if the LOINC is pending. See Vocabulary section below for recommended LOINC value set for selected conditions.
26.1.1	1..20=	[0..1]	ST	RE	None cited	Identifier	The OBX 3.1 of the parent result	No		625-4	LOINC required. LOINC is used as the coding system for this field except where the test being reported has no equivalent LOINC code. In this case, use of local codes is allowed (populated in OBR.26.1.4.) If no local code is available, then a text description in OBR.26.1.9 can be used, but is not used to populate either OBR.26.1.3 or OBR.26.1.4. However, this should only occur for new tests that have not yet been coded.
26.1.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	The OBX 3.2 of the parent result	No		Bacteria identified in Stool by Culture	The resulted test name. Use if a parent-child relationship for the specimen tested exists; else leave blank. Either the LOINC Long Common Name or LOINC Short name can be used here. Condition: If OBR.16.1.1 is populated, OBR.26.1.2 may be populated. Else OBR.26.1.2 is not populated.
26.1.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	The OBX 3.3 of the parent result	Yes		**LN**	This will be "LN" (for LOINC) - can be hardcoded if you always populate first triplet with LN codes. Condition: If OBR.16.1.1 is populated, OBR.26.1E.3 must be populated. Else OBR.26.1.3 is not populated.
26.1.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	The OBX 3.4 of the parent result	No		100	If you have a local test code put it in OBR.26.1.4. Else leave the field empty.
26.1.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	The OBX 3.5 of the parent result	No		enteric culture	You should include the local test name in the ELR message. Condition: if OBR.26.1.4 is populated, OBR.26.1.5 may be populated. Else OBR.26.1.5 is not populated. Send it if you have it.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
26.1.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	The OBX 3.6 of the parent result	Yes		**L**	This will be "L" (for Local) - can be hardcoded if always populated. Populate the first triplet with LOINC and second triplet with local codes. Condition: If OBR.26.1.4 is populated, OBR.26.1.6 must be populated. Else OBR.26.1.6 is not populated.
26.1.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		Yes		2.34	This component may be empty. Send it if you have it.
26.1.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes		v unknown	This component may be empty. Send it if you have it. If the version is unknown, you can send 'v unknown'.
26.1.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If OBR.26.1.1 and OBR.26.1.4 are not populated, OBR.26.1.9 must be populated. Else OBR.26.1.9 may be populated or not. Send it if you have it.
26.1.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This sub-component can be empty.
26.1.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBR.26.1.10 is populated, OBR.26.1.11 may be populated. Else OBR.26.1.11 is not populated.
26.1.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if OBR.26.1.10 is populated, then OBR.26.1.12 must be populated. Else OBR.26.1.12 is not populated.
26.1.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
26.1.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.6.1	Condition: If OBR.26.1.3 is populated, then OBR.26.1.14 must be populated. Else OBR.16.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
26.2	1..20=	[0..1]	ST	RE	None cited	Parent Observation Sub-Identifier	The OBX 4 of the parent result	No		1	May be empty. Used only for Parent-Child situations. Please refer to the comment for this element in the HL7 ELR2PH guide for a more detailed description.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
26.3	1..250	[0..1]	TX	RE	None cited	Parent Observation Value Descriptor	The OBX 5.2 or OBX.5.9 of the parent result	No		Salmonella enterica subsp. Enterica	OBX 5.2 is the text part of the coded test result; or use Original Text field, OBX 5.9 for un-coded results. Recommend using Original Text for the most detailed level of knowledge.. Please refer to the Comment for this element in the HL7 ELR2PH guide for a more detailed description.
27	**0..0**	**[0..0]**	**X**	**X**	**X**	**Quantity/Timing**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This field is not populated but the field separator "|" must be present as a placeholder. See TQ1 & TQ2 Segments (not supported).**
28		[0..1]	XCN	RE	None cited	Result Copies To		No			This element may be empty.
28.1	1..15=	[0..1]	ST	RE	None cited	ID Number		No			This component may be empty. If populated, it is an identifier string that may contain letters, numbers, etc.
28.2		[0..1]	FN	RE	None cited	Family Name		No			This component may be empty.
28.2.1	1..50#	[0..1]	ST	R	None cited	Surname		No			
28.3	1..30#	[0..1]	ST	RE	None cited	Given Name		No			This component may be empty.
28.4	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof		No			This component may be empty. This component may be empty.
28.5	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)		No			This component may be empty.
28.6	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)		No			This component may be empty.
28.7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Prefix (e.g., DR)**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Source Table**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.9		[0..1]	HD	C(R/X)	None cited	Assigning Authority		No			Condition: If OBR.28.1 is populated, OBR.28.9 must be populated. Else, OBR.28.9 is not populated.
28.9.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		No			This component may be empty.
28.9.2	1..199 =	[1..1]	ST	R	None cited	Universal ID		No			If populated, this will be an OID string.
28.9.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type		No			Defaults to 'ISO"

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
28.10	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code		No			This component may be empty.
28.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Identifier Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.13	2..5	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		No			Condition: If OBR.28.1 is populated, OBR.28.13 must be populated. Else OBR.28.13 is not populated. Should be a person identifier of some sort drawn from table HL70203.
28.14		[0..1]	HD	RE	None cited	Assigning Facility		No			This component may be empty.
28.14.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		No			This component may be empty.
28.14.2	1..199=	[0..1]	ST	R	None cited	Universal ID		No			If populated, this will be an OID string.
28.14.3	1..6	[0..1]	ID	R	**HL70301**	Universal ID Type		No			Defaults to 'ISO'..
28.15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This component is not populated but the component separator "^" must be present as a placeholder. See XCN-19 Effective Date and XCN-20 Expiration Date components.**
28.18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
28.20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Not supported. This component is not populated but the component separator "^" must be present as a placeholder.**
28.21	1..199 #	[0..1]	ST	RE	**HL70360**	Professional Suffix		No			This component may be empty.
29		[0..1]	EIP	C(R/RE)	None cited	Parent	The parent order numbers	No		23456&NapaGen_EHR&oid here&ISO^56789PHL222&NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO	OBR-29 is a complex field that contains both the Placer order number (OBR.2) and the Filler order number (OBR.3). OBR-29 is only needed if you need to reference a parent result. Harmonized condition predicate: This field is required if OBR-24 carries the value "MB" and OBR-4 indicates the ordered test is a culture and sensitivity. Parent/child linking should be used when the specimen type changes between the parent and child result (specimen and isolate/component specimen) or for reflex tests.
29.1		[0..1]	EI	RE	None cited	Placer Assigned Identifier	The OBR-2 field of the parent result	No		23456&NapaGen_EHR&oid here&ISO	This is the order number on the parent submitter form, if there is one; or the order number on the electronic order. If there is no OBR.2 Submitter Order Number, you can leave OBR.29.1.1 empty.
29.1.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The placer order number from the parent OBR-2	No		23456	This is the order number on the submitter form, if there is one, or the order number on the electronic order. If there is no Submitter Order Number, you can leave OBR-2 empty.
29.1.2	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	The assigning authority ID for the placer order number	No		NapaGen_EHR	This sub-component may be empty. Send it if you have it.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
29.1.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	The assigning authority OID for the placer order number	No		OID_here	The assigned Organization OID goes here.
29.1.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	No		ISO	Defaults to 'ISO'
29.2		[1..1]	EI	R	None cited	Filler Assigned Identifier	Parent order number info	No		56789PHL222&NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO	The Filler-assigned identifier goes here. This field is populated from sub-components 1, 2 and 3 below.
29.2.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The parent order number in the LIMS	No		56789PHL222	OBR-3 (Filler Order Number) of parent.
29.2.2	1..20=	[0..1]	IS	RE	**Local**	Namespace ID	The PHIN namespace ID of the LIMS	Yes	xxxxx	NapaCo_PHL_LIMS	This sub-component can be empty. Send it if you have it.
29.2.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	OID for the LIMS	Yes	2.16.840.1.114222.4.1.10412.xxxxx	2.16.840.1.114222.4.1.10412	The Filler's assigned Institutional OID string goes here.
29.2.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	ISO	ISO	Defaults to 'ISO'
30	**0..0**	**[0..0]**	**X**	**X**	**X**	**Transportation Mode**	**X**	**X**	**X**	**X**	**Not supported. This field is not populated but the field separator character "|" must be present as a place holder.**
31		[0..1]	CWE	RE	**ICD-9 or ICD-10 Codes should be used**	Reason for Study		No		788.1^Dysuria^I9CDX^^^^07/09/2008	Assume the standard code populates the first triplet and the local code the second. This element can repeat. This code will be drawn from ICD-9 or ICD-10 (when established). **ICD-9 Website**: http://icd9cm.chrisendres.com/ **ICD-10 website:** http://apps.who.int/classifications/icd10/browse/2010/en
31.1	1..20=	[0..1]	ST	RE	None cited	Identifier		No		788.1	ICD-9 or 10 code here.
31.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		Dysuria	Condition: If OBR.31.1 is populated, OBR.31.2 may be populated. Else OBR.31.2 is not populated.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
31.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**I9CDX for ICD-9 Codes. I10 for ICD-10 Codes.**	"I9CDX" for ICD-9 codes. Condition: if OBR.31.1 is populated, OBR.31.3 must be populated. Else OBR.31.3 is not populated.
31.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier		No			This component May be empty. This will be a local code. Send it if you have it.
31.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No			Condition: If OBR.31.4 is populated, OBR.31.5 may be populated. Else OBR.31.5 is not populated.
31.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No			Condition: if 0BR.31.4 is populated, OBR.31.6 must be populated. Else OBR.31.6 is not populated.
31.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		No		07/09/2008	This component may be empty. Send it if you have it.
31.8	1..10=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No	Your local coding system version or “v unknown ”		This component may be empty. Send it if you have it.
31.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If OBR.31.1 and OBR.31.4 are not populated, obr.31.9 must be populated. Else OBR.31.9 may be populated or not. Send it if you have it.
31.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
31.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBR.31.10 is populated, OBR.31.11 may be populated. Else OBR.31.11 is not populated.
31.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if OBR.31.10 is populated, then OBR.31.12 must be populated. Else OBR.31.12 is not populated.
31.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
31.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No			Condition: If OBR.31.3 is populated, then OBR.31.14 must be populated. Else OBR.31.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.

OBR											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
32		[0..1]	NDL	RE	None cited	Principal Result Interpreter		No			Used for pathology results; else may be empty.
32.1		[0..1]	CNN	R	None cited	Name		No			May be empty.
32.1.1	1..15=	[0..1]	ST	RE	None cited	ID Number		No			May be empty.
32.1.2	1..50#	[0..1]	ST	RE	None cited	Family Name		No			May be empty.
32.1.3	1..30#	[0..1]	ST	RE	None cited	Given Name		No			May be empty.
32.1.4	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof		No			May be empty.
32.1.5	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)		No			May be empty.
32.1.6	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)		No			May be empty.
32.1.7	1..5=	[0..1]	IS	RE	**HL70360**	Degree (e.g., MD)		No			May be empty.
32.1.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Source Table**	**X**	**X**	**X**	**X**	**Not supported. This sub-component is not populated, but the sub-component separator character "&" for this data sub-component must be present as a placeholder.**
32.1.9	1..20=	[0..1]	IS	RE	**Local**	Assigning Authority – Namespace ID		No			May be empty.
32.1.10	1..199=	[0..1]	ST	C(R/X)	None cited	Assigning Authority - Universal ID		No			Condition: If OBR.32.9 is populated, then OBR.32.10 must be populated. Else OBR.32.10 is not populated.
32.1.11	1..6	[0..1]	ID	C(R/X)	**HL70301**	Assigning Authority - Universal ID Type		No			Condition: If OBR.32.9 is populated, then OBR.32.11 must be populated. Else OBR.32.11 is not populated.

Note: The remaining unsupported “X” OBR fields 33 through 50 are not included in this implementation. Intervening unsupported elements and intervening unsupported components of supported elements are present.

Example:

OBR|1|23456^NapaGen_EHR^2.16.840.1.114222.4.1.000^ISO|9700123^NapaGen_LIMS^2.16.840.1.114222.4.1.001^ISO|50545-3^Bacterial susceptibility panel:-:Pt:Isolate:OrdQn:MIC^LN^^^^2.26|||200808151030-0700|||||anemia|||1234^Admit^Alan^A^III^Dr^^^&2.16.840.1.113883.19.4.6&ISO^L^^^EI^&2.16.840.1.113883.19.4.6&ISO^^^^^^^MD|^WPN^PH^^1^555^5551005|||||2008081830-0700|||F|625-4&Bacteria identified:Prid:Pt:Stool:Nom:Culture&LN^1^Campylobacter

4.8 OBX Segment

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID – OBX	The sequence number of each OBX segment	No		1	the initial sequence number shall be one (1); for the second repeat, the sequence number shall be two (2), etc.
2	2..3	[0..1]	ID	C(R/X)	**HL70125**	Value Type	The HL7 data type of the result in OBX-5	No		**CWE**	Possible values include: NM (Numeric), SN (Structured Numeric), TS, TM, DT (Timestamp, time, or date), CWE (Coded With Exceptions; i.e., SNOMED), FT, TX or ST (text), ED, RP (embedded object, pointer). Refer to table 5-13 "Observation Identifiers" in the ELR2PH v 2.5.1 guide for a summary of the usage of data types in the OBX Segment. Condition: If OBX.5 is populated, OBX.2 must be populated. Else OBX.2 is not populated.
3		[1..1]	CWE	R	**See 3.1 below**	Observation Identifier	LOINC for resultable test or question	No		43304-5^Chlamydia trachomatis rRNA [Presence] in Unspecified specimen by Probe & target amplification method^LN^400^CT GenProbe^L^2.34^v unknown	LOINC required. LOINC is used as the coding system for this field except where the test being reported has no equivalent LOINC code. In this case, use a local code (OBX.3.4); else, if no local code is available, use original text (OBX.3.9) if original text is all that is available. This should only occur for new tests that have not yet been coded.
3.1	1..20=	[0..1]	ST	RE	**PHVS_LabTestName_NND_V1 or PHVS_LabTestName_CDC_V4**	Identifier	The resulted test or question code	No		43304-5	LOINC required. LOINC is used as the coding system for this field except where the test being reported has no equivalent LOINC code. In this case, use a local code (OBX.3.4); else, if no local code is available, use original text (OBX.3.9) if original text is all that is available. This should only occur for new tests that have not yet been coded.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	The resulted test or question name	No		Chlamydia trachomatis rRNA [Presence] in Unspecified specimen by Probe & target amplification method	The resulted test name. Condition: if OBX.3.1 is populated, OBX.3.2 may be populated. Else OBX.3.2 is not populated. Either the LOINC Long Common Name or LOINC Short name can be used here.
3.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	The resulted test code system	Yes	**LN**	**LN**	Condition: If OBX.3.1 is populated, OBX.3.3 must be populated. Else OBX.3.3 is not populated. This will be "LN" (for LOINC) - can be hardcoded if first triplet is always populated with LN codes. If using PHVS_LabTestName
3.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	Local resulted test or question code	No		400	If you have a local test code put it in OBX.3.4
3.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local resulted test or question name	No		CT Genprobe	Condition: if OBX.3.4 is populated, then OBX.3.5 may be populated. Else OBX.3.5 is not populated. You should put the local test name in the ELR message in addition to the LOINC code name reported in OBX.3.2.
3.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	Local resulted test code system	Yes	**L**	**L**	This will be "L" (for Local) - can be hardcoded if always populated. Populate the first triplet with LOINC and second triplet with local codes Condition: If OBX.3.4 is populated, OBX.3.6 must be populated. Else OBX.3.6 is not populated.
3.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		Yes	2.34	2.34	This component may be empty. Send it if you have it..
3.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes	your local code version or "v unknown "	v unknown	This component may be empty. Send it if you have it.
3.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If OBX.3.1 and OBX.3.4 are not populated, OBX.3.9 must be populated. Else OBX.3.9 may be populated or not. Send it if you have it.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
3.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
3.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBX.3.10 is populated, OBX.3.11 may be populated. Else OBX.3.11 is not populated.
3.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: If OBX.3.10 is populated, then OBX.3.12 must be populated. Else OBX.3.12 is not populated.
3.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			For LTIAPH this element can be empty
3.14	1..199 =	[0..1]	ST	RE	None cited	Coding System OID		No		2.16.840.1.113883.6.1	Condition: If OBX.3.3 is populated, then OBX.3.14 also must be populated. Else OBX.3.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
4	1..20=	[0..1]	ST	C(R/RE)	None cited	Observation Sub-ID	Observation sub-ID	No		1	Required if there is more than one OBX with the same LOINC in OBX.3 eg OBX||||1|… OBX||||2|... …
5		[0..1]	Var	C(R/RE)	**For coded observation values, use PHVS_LabTestName_NND_V1 or PHVS_Microorganism_CDC_V5.**	Observation Value		No			The Data type Varies, and must be the same as shown in OBX.2: See the OBX.5 table below for the different data types. SNOMED Codes are preferred. Harmonized condition: If OBX-8 (Interpretation Flag) is not populated and if OBX-11 observation result status is not 'X' (result cannot be obtained), then OBX.5 must be populated. Else, OBX.5 may be populated. (Differs from the ELR2PH Guide).

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
6		[0..1]	CWE	C(R/RE)	**See 6.1 below**	Units	Units for numerical data in OBX-5	No			This element is a common core data element for quantitative results SN or NM). Need to send it if you have it. Assume a standard (UCUM) code populates the first triplet and a local code the second. For Dimensionless units of measure, the UCUM representation would be {string}, e.g. for titer this would be {titer}. Harmonized Condition: If the data type in OBX 2 is "NM" or "SN" and the OBX-11 observation result status is not 'X' then OBX.6 must be populated. Else, OBX.6 is not populated.
6.1	1..20=	[0..1]	ST	RE	**PHVS_UnitsOfMeasure_CDC_V1**	Identifier	The units code	No			Use UCUM standard code here. The UCUM unit of measure for values without a unit of measure is "1" e.g., ratios, counts.
6.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	The units name	No			Condition: if OBX.6.1 is populated, OBX.6.2 may be populated. Else OBX.6.2 is not populated.
6.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	The units code system	Yes	**UCUM**		This will be UCUM - can be hardcoded if you always populate first triplet with UCUM codes. Condition: if OBX.6.1 is populated, then OBX.6.3 must be populated. Else OBX.6.3 is not populated.
6.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	The local unit code	No			IF you have local unit codes put here.
6.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	The local unit name	No			Condition: if OBX.6.4 is populated, OBX.6.5 may be populated. Else OBX.6.5 is not populated.
6.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	The local unit code system	Yes	**L**		This will be "L" (for Local) - can be hardcoded if the first triplet is always populated with LOINC and the second triplet with local codes. Condition: If OBX.6.4 is populated, then OBX.6.6 must be populated. Else OBX.6.6 is not populated.
6.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		Yes	1.8.2		This component may be empty. Send it if you have it.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
6.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes	your local code version or "V Unknown"		This component may be empty. Send it if you have it.
6.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If OBX.6.1 and OBX.6.4 are not populated, then OBX.6.9 must be populated. Else OBX.6.9 may be populated. If all you have is text put it here.
6.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
6.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBX.6.10 is populated, OBX.6.11 may be populated. Else OBX.6.11 is not populated.
6.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if OBX.6.10 is populated, then OBX.6.12 must be populated. Else OBX.6.12 is not populated.
6.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
6.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No			Condition: If OBX.6.3 is populated, then OBX.6.14 also must be populated. Else OBX.6.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
7	1..60=	[0..1]	ST	RE	None cited	References Range	Reference range for the result	No			This element is a common core data element for quantitative (SN or NM) results. Need to send it if you have it.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
8		[0..1]	CWE	C(R/RE)	**Lab to EHR, NHSN-HL70078 (2.5.1) ELR-HL70078 (2.7). For everything else, use PHVS_AbnormalFlag_HL7_V2.7_V1**	Abnormal Flags	Interpretation code from HL7 table 0078	No		**DET**^^HL70078^^^^2.7	Use of this field is encouraged to allow both the quantitative (numeric) value in OBX.5 and the result interpretation here. Although the HL7 name is "Abnormal Flag", there are several interpretation codes in the table 0078. Examples are: "A" (Abnormal), "DET" (Detected), "IND" (Indeterminate), "POS" (Positive), "RR" (Reactive). This field can repeat. Assume a standard code populates the first triplet and a local code the second. Condition: if OBX.5 is populated and OBX.11 (Observation Result Status) is not 'X' (result cannot be obtained), then OBX.8 must be populated. Else, OBX.8 is not populated. This element is repeatable. Note: There should be NO length value specified for this composite data type (error in the ELR2PH guide).
8.1	1..20=	[0..1]	ST	RE	**See 8 Above**	Identifier		No		A	This will be a Table 0078 code.
8.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		Abnormal	The table 0078 code name goes here. Condition: If OBX.8.1 is populated, OBX.8.2 may be populated. Else OBX.8.2 is not populated.
8.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		Yes	HL70078	**HL70078**	This will be HL70078- can be hardcoded. Required if an identifier is provided in component 1
8.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier		No			For Laboratory reporting this element can be empty. Send it if you have it.
8.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No			Condition: If OBX.8.4 is populated, then OBX.8.5 may be populated. Else OBX.8.5 is not populated.
8.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No			Condition: If OBX.8.4 is populated, then OBX.8.6 must be populated. Else OBX.8.6 is not populated.
8.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID		Yes	2.7	2.7	This component may be empty. Send it if you have it.
8.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
8.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No			Condition: If OBX.8.1 and OBX.8.4 are not populated, then OBX.8.9 must be populated. Else OBX.8.9 may be populated or not. Send it if you have it.
8.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
8.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBX.8.10 is populated, OBX.8.11 may be populated. Else OBX.8.11 is not populated.
8.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if OBX.8.10 is populated, then OBX.8.12 must be populated. Else OBX.8.12 is not populated.
8.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
8.14	1..199 =	[0..1]	ST	RE	None cited	Coding System OID		No		2.16.840.1.113883.12.78	Condition: If OBX.8.3 is populated, then OBX.8.14 also must be populated. Else OBX.8.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Probability**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Nature of Abnormal Test**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
11	1..1	[1..1]	ID	R	**HL70085**	Observation Result Status	Observation result status codes interpretation (from HL7 table 0085)	No		**F**	Possible values are “F” (FINAL), “X” (Results cannot be obtained for this observation) or “P” (Preliminary results).
12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date of Reference Range**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present. of the Test observation goes in OBX.19.**

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
13	**0..0**	**[0..0]**	**X**	**X**	**X**	**User-Defined Access Checks**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
14	4..24	[0..1]	DTM	C(R/RE)	None cited	Date/Time of the Observation	specimen collection date and time	No		201102061830-0800	This element is a common core data element - Need to send it if you have it. For the "TS" data type, only the DTM portion is supported. This element receives the same information as in OBR.7 and SPM.17, which is the date/time of sample collection. Note that the GMT offset (-0800) is required. Condition: If OBR.7 and SPM. 17 are populated, OBX.14 must be populated. Else If the collection date/time is unknown, use "0000". Date and time of the Test observation goes in OBX.19.
15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Producer's ID**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Responsible Observer**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
17		[0..1]	CWE	RE	**See 17.1 below**	Observation Method	Additional details about the test method	No		12345-0^e.g., XYZ DNA # XXX PCR^LN^A Local…^A PCR test…^L^2.32^1/01/2011 ^^^^2.16.840.1.113883.5 .84	Assume a standard code populates the first triplet and a local code the second.
17.1	1..20=	[0..1]	ST	RE	**PHVS_LabTestMethods_CDC_V1**	Identifier		No		**0051**	This will be neither a LOINC nor SNOMED code but is a unique code from the PHVS_V3 Observation method table, which is incorporated in the PHVS_LabTestMethods_CDC_v1 table referenced. This component may be left blank. Send it if you have it.
17.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		e.g., XYZ DNA # XXX PCR	An SCT standard or SCT preferred text description for the above code. Condition: If OBX.17.1 is populated, then OBX.17.2 may be populated. Else OBX.17.2 is not populated.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
17.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**OBSMETHOD**	Condition: If OBX.17.1 is populated, then OBX.17.3 must be populated. Else OBX.17.3 is not populated.
17.4	1..20=	[0..1]	ST	RE	None cited	Alternate Identifier	Local method detail code	No		A local detail code, if available	For ELR, this component may be left blank. Send it if you have it.
17.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local method detail text	No		A PCR test method for xyz	Condition: If OBX.17.4 is populated, OBX.17.5 may be populated (send it if you have it). Else OBX.17.5 is not populated.
17.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	Local method detail code system	Yes		**L**	Condition: if OBX.17.4 is populated, OBX.17.6 must be populated with 'L'. Else OBX.17.6 is not populated.
17.7	1..10=	[0..1]	ST	RE	None cited	Coding System Version ID	Standard Coding System Version	No		2.32	This component may be empty. Send it if you have it.
17.8	1..20=	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system Version	Yes		1012011	This component may be empty. Send it if you have it. If no local coding system version is known, suggest using the string value "v unknown".
17.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Original Text, if any	Condition: If OBX.17.1 and OBX.17.4 are not populated, OBX.17.9 must be populated. Else OBX.17.9 may be populated or not. Send it if you have it.
17.10	1..20=	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
17.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if OBX.17.10 is populated, OBX.17.11 may be populated. Else OBX.11 is not populated.
17.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if OBX.17.10 is populated, then OBX.17.12 must be populated. Else OBX.17.12 is not populated.
17.13	1..10=	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
17.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.5.84	Condition: If OBX.17.3 is populated, then OBX.17.14 also must be populated. Else OBX.17.14 is not populated. See the federal ELR2PH guide, Chapter 6 for coding system OIDs.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Equipment Instance Identifier**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
19	4..24	[0..1]	DTM	RE	None cited	Date/Time of the Analysis	Time at which the testing was performed	No		20110208132554-0800	This element is a jurisdictional (CLIA) requirement - Need to send it if you have it. If the date/time of testing is unknown, use '0000'. Use this field instead of OBX.14 for date and time of testing. The GMT offset (-0800) is required.
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Reserved for Harmonization with Version 2.6**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
21	**0..0**	**[0..0]**	**X**	**X**	**X**	**Reserved for Harmonization with Version 2.6**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
22	**0..0**	**[0..0]**	**X**	**X**	**X**	**Reserved for Harmonization with Version 2.6**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
23		[1..1]	XON	R	None cited	Performing Organization Name		Yes		Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^^05D0897628	This element is a common core data element - Need to send it if you have it. For producing laboratories that are CLIA-certified, the CLIA identifier should be used for the organization identifier (OBX.23.10).
23.1	1..50#	[0..1]	ST	C(R/RE)	None cited	Organization Name	performing Lab name	Yes	your lab name	Napa County Public Health Laboratory	ELR Condition predicate: Must be present if there is no Organization Identifier in OBX.23.10. Send it if you have it. Condition: If OBX.23.10 is not populated, then OBX.23.1 must be populated. Else OBX.23.1 may be populated. Send it if you have it.
23.2	1..20=	[0..1]	IS	RE	**HL70204**	Organization Name Type Code		Yes	L or D	**D**	Example "L" (Legal Name), "A" (Alias Name), "D" (Display Name).

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
23.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**ID Number**	**X**	**X**	**X**	**X**	**Deprecated as of HL7 Version 2.5. Not supported. This component is not populated, but the component separator character "^" for this data component must be present. Use XON-10 Organization Identifier.**
23.4	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
23.5	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
23.6		[0..1]	HD	C(R/X)	None cited	Assigning Authority	Organization that assigned LAB ID	Yes		CLIA&2.16.840.1.113883.19.4.6&ISO	For CLIA-certified labs, the CMS OID is required here. NOTE: NOT certain if the example shown is CMS's OID - need a fact check. Condition: If OBX.23.10 is populated, then OBX.23.6 must be populated. Else, OBX.23.6 is not populated.
23.6.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		Yes	CLIA	**CLIA**	This is CLIA for CLIA certified labs.
23.6.2	1..199=	[1..1]	ST	R	None cited	Universal ID		Yes	2.16.840.1.113883.19.4.6	2.16.840.1.113883.19.4.6	For CLIA certified labs, this should be the CMS OID. - NOTE NOT certain if this is CMS's OID.
23.6.3	1..6	[1..1]	ID	R	HL70301	Universal ID Type	ISO	Yes	ISO	ISO	Defaults to ISO
23.7	2..5	[0..1]	ID	C(R/X)	HL70203	Identifier Type Code		Yes	XX	XX	ELR Condition predicate: Required if OBX.23.10, (Organization Identifier) is populated. Condition: If OBX.13.10 is populated, then OBX.23.7 must be populated. Else, OBX.23.7 is not populated.
23.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Assigning Facility**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
23.9	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
23.10	1..20=	[0..1]	ST	RE	None cited	Organization Identifier	your CLIA ID	Yes	your CLIA ID	05D0897628	Can hard code your CLIA ID here (assumes only one per lab sender).
24		[0..1]	XAD	R	None cited	Performing Organization Address	your lab' s address	Yes		3434 Industrial Loop^^Richmond^CA^99999^USA^B	This element is a common core data element - Need to send it if you have it. Note that the Address of the laboratory that actually performed the test, whether or not it is used as a reference laboratory (error in guide).
24.1		[1..1]	SAD	RE	None cited	Street Address		Yes		3434 Industrial Loop^^Richmond^CA^99999^USA^B	This component may be empty. Send it if you have it.
24.1.1	1..120#	[1..1]	ST	R	None cited	Street or Mailing Address	Lab street or mailing Address	Yes	your street or mailing address	3434 Industrial Loop	An address is required.
24.2	1..120#	[0..1]	ST	RE	None cited	Other Designation		Yes	Example : Suite 555		This isn't needed for most addresses. It could be a suite number, district name, building name, floor number, or P.O. Box number, etc.
24.3	1..50#	[0..1]	ST	RE	None cited	City		Yes	your city	Richmond	California requires the city. Please send it if you have it.
24.4	1..50#	[0..1]	ST	RE	**PHVS_State_FIPS_5-2_V1**	State or Province		Yes	your state	CA	Use the FIPS 5-2 two character codes here (e.g., CA for California
24.5	1..12=	[0..1]	ST	RE	**US Zip+4 or Canadian Postal Code Tables**	Zip or Postal Code		Yes	your zip	95999	US Zip Codes. Zip+4 and Canadian Postal Codes are supported in ELR For US Zip codes: http://www.zip-codes.com/search.asp For Canadian codes: http://www.canada411.ca/area-code-lookup/
24.6	3..3	[0..1]	ID	RE	**PHVS_Country_ISO_3166-1_V1**	Country		Yes	**USA**	**USA**	USA
24.7	1..3	[0..1]	ID	RE	**HL70190**	Address Type		Yes	B	B	Typical values for a facility address are O (Office), B (Business), M (Mailing), L (Legal Address)
24.8	**0..0**	**0..0**	**X**	**X**	**X**	**Other Geographic Designation**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present. CA REDIE calculates this value from the address.**

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
24.9	1..20=	[0..1]	IS	RE	**PHVS_County_FIPS_6-4**	County/Parish Code		Yes		**0655**	This component may be empty. Should always send this if known.
25		[0..1]	XCN	RE	None cited	Performing Organization Medical Director	Your Lab Director	Yes		9876543^House^Gregory^F^^Dr^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI	This element is a common core data element - Need to send it if you have it. Note that the Address of the laboratory that actually performed the test - whether or not it is used as a reference laboratory (error in guide). Please note: Lab directors in California do not have to be medically licensed. CLIA allows Ph.Ds. DO, D.Pharm, and other professionally credentialed directors with a Diplomate or certificate issued by ASM, Association of Bioanalysts, etc. In CA; the lab director, if not a physician, must also have a CDPH-issued Clinical Lab Scientist license or a Public Health Microbiologist certificate, depending on the type of laboratory.
25.1	1..15=	[0..1]	ST	RE	None cited	ID Number	Lab Director ID	Yes	your lab director's ID	1790019875	Assuming single lab director can hard code.
25.2		[0..1]	FN	RE	None cited	Family Name		Yes		House	Assuming single lab director can hard code.
25.2.1	1..50#	[1..1]	ST	R	None cited	Surname	Lab Director Last Name	Yes	Lab Director Last Name	House	Assuming a single lab director, can hard code. Maps to Last name in 2.3.1
25.3	1..30#	[0..1]	ST	RE	None cited	Given Name	LD first name	Yes	LD first name	Gregory	Assuming single lab director can hard code.
25.4	1..30#	[0..1]	ST	RE	None cited	Second and Further Given Names or Initials Thereof	LD middle initial	Yes	LD middle initial	F	Assuming single lab director can hard code.
25.5	1..20#	[0..1]	ST	RE	None cited	Suffix (e.g., JR or III)	LD Suffix	Yes	LD Suffix		Example for John Smith Jr; the name suffix is "Jr".
25.6	1..20#	[0..1]	ST	RE	None cited	Prefix (e.g., DR)	LD Prefix	Yes	LD Prefix	DR	May be empty. Example; Dr.
25.7	**0..0**	**[0..0]**	**X**	**X**	**X**	**Degree (e.g., MD)**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
25.8	**0..0**	**[0..0]**	**X**	**X**	**X**	**Source Table**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.9		[0..1]	HD	C(R/X)	None cited	Assigning Authority	The assigning authority for LD's ID	Yes		NPI&2.16.840.1.113883.4.6&ISO	Condition: If OBX.15.1 is populated, then OBX.25.9 must be populated. Else OBX.25.9 is not populated. **However, OBX.15 is not supported in this implementation, so this field will not be populated**
25.9.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		Yes	name of assigning authority	**NPI**	Issuing authority name goes here.
25.9.2	1..199 =	[1..1]	ST	R	None cited	Universal ID	OID of the assigning authority	Yes	2.16.840.1.113883.4.6	2.16.840.1.113883.4.6	Assigning authority OID goes here.
25.9.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	ISO	ISO	Defaults to 'ISO'.
25.10	1..5	[0..1]	ID	RE	**HL70200**	Name Type Code		Yes	L	L	"L"= legal name
25.11	**0..0**	**[0..0]**	**X**	**X**	**X**	**Identifier Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.12	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.13	2..5	[0..1]	ID	C(R/X)	**HL70203**	Identifier Type Code		Yes	NPI or other identifier type	NPI	For example "NPI" (National Provider Identifier). Condition: If OBX.25.1 is populated, then OBX.25.13 must be populated. Else OBX.25.13 is not populated.
25.14		[0..1]	HD	RE	None cited	Assigning Facility		No			The Assigning Facility identifies the place or location that the ID Number was assigned for use.
25.14.1	1..20=	[0..1]	IS	RE	**Local**	Namespace ID		No			This component may be empty. Send it if you have it.
25.14.2	1..199 =	[1..1]	ST	R	None cited	Universal ID		No			Assigned OID goes here.

OBX											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
25.14.3	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type		No			Defaults to "ISO".
25.15	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Representation Code**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.16	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Context**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.17	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Validity Range**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.18	**0..0**	**[0..0]**	**X**	**X**	**X**	**Name Assembly Order**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.19	**0..0**	**[0..0]**	**X**	**X**	**X**	**Effective Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Expiration Date**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this data component must be present.**
25.21	1..199 #	[0..1]	ST	RE	**HL70360 has useful identifiers.**	Professional Suffix		No			Assuming a single lab director, can hard code. This component may be empty.

There were no terminal, unsupported "X" elements identified for the OBX segment; all intervening unsupported "X" elements are present as are intervening unsupported "X" components within the OBX segment.

Example:

OBX|1|CWE|43304-5^Chlamydia trachomatis rRNA [Presence] in Unspecified specimen by Probe & target amplification method^LN^400^CT GenProbe^L^2.34^v unknown^^^^^^2.16.840.1.113883.6.1|1|260373001^Detected^SCT^1Det^Detected^L^20110131^v unknown^Detected^DET^Detected^^v unknown^2.16.840.1.113883.12.78|||^^HL70078^^^L^2.7|||F|||201102061830-0800|||||20110208132554-0800||||NapaGen Laboratory^D^^^^CMS&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

4.9 SPM Segment

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
1	1..4	[1..1]	SI	R	None cited	Set ID – SPM	1	Yes	1	1	Only one specimen per ELR message so this is 1.
2		[1..1]	EIP	R	None cited	Specimen ID	Placer and Filler Specimen ID	No		23456&NapaGen_EHR &OID here&ISO^200110206122&NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO	This Field contains the Submitter specimen ID, name of the data system that assigned the ID, OID string for the Submitter data system and the OID-assigning authority (ISO). If system names and OIDs aren't available, use Organization Names and OIDs.
2.1		[0..1]	EI	RE	None cited	Placer Assigned Identifier	The submitter's Specimen ID information for the test	No		23456&NapaGen_EHR &oid here&ISO	Submitter = Placer = Ordering facility/provider. This field may be empty (not recommended).
2.1.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The submitter's Specimen ID number string	No		23456	Can include numbers, letters. Periods, dashes, etc. The unique Specimen number derived from the Placer's EHR or LIMS goes here. Like the Patient Identifier, The ID Number component combined with the Assigning Authority component must uniquely identify the associated object.
2.1.2	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID	Namespace ID for the submitter's Specimen ID	No		NapaGen_EHR	The person, software or organization that assigned the specimen ID. This component may be empty. Send it if you have it.
2.1.3	1..199 =	[1..1]	ST	R	None cited	Universal ID	Namespace OID for the submitter's Specimen ID	No		OID here	Need assigned OID for Placer, Provider or submitter system or organization that assigned the Specimen ID.
2.1.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	ISO	Yes	**ISO**	**ISO**	Defaults to "ISO".

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
2.2		[1..1]	EI	R	None cited	Filler Assigned Identifier	Your Specimen ID and PHIN namespace info	No		200110206122&NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO	This component contains the Filler's specimen ID, name of the data system or organization that assigned the ID, the assigned OID string for the Filler's data system or organization and the OID-assigning authority (ISO).
2.2.1	1..199 =	[1..1]	ST	R	None cited	Entity Identifier	The Specimen number in the LIMS	No		200110206122	Can include numbers, letters. Periods, dashes, etc. The unique Specimen number from the Filler's LIMS goes here. Like the Patient Identifier, The ID Number component combined with the Assigning Authority component must uniquely identify the associated object.
2.2.2	1..20 =	[0..1]	IS	RE	**Local**	Namespace ID	The namespace ID of the LIMS	Yes	your lab	NapaGen-LIMS	The person, software or organization that assigned the specimen ID. This component may be empty. Send it if you have it.
2.2.3	1..199=	[1..1]	ST	R	None cited	Universal ID	The OID of the LIMS	Yes	2.16.840.1.114222.xxxxx	2.16.840.1.114222.4.1.10412	The Filler's assigned LIMS or Organization OID string goes here.
2.2.4	1..6	[1..1]	ID	R	**HL70301**	Universal ID Type	**ISO**	Yes	**ISO**	**ISO**	Defaults to 'ISO'.
3	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Parent Ids**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
4		[1..1]	CWE	R	**PHVS_Specimen_CDC_V6**	Specimen Type	Specimen type	No		258530009^Urethral swab^SCT^URTH^Uretha^HL70070^01/31/2011^2.3.1^Urethral swab	This element is a common core data element - need to send it if you have it. Assume a standard code populates the first triplet and the local code the second. This field (Specimen Type) +/- field SPM.8 (Specimen Source) is required.
4.1	1..20 =	[0..1]	ST	RE	None cited	Identifier	Snomed Code for Specimen Type	No		258530009	Use a SNOMED Code (specimen hierarchy) here. If no appropriate SNOMED code exists, use your local code in the second triplet.
4.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Snomed Concept Name	No		Urethral swab (specimen)	Condition: If SPM.4.1 is populated, SPM.4.2 may be populated. Else SPM.4.2 is not populated. Use either the SNOMED fully specified concept name: i.e., "Urethral swab (specimen)" or the SNOMED Preferred concept name "Urethral swab".

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
4.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	SCT	Yes	**SCT**	**SCT**	Use only SNOMED codes in the first triplet. Condition: If SPM.4.1 is populated, SPM.4.3 must be populated. Else SPM.4.3 is not populated. For example, if you put a SNOMED specimen code in SPM.4.1, you must put "SCT" in SPM.4.3. If you leave SPM.4.1 empty, you must also leave SPM.4.3 empty.
4.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier	Local Specimen Code	No		URTH	If you have one, put your local code here. If no appropriate SNOMED exists just populate this triplet (leaving the first triplet empty).
4.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local Specimen Code name	No		Urethra	Condition: If SPM.4.4 is populated, SPM.4.5 may be populated. Else SPM.4.5 is not populated.
4.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	L	Yes	L	**L**	Condition: If SPM.4.4 is populated, SPM.4.6 must be populated. Else SPM.4.6 is not populated. Example; if you put a local test code in SPM.4.4, you must put "L" in SPM.4.6. If you leave SPM4.4 empty, you must also leave SPM.4.6 empty.
4.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID	Snomed Version ID	Yes	01/31/2011	01/31/2011	This component may be empty. Send it if you have it.
4.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local Code System Version ID	Yes	v unknown	HL70070	This component may be empty. Send it if you have it.
4.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text	Original text for Specimen type	No		Uretha	Condition: If SPM.4.1 and SPM.4.4 are both empty, SPM.4.9 must be populated. Else SPM.4.9 May be empty. Send it if you have it.
4.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
4.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.4.10 is populated, SPM.4.11 may be populated. Else SPM.4.11 is not populated.
4.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.4.10 is populated, then SPM.4.12 must be populated. Else SPM.4.12 is not populated.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
4.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
4.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No			Condition: If SPM.4.3 is populated, then SPM.4.14 also must be populated. Else SPM.4.14 is not populated. Note: See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
5		[0..1]	CWE	RE	**PHVS_ModifierOrQualifier_CDC**	Specimen Type Modifier		No		373067005^No (qualifier value)^SCT^NONE^No Qualifier^L^20100731^v unknown^^^^^^2.16.840.1.113883.6.96	This element may be empty. Send it if you have it.
5.1	1..20 =	[0..1]	ST	RE	None cited	Identifier		No		373067005	This component may be empty. Send it if you have it.
5.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		No (qualifier value)	Condition: If SPM.5.1 is populated, SPM.5.2 may be populated. Else SPM.5.2 is not populated.
5.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**SCT**	Condition: If SPM.5.1 is populated, SPM.5.3 must be populated. Else SPM.5.3 is not populated. (code name is "SCT",)
5.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier		No		use a local code here	This component may be empty. Send it if you have it.
5.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		Use local text, if any here.	Condition: If SPM.5.4 is populated, SPM.5.5 may be populated. Else SPM.5.5 is not populated.
5.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		**L**	Condition: If SPM.5.4 is populated, SPM.5.6 must be populated. Else SPM.5.6 is not populated.
5.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		No		20100731	Condition: If SPM.5.4 is populated, SPM.5.6 must be populated. Else SPM.5.6 is not populated.
5.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No		v unknown	This component may be empty. Send it if you have it.
5.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		If you have original text, put it here.	Condition: If SPM.5.1 and SPM.5.4 are not populated, SPM.5.9 must be populated. Else SPM.5.9 may be populated or not. Send it if you have it.
5.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
5.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.5.10 is populated, then SPM.5.12 must be populated. Else SPM.5.12 is not populated.
5.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.5.10 is populated, then SPM.5.12 must be populated. Else SPM.5.12 is not populated.
5.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
5.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.6.96	Condition: If SPM.5.3 is populated, then SPM.5.14 also must be populated. Else SPM.5.14 is not populated. Note: See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
6		[0..1]	CWE	RE	**HL70371 or PHVS_AdditiveOrPreservative_HL7_2x_v1**	Specimen Additives		No		NONE^None^HL70371^N^No additives^L^2.5.1^v unknown^^^^^^2.16.840.1.113883.12.371	**Specimen additives may be added to prevent coagulation of blood specimens, or as preservatives in fecal samples or when samples must be placed in a carry medium or selective medium or if antibiotics, etc. are added to prevent overgrowth of competing microorganisms or when an anaerobic environment for the sample is required, or when a metabolic stabilizer is needed to maintain viability of a biological entity. The laboratory needs this information.**
6.1	1..20 =	[0..1]	ST	RE	None cited	Identifier		No		NONE	This component may be empty. Send it if you have it.
6.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		None	Condition: If SPM.6.1 is populated, SPM.6.2 may be populated. Else SPM.6.2 is not populated.
6.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**HL70371**	Condition: If SPM.6.1 is populated, SPM.6.3 must be populated. Else SPM.6.3 is not populated.
6.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier		No		N	This component may be empty. Send it if you have it.
6.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		No additives	Condition: If SPM.6.4 is populated, SPM.6.5 may be populated. Else SPM.6.5 is not populated.
6.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		**L**	Condition: If SPM.6.4 is populated, SPM.6.6 must be populated. Else SPM.6.6 is not populated. This will be "L" for local.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
6.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		No		2.5.1	This component may be empty. Send it if you have it.
6.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No		v unknown	This component may be empty. Send it if you have it.
6.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		original text, if any, goes here	Condition: If SPM.6.1 and SPM.6.4 are not populated, SPM.6.9 must be populated. Else SPM.6.9 may be populated or not. Send it if you have it.
6.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
6.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.6.10 is populated, SPM.6.11 may be populated. Else SPM.6.11 is not populated.
6.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.6.10 is populated, then SPM.6.12 must be populated. Else SPM.6.12 is not populated.
6.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
6.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.12.371	Condition: If SPM.6.3 is populated, then SPM.6.14 also must be populated. Else SPM.6.14 is not populated. Note: See the federam ELR2PH guide, Chapter 6 for coding system OIDs.
7		[0..1]	CWE	RE	**PHVS_SpecimenCollectionMethod_CDC_V2**	Specimen Collection Method		No		24469009^Collection of routine urine specimen for laboratory (procedure)^SCT^^L^20100731^^^^^^^^2.16.840.1.113883.6.96	This element may be empty if the collection method is not known.
7.1	1..20 =	[0..1]	ST	RE	None cited	Identifier		No		24469009	A SNOMED Code is Required here. This component may be empty. Send it if you have it.
7.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		Collection of routine urine specimen for laboratory (procedure)	Condition: If SPM.7.1 is populated, SPM.7.2 may be populated. Else SPM.7.2 is not populated. The SNOMED Preferred description is used here.
7.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**SCT**	Condition: If SPM.7.1 is populated, SPM.7.3 must be populated. Else SPM.7.3 is not populated. The code system name is "SCT".

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
7.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier		No		use a local code here	This component may be empty. Send it if you have it.
7.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		Use a local name here	Condition: If SPM.7.4 is populated, SPM.7.5 may be populated. Else SPM.7.5 is not populated.
7.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		**L**	Condition: If SPM.7.4 is populated, SPM.7.6 must be populated. Else SPM.7.6 is not populated. May be hard coded. Use "L" for Local.
7.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		No		20100731	This component may be empty. Send it if you have it.
7.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No		If local code version ks not known, use 'V unknown' here.	This component may be empty. Send it if you have it.
7.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Original text, if any, goes here	Condition: If SPM.7.1 and SPM.7.4 are not populated, SPM.7.9 must be populated. Else SPM.7.9 may be populated or not. Send it if you have it.
7.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component may be empty.
7.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.7.10 is populated, SPM.7.11 may be populated. Else SPM.7.11 is not populated.
7.12	1..12	[0..1]	ID	C(R/X)	HL70396	Second Name of Alternate Coding System		No			Condition: if SPM.7.10 is populated, then SPM.7.12 must be populated. Else SPM.7.12 is not populated.
7.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
7.14	1..199 =	[0..1]	ST	RE	None cited	Coding System OID		No		2.16.840.1.113883.6.96	Condition: If SPM.4.3 is populated, then SPM.4.14 also must be populated. Else SPM.4.14 is not populated. Note: See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
8		[0..1]	CWE	RE	**PHVS_BodySite_HITSP_V3**	Specimen Source Site	Specimen Source (body)Site	No		13648007^Urethral structure (body structure)^SCT^URTH^Urethra^HL70700^1/31/2011^2.3.1^Urethra	This element or element SPM.4 needs to identify the specimen and therefore is a common core data element - Need to send it if you have it. Assume a standard code populates the first triplet and a local code the second. Field SPM.4 - Specimen Type +/- Field SPM.8-Specimen Source Site will be used to describe specimen.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
8.1	1..20 =	[0..1]	ST	RE	None cited	Identifier	Snomed Code for Specimen Source	No		13648007	Use SNOMED Code (limited to Body site hierarchy in ELR) here. If no appropriate SNOMED code exists. Use your local code in the second triplet instead.
8.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Snomed Concept Name	No		Urethral structure (body structure)	Condition: if SPM.8.1 is populated, then SPM.8.2 may be populated. Else SPM.8.2 is not populated.
8.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	**SCT**	Yes	**SCT**	**SCT**	This will be SCT (for SNOMED) - can be hardcoded if always populate first triplet with SNOMED codes. Condition: If SPM.8.1 is populated, SPM.8.3 must be populated. Else SPM.8.3 is not populated. The code system name is "SCT".
8.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier	Local Specimen Source Site Code	No		URTH	Put your local code here. If no appropriate SNOMED exists, just populate this triplet.
8.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local Specimen Source Site Name	No		Urethra	Condition: If SPM.8.4 is populated, SPM.8.5 may be populated. Else SPM.8.5 is not populated.
8.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	**L**	Yes	**L**	**L**	This will be "L" (for Local) - can be hardcoded if you always populate first triplet with LOINC and second triplet with local codes. Condition: If SPM.8.4 is populated, SPM.8.6 must be populated. Else SPM.8.6 is not populated.
8.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID	Snomed Version ID	Yes	1/31/2011	1312011	This component may be empty. Send it if you have it.
8.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes	v unknown	2.3.1	This component may be empty. Send it if you have it.
8.9	1..199#	[0..1]	ST	C(R/RE)	None cited	Original Text	Original text for Specimen Source site	No		Urethra	Condition: If SPM.8.1 and SPM.8.4 are not populated, SPM.8.9 must be populated. Else SPM.8.9 may be populated or not; i.e., IF all you have is a submitter's free text description of the Specimen, put it here. Nice to have populated in any case and won't fail validation.
8.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
8.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: ifSPM.8.10 is populated, SPM.8.11 may be populated. Else SPM.8.11 is not populated.
8.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.8.10 is populated, then SPM.8.12 must be populated. Else SPM.8.12 is not populated.
8.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
8.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.6.96	Condition: If SPM.4.3 is populated, then SPM.4.14 also must be populated. Else SPM.4.14 is not populated. Note: See the federam ELR2PH guide, Chapter 6 for coding system OIDs.
9		[0..1]	CWE	RE	PHVS_**ModifierOrQualifier_CDC**	Specimen Source Site Modifier		No		122489005^Urinary system structure (body structure)^SCT^^^^20100731^^^^^^^2.16.840.1.114222.4.11.1014	This element may be empty. Send it if you have it.
9.1	1..20 =	[0..1]	ST	RE	None cited	Identifier		No		122489005	This component may be empty. Send it if you have it.
9.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		Urinary system structure (body structure)	Condition: If SPM.9.1 is populated, SPM.9.2 may be populated. Else SPM.9.2 is not populated.
9.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**SCT**	Condition: If SPM.9.1 is populated, SPM.9.3 must be populated. Else SPM.9.3 is not populated.
9.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier		No		Use a local code here	This component may be empty. Send it if you have it.
9.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		Use a local description here	Condition: If SPM.9.4 is populated, SPM.9.5 may be populated. Else SPM.9.5 is not populated.
9.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		L Not populated in this example as no local code or description included	Condition: If SPM.9.4 is populated, SPM.9.6 must be populated. Else SPM.9.6 is not populated
9.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		No		20100731	This component may be empty. Send it if you have it.
9.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No		The local code system version goes here. Not included in this example.	This component may be empty. Send it if you have it.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
9.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Original text, if any, goes here	Condition: If SPM.9.1 and SPM.9.4 are not populated, SPM.9.9 must be populated. Else SPM.9.9 may be populated or not. Send it if you have it.
9.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
9.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.9.10 is populated, SPM.9.11 may be populated. Else SPM.9.11 is not populated.
9.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.9.10 is populated, then SPM.9.12 must be populated. Else SPM.9.12 is not populated.
9.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
9.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.114222.4.11.1014	Condition: If SPM.9.3 is populated, then SPM.9.14 also must be populated. Else SPM.9.14 is not populated. Note: See the federam ELR2PH guide, Chapter 6 for coding system OIDs.
10	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Collection Site**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present.**
11		[0..1]	CWE	RE	**HL70369**	Specimen Role		No		P^Patient^HL70369^^^2,5,1^^^^^^^2.16.840.1.113883.12.369	Defaults to P for Patient if empty For LTIAPH this element can be empty
11.1	1..20 =	[0..1]	ST	RE	None cited	Identifier		No		P	May be empty. Send it if you have it.
11.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		Patient	Condition: If SPM.11.1 is populated, SPM.11.2 may be populated. Else SPM.11.2 is not populated.
11.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**HL70369**	Condition: If SPM.11.1 is populated, SPM.11.2 may be populated. Else SPM.11.2 is not populated.
11.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier		No		Use a local code here	This component maybe empty. Send it if you have it.
11.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		Use a local description here	Condition: If SPM.11.4 is populated, SPM.11.5 may be populated. Else SPM.11.5 is not populated.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
11.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		**L** (Not populated if a local code is not used).	Condition: If SPM.11.4 is populated, SPM.11.6 must be populated. Else SPM.11.6 is not populated.
11.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		No		2.5.1	This component may be empty. Send it if you have it.
11.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No		The local code system version ID goes here. If not known 'v unknown' may be used.	This component may be empty. Send it if you have it.
11.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Original text goes here if available.	Condition: If SPM.11.1 and SPM.11.4 are not populated, SPM.11.9 must be populated. Else SPM.11.9 may be populated or not. Send it if you have it.
11.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
11.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.11.10 is populated, SPM.11.11 may be populated. Else SPM.11.11 is not populated.
11.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.11.10 is populated, then SPM.11.12 must be populated. Else SPM.11.12 is not populated.
11.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
11.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.12.369	Condition: If SPM.11.3 is populated, then SPM.11.14 also must be populated. Else SPM.11.14 is not populated. Note: See the federam ELR2PH guide, Chapter 6
12		[0..1]	CQ	RE	**See 12.2 below**	Specimen Collection Amount		No		50^mL&Milliliter [SI Volume Units]&UCUM&ML&Milliliters&L&1.8.2&10102010&&&&&2.16.840.1.113883.6.8	Note: corrected ERL251 guide error for len.
12.1	1..16	[1..1]	NM	R	None cited	Quantity		No		50	Note: corrected ERL251 guide error for len.
12.2		[0..1]	CWE	RE	**PHVS_UnitsOfMeasure_CDC_V1**	Units		No		mL&Milliliter [SI Volume Units]&UCUM&ML&Milliliters&L&1.8.2&10102010&&&&&2.16.840.1.113883.6.8	Assume a standard code populates the first triplet and a local code the second.
12.2.1	1..20 =	[0..1]	ST	RE	None cited	Identifier	UCUM code	No		mL	This sub-component may be empty if no units of measure.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
12.2.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Standard UCUM description	No		Milliliter [SI Volume Units]	Condition: If SPM.12.2.1 is populated, SPM.12.2.2 may be populated. ElseSPM.12.2 is not populated.
12.2.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	UCUM code name	Yes	**UCUM**	**UCUM**	Condition: If SPM.12.2.1 is populated, SPM.12.2.3 must be populated. Else SPM.12.3 is not populated.
12.2.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier	local units code	No		ML	This sub-component may be empty. Send it if you have it.
12.2.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	local units name	No		Milliliters	Condition: If SPM.12.2.4 is populated, SPM.12.2.5 may be populated. Else SPM.12.2.5 is not populated.
12.2.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	**L**	Yes	L	L	Condition: If SPM.12.2.4 is populated, SPM.12.6 must be populated. Else SPM.12.6 is not populated.
12.2.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		Yes		1.8.2	This component may be empty. Send it if you have it.
12.2.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		Yes		10102010	This component may be empty. Send it if you have it. If unknown, suggest populating with “v unknown”.
12.2.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Original text, if any, goes here	Condition: If SPM.12.2.1 and SPM.12.2.4 are not populated, SPM.12.2.9 must be populated. Else SPM.12.2. 9 may be populated or not. Send it if you have it.
12.2.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
12.2.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.12.2.10 is populated, SPM.12.2.11 may be populated. Else SPM.12.2.11 is not populated.
12.2.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.12.2.10 is populated, then SPM.12.2.12 must be populated. Else SPM.12.2.12 is not populated.
12.2.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
12.2.14	1..199 =	[0..1]	ST	C(R/E)	None cited	Coding System OID		No		2.16.840.1.113883.6.8	Condition: If SPM.12.2.3 is populated, then SPM.12.2.14 also must be populated. Else SPM.12.14 is not populated. Note: See the federam ELR2PH guide, Chapter 6 for coding system OIDs.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
13	**(0..0)**	**[0..0]**	**X**	**X**	**X**	**Grouped Specimen Count**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
14	**(0..0)**	**[0..0]**	**X**	**X**	**X**	**Specimen Description**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
15	**(0..0)**	**[0..0]**	**X**	**X**	**X**	**Specimen Handling Code**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
16	**(0..0)**	**[0..0]**	**X**	**X**	**X**	**Specimen Risk Code**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
17		[1..1]	DR	R	None cited	Specimen Collection Date/Time	Specimen Collection Date/Time	No		201102061830-0800	This element is a common core data element - Need to send it if you have it. Note that the GMT offset (-0800) must be present.
17.1	4..24	[1..1]	DTM	R	None cited	Range Start Date/Time	Specimen Collection Date/Time	No		201102061830-0800	This component is a common core data element - Need to send it if you have it.
17.2	4..24	[0..1	DTM	RE	None cited	Range End Date/Time		No			This component can be empty. Not used unless the specimen was collected over a period of time.
18	4..24	[1..1]	DTM	R	None cited	Specimen Received Date/Time	Specimen Received Date/Time	No		201102061830-0800	This component is a common core data element - Need to send it if you have it. Same as OBX.14 and OBR.7, since this is an R field for both the sender and receiver. Per ELR2PH HL7 2.5.1 guide For unknown collection date/time use "0000". Per ELR2PH HL7 2.5.1 guide For unknown collection date/time use "0000".
19	**0..0**	**[0,,0]**	**X**	**X**	**X**	**Specimen Expiration Date**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
20	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Availability**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
21		[0..1]	CWE	RE	**See 21.1**	Specimen Reject Reason		No		**RB**^Broken Container^HL70490^^^^ 2.5.1	This element is a common core data element - Need to send it if you have it. Assume a standard codes populates the first triplet and a local code the second.
21.1	1..20 =	[0..1]	ST	RE	**HL70490**	Identifier	HL70490 Specimen Reject Code	No		RB^Broken Container^HL70490^^^^ 2.5.1	This component may be empty. Send it if you have it.
21.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Specimen Reject Code Name	No		Broken Container	Condition: If SPM.21.1 is populated, SPM.21.2 may be populated. Else SPM.21.2 is not populated.
21.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	HL70490	Yes	**HL70490**	HL70490	HL70490 is required if SPM.21.3 contains a table 0490 code. Condition: If SPM.21.1 is populated, SPM.21.3 must be populated. Else SPM.21.3 is not populated.
21.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier	Local Specimen Reject Code	No		Use a local code here	This component may be left empty if no alternate identifier.
21.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Local Specimen Reject Code name	No		Use a local text description here	Condition: If SPM.21.4 is populated, SPM.21.5 may be populated. Else SPM.21.5 is not populated.
21.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	L	Yes	**L**	**L**	"L" is required if SPM21.4 contains a local code for specimen reject. Condition: If SPM.21.4 is populated, SPM.21.6 must be populated. Else SPM.21.6 is not populated.
21.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID	2.5.1	Yes	2.5.1	2.5.1	This component may be empty. Send it if you have it.
21.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system Version	Yes	v unknown	Local coding system version ID goes here.	This component may be empty. Send it if you have it. This can be Hardcoded. If no local coding system version is known, suggest using the string value "v unknown".
21.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Broken Container	Condition: If SPM.21.1 and SPM.21.4 are not populated, SPM.21.9 must be populated. Else SPM.21.9 may be populated or not. Send it if you have it.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
21.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
21.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.21.10 is populated, SPM.21.11 may be populated. Else SPM.21.11 is not populated.
21.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.21.10 is populated, then SPM.21.12 must be populated. Else SPM.21.12 is not populated.
21.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
21.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.12.490	Condition: If SPM.21.3 is populated, then SPM.21.14 also must be populated. Else SPM.21.14 is not populated. Note: See the federal ELR2PH guide, Chapter 6 for coding system OIDs.
22		[0..1]	CWE	RE	**HL70491**	Specimen Quality		No		**P**^Specimen Quality^HL70491^^2.5.1 ^^^^^^^2.16.840.1.113883.12.491	This element is a common core data element (CLIA) requirement, but Not a use case for ELR. Use this field along with SPM.21 and SPM.24 if a test is cancelled for a specimen-related reason. Currently only 4 values: E - Excellent, F - Fair, G- Good, P- Poor.
22.1	1..20 =	[0..1]	ST	RE	None cited	Identifier		No		P	Possible values are E - Excellent, F-Fair, G- Good, P- Poor. This component may be empty. Send it if you have it.
22.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text		No		Specimen Quality	Condition: If SPM.22.1 is populated, SPM.22.2 may be populated. Else SPM.22.2 is not populated.
22.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System		No		**HL70491**	Condition: If SPM.22.1 is populated, SPM.22.3 must be populated. Else SPM.22.3 is not populated.
22.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier		No		Use a local code here	This component may be left empty. Send it if you have it.
22.5	1..199#	[0..1]	ST	C(RE/X)	None cited	Alternate Text		No		Use a local description here	Condition: If SPM.22.4 is populated, SPM.22.5 may be populated. Else SPM.22.5 is not populated.
22.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System		No		**L**	Condition: If SPM.22.4 is populated, SPM.22.6 must be populated. Else SPM.22.6 is not populated.
22.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID		No		2.5.1	This component may be empty. Send it if you have it.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
22.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID		No		Local coding system version ID goes here. If not known you may populate with 'v unknown''	This component may be empty. Send it if you have it.
22.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		Original text, if available, goes here	Condition: If SPM.22.1 and SPM.22.4 are not populated, SPM.22.9 must be populated. Else SPM.22.9 may be populated or not. Send it if you have it.
22.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
22.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.22.10 is populated, SPM.22.11 may be populated. Else SPM.22.11 is not populated.
22.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.22.10 is populated, then SPM.22.12 must be populated. Else SPM.22.12 is not populated.
22.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
22.14	1..199 =	[0..1]	ST	C(R/X)	None cited	Coding System OID		No		2.16.840.1.113883.12.491	Condition: If SPM.4.3 is populated, then SPM.4.14 also must be populated. Else SPM.4.14 is not populated. Note: See the federam ELR2PH guide, Chapter 6 for coding system OIDs.
23	**0..0**	**[0..0]**	**X**	**X**	**X**	**Specimen Appropriateness**	**X**	**X**	**X**	**X**	**Optional field. Not supported. This field is not populated, but the field separator character "|" for this data field must be present as a placeholder.**
24		[0..1]	CWE	RE	**HL70493**	Specimen Condition		No		**FROZ**^Frozen^HL70493^^^^20090731^^^^^^^2.16.840.1.113883.12.493	State of the Specimen. This is a common core data element (CLIA); changed usage to "C (RE/X)" (conditional, empty) to harmonize with S + I Framework requirement.
24.1	1..20 =	[0..1]	ST	RE	None cited	Identifier	Specimen Condition Code from HL70493	No		FROZ	Sample Values "Hem" = Hemolyzed, "Live" = Live, "FROZ" = Frozen, "ROOM" = Room Temperature.
24.2	1..199 #	[0..1]	ST	C(RE/X)	None cited	Text	Specimen Condition text name from HL70493	No		Frozen	Condition: If SPM.24.1 is populated, SPM.24.2 may be populated. Else SPM.24.2 is not populated.

SPM											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
24.3	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Coding System	HL70493	Yes	HL70493	**HL70493**	Condition: If SPM.24.1 is populated, SPM.24.3 must be populated. Else SPM.24.3 is not populated.
24.4	1..20 =	[0..1]	ST	RE	None cited	Alternate Identifier	Specimen Condition Local Code	No		use a local code here	If no alternate identifier, this field may be empty.
24.5	1..199 #	[0..1]	ST	C(RE/X)	None cited	Alternate Text	Specimen Condition Local text name	No		Use a local description here	Condition: If SPM.24.4 is populated, SPM.24.5 may be populated. Else SPM.24.5 is not populated.
24.6	1..12	[0..1]	ID	C(R/X)	**HL70396**	Name of Alternate Coding System	**L**	Yes	**L**	**L**	Condition: If SPM.24.4 is populated, SPM.24.6 must be populated with "L". Else SPM.24.6 is not populated.
24.7	1..10 =	[0..1]	ST	RE	None cited	Coding System Version ID	Standard Coding System Version	No		20090731	This component may be empty. Send it if you have it.
24.8	1..20 =	[0..1]	ST	RE	None cited	Alternate Coding System Version ID	Local coding system Version	No		Local coding system version ID goes here. If not known, can populate with 'v unknown'.	This component may be empty. Send it if you have it. If no local coding system version is known, suggest using the string value "v unknown".
24.9	1..199 #	[0..1]	ST	C(R/RE)	None cited	Original Text		No		original text, if available, goes here	Condition: If SPM.24.1 and SPM.24.4 are not populated, SPM.24.9 must be populated. Else SPM.24.9 may be populated or not. Send it if you have it.
24.10	1..20 =	[0..1]	ST	RE	None cited	Second Alternate Identifier		No			Most LIMS will not have a second alternate coding system. This component can be empty.
24.11	1..199 #	[0..1]	ST	C(RE/X)	None cited	Second Alternate Text		No			Condition: if SPM.24.10 is populated, SPM.24.11 may be populated. Else SPM.24.11 is not populated.
24.12	1..12	[0..1]	ID	C(R/X)	**HL70396**	Second Name of Alternate Coding System		No			Condition: if SPM.24.10 is populated, then SPM.24.12 must be populated. Else SPM.24.12 is not populated.
24.13	1..10 =	[0..1]	ST	RE	None cited	Second Alternate Coding System Version ID		No			This component may be empty. Send it if you have it.
24.14	1..199 =	[0..1]	ST	C(R/E)	None cited	Coding System OID		No		2.16.840.1.113883.12.493	Condition: If SPM.4.3 is populated, then SPM.4.14 also must be populated. Else SPM.4.14 is not populated. Note: See the federal ELR2PH guide, Chapter 6 for

Note: Unsupported “X” terminal SPM Fields 25 through 29 are not included in this implementation.Unsupported “X” intervening fields and unsupported intervening components of supported fields are present.

Example:

SPM|1|23456&NapaGen_EHR&oid here&ISO^200110206122&NapaGen_LIMS&2.16.840.1.114222.4.1.10412&ISO||258530009^Urethral swab^SCT^URTH^Urethra^L^20100731^2.3.1^Urethral swab||||13648007^Urethral structure (body structure)^SCT^URTH^Urethra^HL70700^1/31/2011^2.3.1^Urethra||||||||201102061830-0800|201102071830-0800

5 OBX.5 Table Observation Value Data Types

5.1 Quantitative Results SN *vs.* NM and OBX.8 Usage

For quantitative results there is a choice of the NM-numeric data type or the SN-Structured Numeric data type. The NM data type is limited to numbers with an optional leading "+" or "-"; in contrast, the SN can express signed or unsigned numbers in additions to inequalities, ranges, and ratios, and categorical responses. The preferred convention is to use SN data type whenever expressing a quantitative results. In both cases the UCUM Units are required in OBX.6 and reference range in OBX.7 is a CLIA requirement. (Ref.) A Laboratory may use the "Abnormal flag" (or more correctly "interpretation flag") field, OBX.8, as part of its interpretation guidance. Its use is encouraged by LTIAPH, because it enables one to report both a quantitative result in OBX4 and interpretation(s) in OBX.8 in a single segment. The alternative is to send two OBX segments using a quantitative LOINC in OBX.3 and an ordinal (presence/absence) LOINC with a Coded result. Examples of OBX.8 usage are given below.

5.1.1 SN - Structured Numeric; Preferred for Numeric Results

OBX.5_SN DATA TYPE											
SEQ	**LEN**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5			SN	R		Observation Value	Numeric Results	No		>^2000000	The SN data type is for numeric data and corresponds to a Quantitative LOINC scale property. For Example: numbers |^2.0|, intervals |^0^-^1|, ratios |^1^/^2| or |^1^:^2|, inequalities | categorical results |^2^+| For numeric data, units are required in OBX-6. This is an ELR and CLIA requirement. The reference range is OBX.7 - also a CLIA requirement. OBX.8 should be populated with the test interpretation.
OBX.5.1	1..2	[0..1]	ST	RE		Comparator	optional operator	No		>	Component that must be one of ">" or "<" or ">=" or "<=" or "=" or "<>". This component defaults to "=" if empty.

OBX.5_SN DATA TYPE											
OBX.5.2	1..16	[0..1]	NM	RE		Num1	first number	No		2000000	The Number can consist of an optional leading sign (+ or -), the digits, and an optional decimal point. In the absence of a sign, the number is assumed to be positive.
OBX.5.3	1..1	[0..1]	ST	RE		Separator/Suffix	optional operator	No			Component that must be one of "-" or "+" or "/" or "." or ":".
OBX.5.4	1..16	[0..1]	NM	RE		Num2	second number	No			The Number can consist of an optional leading sign (+ or -), the digits, and an optional decimal point. In the absence of a sign, the number is assumed to be positive.

Example: OBX using the SN data type and OBX.8 Abnormal flag:

OBX|1|SN|11011-4^Hepatitis C virus RNA [Units/volume] (viral load) in Serum or Plasma by Probe & target amplification method^LN^2080^ HEP C RNA (IU/ML)2.34^v unknown||>^2000000|[iU]/mL^ International Units.Per Liter [Arbitrary Concentration Units]^UCUM^IU/ml^^L^1.8^v unknown^|<200 IU/ml|DET^Detected^HL70078^^^^2.7~ A^Abnormal^HL70078^^^^2.7|…

An alternative to using OBX.8 above is to send two OBX segments, one quantitative LOINC with numeric result, and one ordinal (presence/absence finding) with a coded result. (OBX.1 through OBX.9 shown for OBX|1| and OBX.1 through OBX.9 for OBX|2|). Shown are results for a quantitative and qualitative VDRL test. This is not the preferred LTIAPH method.

OBX|1|SN|47235-7^VDRL XXX-Titr^LN^VA199^VDRL-Quantitative^L^2.34^2011||^1^:^20|1^^UCUM^^^^1.8|reference range here|abnormal flag goes here|…

OBX|2|CWE|22464-2^Reagin Ab XXX Ql^LN^VA200^VDRL-Qualitative^L^2.34^2011| A^Abnormal^HL70078^^^^2.7|… 260373001^Detected^SCT^132^Detected^L^20110131^2011||| A^Abnormal^HL70078^^^^2.7|…

5.1.2 NM - Numeric

OBX.5_NM DATA TYPE											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5	1..16	[1..1]	NM	R		Observation Value	Numeric Results	No		15549	The NM data type is for numeric data and corresponds to a Quantitative LOINC scale property. The Number can consist of an optional leading sign (+ or -), the digits, and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point, the number is assumed to be an integer. For numeric data, units are required in OBX-6. This is an ELR and CLIA requirement. The reference range is OBX.7 is also a CLIA requirement. OBX.8 can(should?) be populated with the test interpretation

Example: (shown are OBX.1 through OBX.8; OBX.8 has one repeat):

OBX|1|NM|11011-4^Hepatitis C virus RNA [Units/volume] (viral load) in Serum or Plasma by Probe:target amplification method^LN^2080^HEP C RNA (IU/ML)^L^2.34^v unknown||15549|[iU]/mL^InternationalUnitsPerLiter [Arbitrary Concentration Units]^UCUM^IU/ml^^L^1.8^v unknown^|<200 IU/ml|DET^Detected^HL70078^^^^2.7~ A^Abnormal^HL70078^^^^2.7…

5.2 CWE – Coded with Exceptions

This version of the CWE data type is for use in the OBX.5 field only. The usage rules are different than for the other CWE fields in the message. Namely, the first triplet SNOMED code field and code system name field (CWE.1 and CWE.3), are required elements and original text element, CWE.9 is an RE vs. CE element. For LTIAPH it is recommended that the original text always be included in the OBX.5.9 component for CWE. The OBX.5 CWE data type is used primarily to code lab results such as organism names for nominal scale LOINCs and presence/absence finding for ordinal scale LOINCs (see page 162). In addition, it is used to convey epidemiologically important information that is not contained in the message (see 7.3 on page 155. The Interpretation flag field OBX.8 can also be used with coded results (see example below).

OBX.5_CWE DATA TYPE											
Seq	**LEN**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**Component Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5			CWE	R		Observation Value	Coded Results	No		5 83410001^Gram-negative diplococcus^SCT^12567^Gram neg. diplococci resembling the gonoccus observed^L^07/31/2010^2010^Gram neg. diplococci resembling the gonoccus observed	The OBX.5 CWE data type is used primarily to coded lab results like organism names for nominal scale LOINCs and presence/absence finding for ordinal scale LOINCs. It can also be used for specimen related observations when following the SPM segment.
OBX.5.1	1..20 =	[1..1]	ST	R		Identifier	Snomed Results Code	No		5 8341000	Need a code here. This will be a SNOMED code. Use parent term if organism concept not in Snomed. Only use Local term here if no SNOMED term available. - this is an exception to our convention of 1st triplet for standard coding and second for local coding
OBX.5.2	1..199#	[0..1]	ST	RE		Text	Snomed result text	No		Gram-negative diplococcus	This will be a SNOMED concept name
OBX.5.3	1..12	[1..1]	ID	R	HL70396	Name of Coding System	SCT	Yes	SCT	SCT	SCT for SNOMED results unless need to use local term here

OBX.5_CWE DATA TYPE											
Seq	**LEN**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**Component Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5.4	1..20 =	[0..1]	ST	RE		Alternate Identifier	Local result code	Yes		12567	Put local code here
OBX.5.5	1..199#	[0..1]	ST	RE		Alternate Text	Local result text	No		Gram neg. diplococci resembling the gonoccus observed	You should put the local result text in OBX 5.5
OBX.5.6	1..12	[0..1]	ID	C(R/X)	HL70396	Name of Alternate Coding System	L	Yes	L	L	if you put a local test code in OBX5.4, you must put L in OBX5.6. If you leave OBX5.4 empty, you should also leave OBX5.6 empty
OBX.5.7	1..10 =	[0..1]	ST	RE		Coding System Version ID	Standard Coding System Version	Yes	01/31/2011	01/31/2011	Recommended if a coding system is identified in component 3. This can be Hardcoded if only SNOMED codes appear in OBX.5.1. SNOMED codes are updated every 6 months.
OBX.5.8	1..20 =	[0..1]	ST	RE		Alternate Coding System Version ID	Local coding system Version	Yes	your local coding system version or "V Unknown "	v unknown	Recommended if a coding system is identified in component 6. This can be Hardcoded. If no local coding system version is known, default to the string “v unknown”.
OBX.5.9	1..199#	[0..1]	ST	RE		Original Text	Original text for coded results here	No		Gram neg. diplococci resembling the gonoccus observed	For LTIAPH it is recommended that the original text always be included in the OBX.5 field for CWE.
OBX.5.10	1..20 =	[0..1]	ST	RE		Second Alternate Identifier		No			For LTIAPH this element can be empty
OBX.5.11	1..199#	[0..1]	ST	RE		Second Alternate Text		No			For LTIAPH this element can be empty
OBX.5.12	1..12	[0..1]	ID	C(R/X)	HL70396	Second Name of Alternate Coding System		No			For LTIAPH this element can be empty

OBX.5_CWE DATA TYPE											
Seq	**LEN**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**Component Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5.13	1..10=	[0..1]	ST	RE		Second Alternate Coding System Version ID		No			For LTIAPH this element can be empty
OBX.5.14	1..199=	[0..1]	ST	RE		Coding System OID		No			For LTIAPH this element can be empty

Example: (shown are OBX.1 through OBX.8):

OBX|1|CWE|664-3^Gram Stn XXX^LN^30097^Gram Stain^L^2.34^v unknown|1|83410001^Gram-negative diplococcus^SCT^12567^Gram neg. diplococci resembling Neisseria sp. observed^L^20100731^v unknown^Gram neg. diplococci resembling Neisseria gonorrhea observed^^^^^2.16.840.1.113883.6.96|||A^Abnormal^HL70078^^^^2.7|…

5.3 CX Data Type Used Primarily to Convey Optional Additional Specimen Identifiers in OBXs Following the SPM Segment or for Epidemiologically Important Data in OBXs following a second OBR segment instantiated for the purpose.

OBX.5_CX DATA TYPE: Extended Composite ID with Check Digit											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5			CX	R		Extended CoObservation Value mposite ID with Check Digit	Identifiers	No		987RQ4321A^^^Atlantis General Hospital&OID here&ISO^XX	The CX data type is used to carry identifiers. This guide requires that all identifiers be accompanied by assigning authorities, and that all identifiers carry an . For ELR, the CX data type observation result could be used for example for additional specimen ID in the OBX following the SPM segment.
OBX.5.1	1..15=	[1..1]	ST	R		ID Number		No		987RQ4321A	The ID Number component combined with the Assigning Authority component must uniquely identify the associated object.
OBX.5.2	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this component must be present as a placeholder.**
OBX.5.3	**0..0**	**[0..0]**	**X**	**X**	**X**	**Check Digit Scheme**	**X**	**X**	**X**	**X**	**Optional component. Not supported. This component is not populated, but the component separator character "^" for this component must be present as a placeholder.**
OBX.5.4		[1..1]	HD	R		Assigning Authority	The PHIN namespace ID and OID	No		Atlantis General Hospital&OID here&ISO	The Assigning Authority component is used to identify the system, application, organization, etc. that assigned the ID Number in component 1.
OBX.5.4.1	1..20=	[0..1]	IS	RE	Local	Namespace ID		No		Atlantis General Hospital	
OBX.5.4.2	1..199=	[1..1]	ST	R		Universal ID	OID for assigning authority	No		OID here	

OBX.5_CX DATA TYPE: Extended Composite ID with Check Digit											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5.4.3	1..6	[1..1]	ID	R	HL70301	Universal ID Type	ISO	Yes	ISO	ISO	ISO
OBX.5.5	2..5	[1..1]	ID	R	HL70203	Identifier Type Code		No		XX	
OBX.5.6		[0..1]	HD	RE		Assigning Facility		No			The Assigning Facility identifies the place or location that the ID Number was assigned for use. (Not needed in most states) Discussion???
OBX.5.6.1	1..20=	[0..1]	IS	RE	Local	Namespace ID		No			
OBX.5.6.2	1..199=	[1..1]	ST	R		Universal ID		No			
OBX.5.6.3	1..6	[1..1]	ID	R	HL70301	Universal ID Type		No			

Example: (from PHLIP ETOR-Shows OBX.1 through OBX.14):

OBX|1|CX|PLT221^Original Submitter Lab Specimen ID^PLT^OSLSpecID1^Original Submitter Lab Specimen ID #1^L^1.0.4^1^Original Submitter Lab Specimen ID #1||987RQ4321A^^^Atlantis General Hospital&OID here&ISO^XX|||||F|||20090210163000.0-0800 Note: The text in bold green is the OBX.5 component.

5.4 ST and TX: Used for String and Text Data Types

ST Data Type: Used for Text Strings Less Than 999 Characters in Length

OBX.5_ST DATA TYPE											
ata	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5	1..999	[1..1]	ST	R			Text only Result	No		Salmonella subspecies I:Rough:i:1,2	The ST data type is intended for short strings (e.g., less than 1000 characters). For longer strings the TX or FT data types should be used

Example:

OBX|1|ST|20951-0^Salmonella sp serotype [Identifier] in Isolate by Agglutination^…||Salmonella subspecies I:Rough:i:1,2||…

TX Data Type: Used for Test Strings Longer Than 999 Characters in Length

OBX.5_TX DATA TYPE											
Seq	**Len**	**Cardinality**	**DT**	**Lab Result Sender Usage**	**Value Set**	**HL7 Element Name**	**LTIAPH Def.**	**Hard Code**	**Hard Code Value**	**Example data**	**Comments**
OBX.5	1..65536	[1..1]	TX	R			Text only Result	No			TX data is intended for display purposes. The ST data type is intended for short strings (e.g., less than 1000 characters). For longer strings the TX or FT data types should be used.

Example: (Shows OBX.1 through OBX.7):

OBX|1|TX|20951-0^Salmonella sp. serotype [Identifier] in Isolate by Agglutination^SCT||your displayable text based results here…||…

6 California ELR2PH Vocabulary and Implementation Conventions

6.1 Mapping Workbook

A vocabulary Mapping Workbook contains all the value sets for use within an implementation. This has been completed by the PHINVADS team for the 2010 ELR2PH Version 2.5.1 guide and is available at http://phinvads.cdc.gov/vads/ViewView.action?id=7F008CA6-33A9-DF11-9BDD-0015173D1785.

6.2 Preferred LOINC Codes

6.2.1 LOINC Observation Identifier (Test Request) and Results Codes (Test Results Indicators)

LOINC observation identifier codes are strongly recommended in element OBR.4, “Universal Service Identifier”; (i.e., Laboratory Order Code). For ELR2PH, the receiving partner, the Public Health Agency, may not be specifically interested in this data element, although it is often useful in results interpretation for case investigation. Nonetheless, it is a required element, so must be populated. For the use case, “electronic test orders and results (ETOR)”, order codes are critically important data elements. However, developing and expanding standard value sets of order codes for clinical and public laboratories remains a work in progress.

LOINC observation identifier (i.e., test request) codes are required in OBX.3 (Observation Identifier) for the resulted test data that will populate OBX.5. These standard codes are filtered by the Public Health Agency using tools such as the Reportable Condition Mapping Table (RCMT) to identify the reportable conditions. These codes are identified for each condition and agent in the RCMT. New codes are being added continuously.

Link: https://phinvads.cdc.gov/vads/ViewCodeSystemConcept.action?oid=2.16.840.1.114222.4.5.274&code=RCMT

6.2.1.1 LOINC Analyte - Specific Observation Request Codes

Analyte-specific Observation Request codes cite a specific microorganism or other analyte as the object of the test ordered, and are used when a specific microorganism or other analyte is being sought. These codes have the specific organism or analyte described in the “system” component of the code descriptor. For these codes, the associated LOINC result is never an organism or analyte name, but is instead a coded LOINC term representing findings such as “Present”, “absent”, etc. When analyte-specific LOINC codes are used in OBX.3, neither SNOMED codes nor free-text are ever used in OBX.5 (Observation Value). The only exception is when the test result is a quantitative one, in which case the result is expressed as a numerical value, percentage or other quantitative measure; in this case, the units of measure must be included in OBX.6.

6.2.1.2 LOINC Generic Observation Request Codes

Generic (i.e., Methodless) observation codes do not cite a specific microorganism, other analyte or test condition (e.g., the system component is designated as “XXX”). These codes are used when the desired result includes a specific organism name, serotype or analyte, etc.; and are also used preferentially when a quantitative result; i.e., a serological titer, an analyte concentration, etc., is the objective of the assay. For these results, a LONIC result code is never used; instead, a SNOMED code is used to identify the organism or other analyte; and numeric results are used to express quantitative results shown in OBX.5. in this latter case, UCUM units of measure must also populate OBX.6.

6.2.1.3 LOINC Generic Specimen Type Codes

Generic LOINC specimen type codes are also available, but not preferred. These codes have the “system component” unspecified, i.e. employ the designator “XXX” to indicate that the specimen source is unspecified. These codes may be used when no SNOMED code is available to populate SPM.4, but this usage then requires that SPM.8 contain a SNOMED specimen source code.

6.3 Preferred SNOMED Codes

6.3.1 SNOMED Results Codes are used in OBX.5 with Generic LOINC Observation Request Codes Cited in OBX.3

SNOMED concept codes should be used for results populating element OBX.5, “Observation Value”, although when organism-specific LOINC test request codes are used in OBX.3, LOINC result codes must also be used in OBX.5, but not otherwise. Coded results are divided between “Ordinal” results which are basically presence (“positive”) and absence (“negative”) findings, and “Nominal” results which include organism names. In general, for tests with Ordinal results, only positive reportable lab results are sent to the local public health agency for ELR2PH reporting, although in some cases your jurisdiction may request you to send equivocal and inconclusive results as well for some conditions. Currently, APHL has not established any preferred conventions for presence findings terms (i.e. positive vs. reactive vs. detected), but expect some conventions to be developed through other efforts, such as LabCOP, in the near future. Where the package insert provides no guidance, we recommend that you adopt the PHLIP definitions for Inconclusive, Equivocal, Indeterminate and Unsatisfactory, which can be found at the following link:
http://www.aphlweb.org/aphl_departments/Strategic_Initiatives_and_Research/Informatics_Program/Projects/PHLIP/PrimerWG/Wiki%20Pages/Home.aspx

Tests such as specimen cultures or conclusion reporting with nominal results that identify a reportable organism or agent are also sent to the local public health agency via ELR2PH messaging. The List of SNOMED organism concepts for reportable laboratory results is currently being compiled through the RCMT project and available codes can be accessed at PHINVADS. Standard SNOMED codes for results are required in order to use a tool like RCMT to filter reportable results when the test request code used is a generic code that doesn’t identify the condition. New codes are being added continuously.

Link: https://phinvads.cdc.gov/vads/ViewCodeSystemConcept.action?oid=2.16.840.1.114222.4.5.274&code=RCMT

6.3.2 SNOMED Codes are Preferably Used for Specimen Type and Source Site, Etc. Terms Used in the SPM Segment

SNOMED codes are preferred for Specimen type and required for the Specimen (body) Source. For this implementation, Specimen Site Modifier, Specimen Source Modifier, Collection Method, and Specimen Additives are of “RE” data usage, with work currently in progress to

define a constrained set of SNOMED terms for use, so are not further discussed here. For this implementation, the specimen is limited to human clinical samples and body sites. Animal specimens for rabies testing may be considered later, but cannot be accepted at this time. The Specimen Type field (SPM.4), is required, and should default to a SNOMED Specimen type code when available; else, a generic LOINC specimen code or, if no standard code is available, a local code can be used. If a Source Site is provided, then populate with the appropriate source site code in SPM.8. The following link lists the collection of Specimen Types and Source Sites gathered from the 11 jurisdictions in the ELC grantee's ELR workgroup. This list was created using the PHLIP cross mapping table which describes local specimen types using all the above listed fields as well as a mapping to HL7 0487 and, for backward compatibility to HL7 0070 (the completed PHLIP cross mapping table will be published later). Several terms have been submitted to SNOMED and have been identified in the list. Please see the links below for the relevant SNOMED specimen type and source codes.

6.3.2.1 Specimen Type (SPM.4)

Table: link to the SNOMED Specimen type Codes:
http://www.aphlweb.org/aphl_departments/Strategic_Initiatives_and_Research/Informatics_Program/Projects/ltiaph/Shared%20Documents/ELRWorkgroup/Vocabulary/SpecimenTypeForSPM4.xlsx

6.3.2.2 Specimen Source Site (SPM.8)

Table: link to SNOMED Source Site Codes: Please note that the cross-mapping table is not yet complete, but a comprehensive set of SNOMED source site codes is present. Work is continuing with respect to including the cross-mapped components for Tables HL7 0487 and HL7 0070.

http://www.aphlweb.org/aphl_departments/Strategic_Initiatives_and_Research/Informatics_Program/Projects/ltiaph/Shared%20Documents/ELRWorkgroup/Vocabulary/SpecimenSourceSiteForSPM8.xlsx

6.4 ELR2PH Special Vocabulary for Epidemiologically Important Information and Specimen Related Observations

The elements in the following table have been identified as common core data elements that do not have a supported field in the ELR2PH HL7 2.5.1 message. These data elements are cross referenced below to the HL7 context in which the element would be expressed in the message. Please note that all of the Data Elements of Interest are included, although each site may opt not to send a particular data element that is not required for their jurisdiction.

6.4.1 Column Definitions for the Special Vocabulary Definition Table

- **Variable ID**: Data element code
- **Label Short name**: For the data element passed in the message.
- **Data Type**: Coded or Numeric.
- **Program Req/Opt**: Indicates if the element is required. These values have been defined as:
  - "**Optional**": Nice to have- send it if you have it.
  - "**Conditional**": When the condition is met, the element becomes R; otherwise the element must be empty.
  - "**Send if you have it**": This notation is intended to call attention to a common core data element that though assigned an RE data usage is strongly desired for public health purposes. Please send it if you have it. If empty, it will be assumed the data is not known.
- **May Repeat (~)**: Indicates whether element can repeat (values: Y, N).
- **Value Set Name**: Name of the pre-coordinated value set from which the response is drawn. The value sets. and coding systems are accessible via the Public Health Information Network Vocabulary Access and Distribution Services at http://phinvads.cdc.gov/vads/SearchVocab.action.
- **HL7 Message Context**: Describes the placement of the variable ID and associated OBR/OBX values used.
- **HL7 Data Type**: HL7 data types; i.e., TX, ST, TS, etc.
- **HL7 Optionality**: Indicates if the field is required, optional, or conditional in a segment. These Values have been defined using following definitions. Note that these definitions deviate from standard Version 2.5.1 HL7 usages, but are intended to provide guidance for interpreting HL7 version2.7.1 conditional usages employed in the ELR2PH message guide:
  - **R**: Required.

- **RE**: Required, but not mandated. Considered as “nice to have”, but the field may remain unpopulated if the data is unavailable. Nonetheless, your system must support the data element and be able to send it if you have it, See the ELR optionality discussion below for further guidance.
- **C (a/b) Conditional**: The usage code has an associated condition predicate true (See section 2.B.7.9, Condition Predicate in V2.7.1 Chapter 2B"). If the condition predicate associated with the element is true, follow the rules for “a” which may be one of R, RE or X:
  - If the condition predicate associated with the element is false, follow the rules for “b” which may be one of R, RE or X.
  - “a” and “b” SHALL be different and defined by the message profile.

☐ **HL7 Cardinality**: indicates whether the element can repeat.

☐ **Implementation Notes**: Describe the data element and if needed, condition for reporting.

6.4.2 Epidemiologically Important Information for ELR2PH

Variable ID	Label/Short Name	Data Type	Program Req/Opt	May Repeat	Value Set Name	HL7 Message Context	HL7 Data Type	HL7 Optionality	Cardinality	Implementation Notes
68991-9	Epidemiologically important information for public health reporting panel	N/A	Optional	N		OBR.4,.Order_Observation Group for Epidemiologically important information for public health reporting panel. OBR-4=68991-9 ^Epidemiologically important information for public health reporting panel ^LN^^^^2.34		C(R/RE)	[0..1]	Condition: Use this Order_Observation group for Jurisdictional required data elements that do not have a supported field in the ELR2PH HL7 2.5.1 message. PLT40 “Epidemiologically important information” superseded by 68991-9.
21612-7	Reported Patient Age	Numeric	Send if you have it	N		OBX.3 for Order_Observation group for Epidemiologically important information for public health reporting panel. OBX.2=SN	SN	C(R/RE)	[0..1]	For ELR implementation, this element is a jurisdictional requirement. Your system must support it and you’ll need to send it if you have it. If a birth date is not provided in the PID, then report the patient reported age in patient information Order Observation Segment (OBX)

						OBX.3=21612-7^Reported Patient Age^LN^^^^2.34 OBX-5 = ^Age number OBX-6 = Age Units (e.g. a^Year[time]^UCUM^^^^1.8 .2)				
11368-8	Illness or injury onset date and time	DTM	Optional	N		OBX-3 for the Order_Observation group for Epidemiologically important information for public health reporting panel. OBX-2=DTM OBX-3=11368-8^Illness or injury onset date and time^LN^^^^2.34 OBX-5 = YYYYMMDD[HH[MM[SS[.S[S[S[S]]]]]]]+/-ZZZZ]	CWE	RE	[0..1]	For ELR implementation, this is an optional Epi question.
49541-6	Fasting status [Presence] - Reported	Coded	Optional	N	Value set: (OBX.5) ConceptId: 373066001^Yes ConceptId: 373067005^No ConceptId: 261665006^Unknown	OBX-3 for Order_Observation group for Epidemiologically important information for public health reporting panel. OBX-2=CWE OBX-3=49541-6^Fasting status [Presence] - Reported^LN^^^^2.34 OBX-5=SNOMEDCode^SNOMEDName^^SCT^^^^01/31/2011	CWE	RE	[0..1]	For LTIAPH implementation this is an optional Epi question

11449-6	Pregnancy status	Coded	Send if you have it	N	SNOMED value Set: 261665006^Unknown 7738600^ Patient currently pregnant 60001007^Not pregnant	OBX-3 for Order_Observation group for Epidemiologically important information for public health reporting panel. OBX-2=CWE OBX-3=11449-6^Pregnancy status^LN^^^^2.34 OBX-5=SNOMEDCode^SNOMEDName^^SCT^^^^01/31/2011	CWE	RE	[0..1]	For LTIAPH implementation this element is a common core data element- Need to send it if you have it. () SNOMED value Set: 261665006^Unknown 7738600^ Patient currently pregnant 60001007^Not pregnant

Example:

Additional epidemiologically important information will be transmitted in a separate (i.e., second) Order_Observation Group with a default LOINC order code for OBR.4, which is the following: 68991-9^Epidemiologically important information for public health reporting panel

- ☐ (First Order- Observation group begins - only one OBR per group)
  - ORC||… (Populated)
  - OBR|1|23456^EHR^2.16.840.1.113883.19.3.2.3^ISO|56789PHL222^XYZSPHL^2.16.840.1.114222.4.1.10412^ISO|1234^N.gonorrhoeae Culture and Smear^L^^^^2008|||….
  - OBX|1|CWE|664-3^Gram Stn XXX^LN^30097^Gram Stain^L^2.34^v unknown|1|83410001^Gram-negative ….
  - SPM|1|…
- ☐ (First Order-Observation group ends)
- ☐ (Second Order-Observation group begins - ORC empty, so not included in this one)
  - OBR|2|23456^EHR^2.16.840.1.113883.19.3.2.3^ISO|56789PHL222^XYZSPHL^2.16.840.1.114222.4.1.10412^ISO|^^^68991-9^ Epidemiologically important information for public health reporting panel^LN^^2011|||…
  - NTE|||this is where extra patient information goes
  - OBX|1|NM|21612-7^Age – Reported^LN^A^Patient Age^L^2.34^1||46|a^year^UCUM^yr ^years^L^1.7^1.1|||||F…
  - OBX|2|CWE|11449-6^Pregnancy status^LN^A^Pregnancy Status^L^2.34|1|77386006^Patient currently pregnant^SCT^^^^01/31/2011|…

☐ (Second Order- Observation group ends)

Note: Assuming that this information is valid and ordinarily intended for the time of specimen collection, then **for Epidemiologically Important Question observations only**, OBX.14 – specimen collection date/time and OBX.19 - Date/time of analysis are treated as usage "RE"; in other words, nice to haves but may be empty. For this usage, these dates should be considered as representing the date and time of the Epi question and not the test itself.

6.5 Specimen Related Observations: Identifying Specimen Isolates *vs*. Original Specimens for Reference Testing

The following table contains special vocabulary related to specimen related observations:

Variable ID	Label/Short Name	Data Type	Program Req/Opt	May Repeat	Value Set Name	HL7 Message Context	HL7 Data Type	HL7 Optionality	Cardinality	Implementation Notes
PLT227	Sample type submitted	Coded	Conditional	N	Value set is 119303007^Microbial Isolate, Specimen 8021000009107^Bacterial Isolate, 621000009105^Viral Isolate, TBD^Fungal Isolate, 258566005^Deoxyribonucleic acid sample, nnnnnnnn^Ribonucleic acid sample, rest TBD.	Specimen/OBX Segment OBX-2=CWE OBX-3=PLT227^Sample type submitted^PLT^^^^1.02 OBX-5=SNOMEDCode^SNOMED Name^^SCT^^^^01/31/2011	CWE	C(R/X)	[0..1]	Drawn from SNOMED Specimen Hierarchy. Condition: Required if the specimen type in is a Microbial Isolate Specimen or RNA or DNA. The Source material should populate SPM.4 see discussion below. Value set is : 119303007^Microbial Isolate, Specimen 8021000009107^Bacterial Isolate, 621000009105^Viral Isolate. TBD^Fungal Isolate, 258566005^Deoxyribonucleic acid sample, nnnnnnnn^Ribonucleic acid sample, rest TBD.

Note: The terms "TBD" and "nnnnn" in the Implementation Notes column of the table above are placeholders indicating that the SNOMED codes and terms to be used for fungal isolates and ribonucleic acid samples were not yet available at the time this companion guide version was prepared.

6.5.1 Identifying Reference Cultures - Isolate vs. Original Source

Currently, the SPM segment does not contain the necessary fields to describe both the concept of an isolate (or other derivative of a clinical specimen like DNA etc.) AND the original source material – the clinical specimen. In order to provide both concepts, the LTIAPH convention is to use the SPM.4 “Specimen Type” field for the clinical specimen, and the associated OBX segment following the SPM segment to describe the concept that the specimen is an isolate (please refer to the table on page 154 above for examples). Similarly, this method can be used to describe RNA and DNA samples from clinical specimens.

Example: SPM||||119334006^Stool specimen^SCT…||||…

OBX|||^^^^PLT227^Sample type submitted^PLT…||119303007^Microbial isolate specimen^SCT…|||||…

Note: A LOINC code request for “Sample type submitted” is pending.

7 Implementation Conventions

7.1 CWE Data Type (except when used in the OBX.5 element)

Always assign the first triplet to the standard code and the second triplet to the local code; separate rules dictate the usage for CWE within an OBX.5 element. Please see chapter 2, page 18, Table 2.3.4 in the HL7 ELR2PH guide.

7.2 When Reporting Quantitative (Numeric) Results

Use the SN (Structured Numeric) data type rather than the NM (Numeric) data type; see examples in the OBX.5 section, page 139 above).

7.3 When No Appropriate Field Exists for a Data Element

This information will be transmitted using an Observation Request (OBR with one or more associated OBX) Segments (see examples of the xxx usage in the special vocabulary, section 6.4 on page 150) or in an OBX following the SPM segment for specimen-related data). Also please see the examples at the bottom of page 151 and top of page 152.

7.4 Restrictions on NTE Segment Use:

NTE segments are for notes and comments only; results are reported in OBX.5. Report no more than one Patient Result Group per message. (See comments for Patient Results Group in the message structure section (3, on page 23 above). Note that though there is a limit for EHR messages on the number of NTE segments per PID, there is no such limit for the ELR2PH message.

7.5 Use the HL7 Standard Approach for Escaping Reserved Characters in the Message

Please see the ELR2PH Guide, section 2.2, page 12 for a discussion regarding where used and limits on use.

Some standard LOINC and local text descriptions may contain reserved characters. Use the escape sequences shown in the table below when populating ST – string, TX – text, or FT – formatted text fields:

7.5.1 Escape Character Used in ELR2PH for Special Characters (HL7 Standard)

\F	field separator "|"
\S	component separator "^"
\T	subcomponent separator "&"
\R	repetition separator "~"
\E	escape character "\"

- **Example**:

  OBX||53947-8^Escherichia coli STX gene+H7 gene [Identifier] in Unspecified specimen by Probe \T\ target amplification method…

- **Note**: Presence and Absence finding terms are interpreted the same way by the Sender and Receiver (agency) (20110502). So, "Detected", "Reactive" and "Positive" are all considered equivalent presence findings from the standpoint of the receiver (agency). Similarly, "Not Detected", "Negative" and "Not Reactive" are all considered equivalent absence findings from the standpoint of the receiver. Further, the use of these terms is often stipulated in the FDA approved test kit package inserts for laboratory tests. An independent effort is underway to harmonize this terminology within the laboratory community.

7.6 Where a Test Kit Package Insert is Not Prescriptive, Adopt PHLIP Definitions for the Following Concepts (20110502)

- ☐ **Equivocal**: The result falls between the positive and negative cut off values of the test. The result is considered borderline and should be interpreted with consideration to clinical and epidemiological criteria. For PCRs, equivocal should be used for low-reactors that are borderline negative, but within a range of cycle time (CT) that is still possibly of concern. This range should be determined and listed in the test kit package insert, if applicable.
- ☐ **Inconclusive or indeterminate**: These terms should be used for situations where you cannot draw a conclusion from the test.
    - **Indeterminate**: Use when QC is OK, but the result cannot be obtained due to inhibition of reagent by sample components and the test is of a quantitative nature.
    - **Inconclusive**:
        - Use when QC is OK, but the result cannot be obtained due to inhibition of reagent by sample components and the test is of a qualitative nature.
        - Use “Inconclusive” for FLU PCR and FLU DFA.
    - **Intermediate**: In SNOMED CT this belongs under the parent of “ranked findings”.

The following term is not truly a result and every effort should be made to communicate the related situations in the appropriate segment and component of the message (SPM.21).

- ☐ **Unsatisfactory**: Refers to a QA event, where the sample was**:** not tested, a lab accident, of insufficient quantity, test not performed (done), etc. Although the term “Test not done” is often used as an allowed result value, it is not truly a result, so may not be used as such. The concept “Specimen unsatisfactory for evaluation” may not be used as a result, but rather **is to be communicated in the SPM segment with a specimen rejection code in SPM.21(Specimen Reject Reason).**

7.7 The SPM Segment Source of Truth for the Specimen is not Necessarily a LOINC Code System Component

Whenever possible, if using a LOINC Code use a Generic LOINC Code (“XXX” for the LOINC system component) (20110315):

- ☐ “Specimen Source” is a required data element and its primary location is SPM.4, with other SPM fields providing additional detail and context to the specimen description. This approach supports the consistent use of “XXX” (generic)

LOINC specimen codes that lack the system component to make mapping local terms to standard SNOMED terms easier. SNOMED Specimen codes also provide greater precision. If specimen source conflicts arise regarding use of a SNOMED specimen code in SPM.4 versus a LOINC code with a specimen component description, use the SNOMED code rather than the LOINC code in SPM.4 as the specimen source code and descriptor.

- ☐ Serum vs. Plasma (From the LOINC Manual p24):
- ☐ For many types of tests, the distinction between serum and plasma is irrelevant. When testing on serum or plasma is clinically equivalent, the LOINC system component should be recorded as Ser/Plas. Sometimes, the test can only be run on either plasma or serum; if so, the component will then be associated with “Ser” or “Plas” as appropriate.
- ☐ If the test can be run on either serum or plasma but the results are different and standardized (a very rare circumstance), two separate tests will be defined in our file, one with a system “Plas” and one with a system “Ser”. **The current LOINC database includes some Ser tests and some Plas tests that should really be Ser/Plas**. As we determine that a Ser or Plas test really should have been designated as Ser/Plas, we will Request that LOINC change the designation.
- ☐ Exception For clinical specimens (e.g. Stool) vs. isolates (reference cultures).
    - If you set up separate work flows for clinical specimens vs. reference cultures, then it is OK to use LOINC with system = “ISLT” and system =”XXX” for the clinical specimens. However, even in this case, the specimen can and should be fully described in the SPM Segment using the preferred SNOMED codes and terms.

- ☐ How to represent a Microbial Isolate in the SPM segment:
    - **Example**: SPM||||40976-3^Adenovirus DNA^LN…||||39607008^Lung Structure^SCT…

7.8 Decision is to be Able to Support at Least to Specimen Type (SPM.4) and Source Site (SPM.8) as a Starting Point

Other currently available fields will also be used in future to fully describe specimens, collection method and additives.

7.9 For the SPM Segment, Culture = Isolation and Identification (20110315)

Background:

Traditionally, the original “culture” order sent by the ordering provider is used to request both the isolation and the identification of any or all agents in the specimen. That custom can be hard to change. Technically, a culture procedure alone will not identify the virus, bacteria, fungus,

or parasite, etc. Therefore, a true result of a culture procedure would only be growth, no growth, description of the colonies or changes in the cell culture (CPE) and may be a colony count. Sometimes, the growth characteristics and morphology observed can point to the most likely organism, but any identification from culture alone should be considered presumptive or very coarsely granular (e.g. beta-hemolytic staph).

All labs have confirmatory tests that are performed on the isolates from the culture to identify the organism, be they antigen detection, biochemical characteristics, motility, nucleic acid detection, etc. Often, the labs do not report the results of these additional tests individually, but report the final identification as the result for the culture test, because that is what the customer expects. The term "culture" therefore is used in current lab jargon to describe a battery of tests that start with the organism Isolation and proceed to the Identification of the isolated organism. For this implementation, we reflect that by equating culture with isolation and Identification.

7.10 Choosing an Analyte-Specific vs. a Generic Testing and Reporting Approach

- ☐ For an "**Organism-Specific 'culture and isolation' request**", use Analyte Specific LOINC codes:
  - These codes exist for most of the reportable disease conditions. The method "Organism Specific Culture" does not mean the test must use a selective culture method for the organism of interest; rather it is "LOINC speak" as a way to identify what you are looking for. In other words, it is used when the lab performs a culture and identification to rule out one particular organism in the specimen, even if other organisms could grow under the same conditions from this sample. More importantly for ELR2PH, these LOINC request codes can be linked to a reportable condition via the RCMT tables, but the result cannot be so linked. Organism-specific cultures are **"Ordinal"**; i.e. used to report the presence or absence of the specific individual organism named in the request (positive/negative/indeterminate); the report in OBX.5 may not contain the name of the organism found (e.g. Shigella dysenteriae or Shigella sonnei).The concept "Not Isolated" is used for absence of an organism. In no circumstance is it correct to report an organism not specifically named in the LOINC component as a result of an organism specific culture.

    - **Examples of analyte-specific test requests:**
      - Analyte-specific LOINC with a generic (XXX) system code for the specimen tested

        6317-2^Bordetella sp. identified in Unspecified specimen by Organism specific culture…
      - Analyte Specific LOINC with defined specimen system (Stool) used;

OBX||10851-4^Escherichia coli O157:H7 [Presence] in Stool by Organism specific culture ||2603737001^Detected…

- Analyte Specific LOINC with generic specimen system (XXX) used;
  OBX||6317-2^Bordetella sp. identified in Unspecified specimen by Organism specific culture||2603737001^Detected …
- For negative findings using an analyte specific LOINC test request code:
  OBX||6317-2^Bordetella sp. identified in Unspecified specimen by Organism specific culture…||264887000^Not Isolated…

☐ **Generic LOINC codes**:

- These codes can be used for any agent. The result will always be a **Nominal** result (i.e., name of an organism). In SNOMED, the result as organism implies a finding of organism. More importantly, the SNOMED result code can be linked to a reportable condition via the RCMT tables. There is currently no satisfactory way to express the concept of a negative finding for an organism using a generic culture LOINC, although several options have been proposed.
  - **Example of a generic LOINC test request Code**:

    11475-1^Microorganism identified in Unspecified specimen by Culture.

  - **Example of use**: OBX||11475-1^Microorganism identified in Unspecified specimen by Culture …||5247005^Bordetella pertussis…
  - **NOTE**: in this example, OBX.5 employs the OBX.5 CWE data type, with the result reported via a SNOMED code and its associated standard text description.
- Reporting negative findings:
  This is not normally a use case for ELR2PH, but is required for reporting back to clinical partners using the ELR2PH HL7 2.5.1 message other than the ELR2PH message; i.e. ETOR. However, there are situations in which a negative finding report may have to be forwarded to a Public Health Agency; e.g., a use case in which a positive or equivocal finding was initially reported, but subsequently determined to be inaccurate, requiring a corrected message with a negative finding to be sent.
  Currently there are 4 negative finding concepts in SNOMED under the “Sample no bacteria isolated” hierarchy, but it is unlikely that more concepts will be added. Within the LTIAPH Workgroup there is no consensus on how to report negative findings using standard coding without using specific pre-coordinated terms in SNOMED. Therefore, the only general guidance that is

given here is to report using your local code followed by an NTE which should explain what the assay was looking for and what you did not find.

- **Example**:
  - OBX||11475-1^Microorganism identified in Unspecified specimen by Culture …||123^Bordetella pertussis not isolated^L…
  - NTE|||This culture did not isolate Bordetella pertussis, Bordetella parapertussis, etc.
  - Note: In the above example, a local code is used to convey a negative result. This approach is only acceptable if no standard code is available.

- Reporting co-infections:
  - Use 2 separate OBX segments instead of a combining in a single result, incrementing the Sub-ID field OBX.4.
    - **Example**:
      - OBX|1|CWE|1234-5^Culture^LN…|1|Organism A|
      - OBX|2|CWE|1234-5^Culture^LN…|2|Organism B|

7.11 How to Report Coded Data When No Standard Term Exists

☐ All fields except OBX.5:

- If you have a local but not a standard code, then you must populate only the second triplet (CWE.4,.5 and .6), leaving the first triplet empty. You will then need to submit a request to the appropriate SDO for a standard code.
  - **Example**:
    - OBR|1|||^^^1234^GC RNA NAAT^L^^v unknown|||…

7.12 When Populating Free Text Only in a non-OBX.5 CWE Data Type, Populate Only the Original Text Element (CWE.9)

☐ If you have neither a standard nor a local code, then populate the original text component (CWE.9) with a text only entry; If populating an OBX.5 CWE with free text only, then a more complex approach is required. The method of accommodating free text only in an

OBX.5 CWE data type is described in the comments field of the OBX.5 CWE data type – See Page 140 above, and the examples below.

- **Example** for coding free text in a **non-OBX.5 CWE** message component:

  OBR|1|||^^^^^^^^GC RNA NAAT|||…

☐ For coded results in OBX.5:

- The OBX.5 CWE data type requires the first and third element be populated (CWE.1 = R, CWE 3=R) and the Original Text component (CWE.9) is RE- Required, empty, so should use either option below for this data element. The choice of which method will work requires careful analysis of how it will impact your individual data collection process and analysis.
  - **Method 1**:

    Use the parent SNOMED code, i.e., move up the vocabulary hierarchy tree to the next level to code (e.g. Serovar to Subspecies) AND You must then populate original text OBX.5.9 for results– assume same thing as when using a printout report. However, Local code and original text should represent the current level of knowledge.

    - **Example for using standard codes**

      OBX|1|CWE|20951-0^Salmonella sp serotype [Identifier] in Isolate by Agglutination^…||398508004^Salmonella enterica subsp. Enterica^SCT^167^Salmonella subspecies I:Rough:i:1,2^L^07/31/2011^1.2^Salmonella subspecies I:Rough:i:1,2||…

  - **Method 2**:

    Use a local code to populate CWE.1 and CWE.3; wait for a Standard code AND always populate original text (if available) in OBX.5.9 for results. Assume the same strategy will be applied for a printed report. (see example, next page)

    - **Example**: **for using local codes only**

      OBX|1|CWE|20951-0^Salmonella sp. serotype [Identifier] in Isolate by Agglutination^…||167^ Salmonella subspecies I:Rough:i:1,2^L^167^Salmonella subspecies I:Rough:i:1,2^L^1.2^1.2^Salmonella subspecies I:Rough:i:1,2||…

Options for Reporting Text Only Results in OBX.5 when neither standard codes nor local codes are available:

- ☐ If you have neither a standard nor a local code then:
  - OPTION 1- Change the "Value Type" in OBX.2 to ST (String) or TX (Text) and populate the field with a text only entry.
    - Example:

      OBX|1|ST|20951-0^Salmonella sp serotype [Identifier] in Isolate by Agglutination^…||Salmonella subspecies I:Rough:i:1,2||…
- ☐ OPTION 2 - Use default value "Code Unavailable" CWE.1 and "L" – local in CWE.3 and populate CWE.9 with the text only data. This may be useful for error trapping if lacking a standard code for the receiver.
    - Example:

      OBX|1|CWE|20951-0^Salmonella sp. serotype [Identifier] in Isolate by Agglutination^…||Code Unavailable^^L^^^v unknown^^Salmonella subspecies I:Rough:i:1,2
- ☐ Concept for "Organism Code Unavailable (finding) pending".

7.13 How to Update Demographic Changes, Etc.

- ☐ For updates to all changes whether they are changes related to patient demographics, specimen information, orders or test results:
  - Change ORC.1 to RE (Results) and OBR.25 to C (corrected)
  - Update PID.33 last update time and PID.34 last update facility if this field is being supported.
  - Resend the entire message with updated information.

7.14 How to Report Referred Results: Reporting the Sending of a Sample for Reference Testing

- ☐ The following SNOMED result codes may be used:

  414976005^Organism unidentified, referred to CDC (finding).

  414977001^Organism unidentified, referred to reference laboratory for identification (finding).

  - **Example**:

OBX|1|ST|20951-0^Salmonella sp serotype [Identifier] in Isolate by Agglutination^LN...|| 41497600^Organism unidentified, referred to CDC (finding)^SCT …|||...

NTE|1|L|Sending to CDC for further Characterization…

- ☐ However, for other use cases (i.e. where the organism is identified) no concepts exist.
- ☐ Concept codes for “Referred to reference laboratory” and “Referred to CDC” submitted to SNOMED and are pending.
  - **Example**:

    OBX||Influenza test|1|inconclusive

    OBX||Influenza test|2|<new SNOMED>^Referred to reference laboratory…

  - In these cases, an NTE segment should follow the OBX segment to comment on the referral. The results should be partial until the referred results come back.

7.15 How to Report Referred Results Obtained via Reference Testing

The Preferred method is to put the reference lab information (e.g. CDC) in OBX fields 23-25, Performing Organization Name, Address, and Medical Director (see example, next page)

- ☐ **Example**:

  MSH|||...

  ORC|||...

  OBR|1|||NNNN_N^my LOINC test^....

  OBX|1|||NNNN-N^my LOINC test^...||414976005^Organism unidentified, referred to CDC (finding)…

  OBR|2|||NNNN-N^Reference lab test panel^LN^....

  OBX|1||||NNNN_-N^Reference lab test results^LN...||Referred test results here|....|CDC lab division here in OBX.23|CDC Lab address here|CDC Division Lab Director here…

- ☐ Alternatively, LOINC codes exist for referred lab results. These results can be combined with the referring lab's results and structured as a parent-child relationship with the local results in the parent results in the Order Observation Group) and the referred results in the child Order Observation Group, or reported separately as a child result. Alternatively, the referred lab results can be combined with the referring lab's results as additional OBXs under the same order or additional order.
- ☐ **LOINC Code Examples**:

  51991-8 Reference lab test panel (all components optional).

  42216-2 Reference lab name [Identifier].

  49581-2 Reference lab test identifier and name [Identifier].

  30896-5 Reference lab test [Identifier].

  19145-2 Reference lab test name

  49549-9 Reference lab test method

  19146-0 Reference lab test results

  19147-8 Reference lab test reference range.

- ☐ **Example of a Parent – child Structure**:

  OBR|1|||NNNN_N^my local LOINC test^...

  OBX|1|||NNNN-N^my local LOINC test^...||414976005^Organism unidentified, referred to CDC (finding)…

- ☐ (Child OBR)

  OBR|2|||51991-8^Reference lab test panel^LN^....

  OBX|1|XON|42216-2^Reference lab name^LN||National Salmonella Reference Laboratory^L…

  OBX|2|TX|30865-5^Reference lab test identifier^LN||56475-7....

  OBX|3|TX|19145-2^Reference lab test name^LN|1| Salmonella sp Ag form Islt Aggl....

  OBX|4|TX|||19146-0^Reference lab test results^LN...|1| I 3,10:z:1,5… Etc.

7.16 Parent Child Messaging

- ☐ Systems should be able to link parent (e.g. culture) to child (e.g. bacterial susceptibility) results using OBR.26 and OBR.29 in the child message. The messages may contain both the parent order-observation group and the child order-observation group; or the message may contain only the child order-observation group. Reflex testing and Bacterial Susceptibilities are the major use cases for this structure. Also see the ELR2PH guide: Appendix A: "HL7 Reporting of Culture and Susceptibilities" for more examples and information.
    - **Example**:

      ORC|RE|…

      OBR|1||||625-4^Bacteria identified^LN^STLCLT^STOOL CULTURE^L^2.26^V-unknown^Fecal Culture^^^^^…

      NTE|1|L|Parent Order_Observation Group|RE^Remark^HL70364^^^^2.5.1

      OBX|1|CWE|625-4^Bacteria identified:Prid:Pt:Stool:Nom:Culture^LN^STLCLT^Stool Culture^L^2.26^unk^^^^^^2.16.840.1.113883.6.1|1|66543000^Campylobacter jejuni^SCT^CPBJ^Campylobacter jejuni^L^January 2007^v unknown^Campylobacter jejuni…

      OBX|2|SN|564-5^COLONY COUNT:NUM:PT:XXX:QN:VC^LN^COLCNT^Colony Count^L^2.26^unk^^^^^^2.16.840.1.113883.6.1|1|^10000^-^90000|1^^UCUM^^^^1.6|||||F…

      OBX|3|CWE|625-4^Bacteria identified:Prid:Pt:Stool:Nom:Culture^LN^STLCLT^Stool Culture^L^2.26^unk^^^^^^2.16.840.1.113883.6.1|2|441745001^Salmonella enterica subspecies enterica serovar 4,[5],12:b:- organism)^SCT^SalB1^Salmonella Group B^L^January 2007^v unknown^Salmonella Group B||||||F…

      OBX|4|…

      SPM|1|^9700122&Public Health Lab&2.16.840.1.113883.19.3.1.6&ISO||119339001^Stool specimen (specimen)^SCT^STL^Stool^L^20080731^unk…

      OBR|2|||||50545-3^Bacterial susceptibility panel:-:Pt:Isolate:OrdQn:MIC^LN^MIC^Bacterial Susceptibility Panel^L^2.26^V_unknown|||||||||F|625-4&Bacteria identified:Prid:Pt:Stool:Nom:Culture&LN&STLCLT&Stool Culture&L^1^Campylobacter jejuni|||54654654&Public Health Clinic&2.16.840.1.113883.19.3.2.3&ISO^300005074&Public Health Lab&2.16.840.1.113883.19.3.1.6&ISO

NTE|1|L|Child Order_Observation Group to|RE^Remark^HL70364^^^^2.5.1

OBX|1|SN|6979-9^AMPICILLIN:SUSC:PT:ISLT:ORDQN:GRADIENT STRIP^LN^AMP^Ampicillin^L^2.26^unk^^^^^^2.16.840.1.113883.6.1|1|<^0.06|ug/mL^^UCUM^^^^1.6||S^^HL70078^^^^2.26|||F

OBX|2|SN|7016-9^GENTAMICIN:SUSC:PT:ISLT:ORDQN:GRADIENT STRIP^LN^GENT^Gentamicin…

OBX|3|SN|7002-9^CIPROFLOXACIN:SUSC:PT:ISLT:ORDQN:GRADIENT STRIP^LN^CPFX^…

OBR|3|||50545-3^Bacterial susceptibility panel:-:Pt:Isolate:OrdQn:MIC^LN^MIC^Bacterial Susceptibility Panel^L^2.26^V_unknown^^^^^^|||||||F|625-4&Bacteria identified:Prid:Pt:Stool:Nom:Culture&LN&STLCLT&Stool Culture&L^2^Salmonella group B phase 1 a-e|||54654654&Public Health Clinic&2.16.840.1.113883.19.3.2.3&ISO^300005074&Public Health Lab&2.16.840.1.113883.19.3.1.6&ISO

OBX|1|SN|6979-9^AMPICILLIN:…

OBX|2|SN|7016-9^GENTAMICIN:…

OBX|3|SN|7002-9^CIPROFLOXACIN:…

- ☐ A second mode of conveying this information is to use a standard OBX segment. If more than one organism is present, OBX.4 – observation sub identifier - is used to distinguish them. In this case, the first OBX with sub_ID “n” will contain a value identifying the nth microorganism, and each additional OBX with sub_ID n + 1 will contain susceptibility values for a given antimicrobial test for this organism.
    - Example:

      OBR|1||||625-4^Bacteria identified^LN^STLCLT^STOOL CULTURE^L^2.26^V-unknown^Fecal Culture^^^^^…

      OBX|1|CWE|625-4^Bacteria identified:…|1|66543000^Campylobacter jejuni^…

      OBX|2|CWE|625-4^Bacteria identified:…|2|441745001^Salmonella enterica subspecies enteric…

      OBX|3|SN|6979-9^AMPICILLIN:…|1.2|result1

      OBX|4|SN|7016-9^GENTAMICIN:…|1.2|result2

      OBX|5|SN|7002-9^CIPROFLOXACIN:…|1.3|result3

OBX|6|SN|6979-9^AMPICILLIN:…|2.1|result4

OBX|7|SN|7016-9^GENTAMICIN:…|2.2|result5

OBX|8|SN|7002-9^CIPROFLOXACIN:…|2.3|result6

SPM|1|^9700122&Public Health Lab&2.16.840.1.113883.19.3.1.6&ISO||119339001^Stool specimen (specimen)^SCT^STL^Stool^L^20080731^unk…

7.17 Specimen Reject Implementation Guidance

- ☐ Although not usually an ELR use case, but a response to a test order (ETOR use case), SPM-21; Reporting of the Specimen reject reason and SPM.24; specimen condition are CLIA requirements. LTIAPH changed the usage for SPM.22 - Specimen Quality and SPM.24 – Specimen Condition from O to RE. SNOMED CT is the recommended terminology and Value set to be used and a constrained set of standard terms is TBD; in the meantime, if appropriate SNOMED terms and codes are not available, then local terms will have to be used.

  CLIA Reference: (From: http://www.cms.gov/CLIA/downloads/apcsubk2.pdf)

  "§493.1291 Standard: Test report."

  (c)(7) Any information regarding the condition and disposition of specimens that does not meet the laboratory's criteria for acceptability.

  - **Example**:

  SPM|1|||53130003^Venous blood...|||RB^Broken Container^HL70490^^^^2.5.1
  |P^POOR^HL70491^^^^2.5.1|CON^Contaminated^HL70493^^^2.5.1…

8 Appendix A: Sample Messages with Storyboards.

8.1 Chlamydia/Gonorrhea PCR: Reporting a Panel Result

Storyboard: Provider Dr. Joanna Artze at Napa General sees a 46 yo, white male with a complaint of dysuria. Based on history and clinical signs, Dr. Artze orders a GC test. Napa General Hospital's clinical lab sends a urethral swab to the Napa county public health laboratory, which performs a GC NAAT test. The specimen tests positive for Chlamydia and negative for Gonorrhea. This result triggers the Reportable Laboratory Result (RLR) message shown below to the local public health agency.

MSH|^~\&|NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|NapaCo_PHL^2.16.840.1.114222.4.1.104^ISO|NapaCoDOH_OMS^2.16.840.1.114222.4.1.151^ISO|NapaCoDOH^2.16.840.1.114222.4.1.150^ISO|20110208132554-0400||ORU^R01^ORU_R01|20110208132554.23456|P|2.5.1|||NE|NE|USA||||PHLabReport-NoAck^^2.16.840.1.114222.4.10.3^ISO

SFT|Orion Health|4.0|Orion Rhapsody|789654||20110101

PID|1||987654321A^^^NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO^PI~45AQ12345^^^Napa General Hosp&2.16.840.1.113883.19.3.2.1&ISO^MR||Everyman^Adam^A^^^^L^^^^^^^BS|Mum^Martha^M^^^^M|19640619|M||2106-3^White^CDCREC^W^White^L^04/24/2007^2010|2222 Home Street^^Napa^CA^94558^USA^H^^06055||^PRN^PH^^1^707^2272608|^WPN^PH^^1^707^6374377|||||||N^Not Hispanic or Latino^HL70189^N^Not Hispanic^L^2.5.1^2010|||||||2186-5|||201102081000-0700|LastUpdater^2.16.840.1.113883.19.3.1^ISO

NTE|1|L|Optional Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

ORC|RE|23456^NapaGen_EHR^OID here^ISO|56789PHL222^NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|||||||1412941681^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^MD||^WPN^PH^^1^707^2643378||||||Napa General Hospital Lab^L^^^^NPI&2.16.840.1.113883.4.6&ISO^NPI^^^1255402921|2217 Trancas^Suite 22^Napa^CA^94558^USA^M|^WPN^PH^^1^707^5549876|115 Trancas^Suite 2100^Napa^CA^94558^USA^M

OBR|1|23456^NapaGen_EHR^oid here^ISO|56789PHL222^NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|^^^1234^CT/GC NAAT^L^^2010|||201102061830-0800|||||Dysuria|||1412941681^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^MD|^WPN^PH^^1^707^2643378|||||20110208132554-0800|||F|||||788.1^Dysuria^I9CDX^^^^07/09/2008

NTE|1|L|Optional Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

OBX|1|CWE|43304-5^Chlamydia trachomatis rRNA [Presence] in Unspecified specimen by Probe & target amplification method^LN^400^CT GenProbe^L^2.34^v unknown|1|260373001^Detected^SCT^1Det^Detected^L^01/31/2011^v unknown^Detected|||DET^^HL70078^^^^2.7|||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

OBX|2|CWE|43305-2^Neisseria gonorrhea rRNA [Presence] in Unspecified specimen by Probe & target amplification method^LN^410^GC GenProbe^L^2.34^v unknown|1|260415000^Not Detected^SCT^2ND^Not Detected^L^01/31/2011^v unknown^Not Detected|||ND^^HL70078^^^^2.7|||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

SPM|1|23456&NapaGen_EHR&oid here&ISO^200110206122&NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO||258530009^Urethral swab^SCT^URTH^Uretha^HL70070^01/31/2011^2.3.1^Urethal swab||||13648007^Urethral structure (body structure)^SCT^URTH^Uretha^HL70700^1/31/2011^2.3.1^Uretha||||||||201102061830-0800|201102071830-0800

8.2 Salmonella Reference Culture: Reporting Results of a Referred Culture Isolate

Storyboard: In the Napa General Hospitals Emergency Ward, Dr. Joanna Artze sees patient Adam Everyman, a 46 yo, white male with a complaint of severe abdominal pain, Diarrhea, Nausea and Fever. Based on history and clinical signs, Dr. Artze orders a complete blood count with differential and a stool culture for salmonella. The hospital's clinical lab, cultures salmonella and sends the isolate to the local reference laboratory, Napa County public health laboratory. Napa County public health laboratory performs a reference culture and identification on the isolate sample. Each of these results is sufficient to trigger a reportable laboratory result message to the local public health agency. The following sample message is for the reference culture performed by the public health lab.

MSH|^~\&|NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|NapaCo_PHL^2.16.840.1.114222.4.1.104^ISO|NapaCoDOH_OMS^2.16.840.1.114222.4.1.151^ISO|NapaCoDOH^2.16.840.1.114222.4.1.150^ISO|20110208132554-0400||ORU^R01^ORU_R01|20110208132554.23456|P|2.5.1|||NE|NE|USA||||PHLabReport-NoAck^^2.16.840.1.114222.4.10.3^ISO

SFT|Orion Health|4.0|Orion Rhapsody|789654||20110101

PID|1||987654321A^^^NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO^PI~45AQ12345^^^Napa General Hosp&2.16.840.1.113883.19.3.2.1&ISO^MR||Everyman^Adam^A^^^^L^^^^^^BS|Mum^Martha^M^^^^M|~|M||2106-3^White^CDCREC^W^White^L^04/24/2007^v unknown|2222 Home Street^^Napa^CA^94558^USA^H^^06055||^PRN^PH^^1^707^2272608|^WPN^PH^^1^707^6374377|||||||N^Not Hispanic or Latino^HL70189^N^Not Hispanic^L^2.5.1^v unknown|||||||N|||201102081000-0700|LastUpdater^2.16.840.1.113883.19.3.1^ISO

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

ORC|RE|23456^NapaGen_EHR^oid here^ISO|56789PHL222^NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|||||||||1412941681^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^^MD||^WPN^PH^^1^707^2643378||||||Napa General Hospital Lab^L^^^^NPI&2.16.840.1.113883.4.6&ISO^NPI^^^1255402921|2217 Trancas^Suite 22^Napa^CA^94558^USA^M|^WPN^PH^^1^707^5549876|115 Trancas^Suite 2100^Napa^CA^94558^USA^M

OBR|1|23456^NapaGen_EHR^oid here^ISO|56789PHL222^NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|42803-7^Bacteria identified in Isolate^LN^1234^Enteric Reference Culture^L^2.34^V unknown|||201102061830-0800||||||Abdominal pain, Diarrhea, Nausea and Fever|||1412941681^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^^MD|^WPN^PH^^1^707^2643378|||||20110208132554-0800|||F||||||003.0^Salmonella gastroenteritis^I9CDX^^^^07/09/2008

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

OBX|1|CWE|59846-6^Salmonella sp identified^LN^30097^Salmonella Culture^L^2.34^v unknown|1|398508004^Salmonella enterica subsp. enterica^SCT^12567^Salmonella enterica subsp. enterica^L^07/31/2010^v unknown^Salmonella enterica subsp. enterica||||||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

OBX|2|CWE|20951-0^Salmonella sp serotype [Identifier] in Isolate by Agglutination^LN^30098^Salmonella Serotype^L^2.34^v unknown|1|56077000^Salmonella Newport^SCT^12568^Salmonella Serovar Newport^L^07/31/2010^v unknown^Salmonella formula: 6,8,20:e,h:1,2 Sevovar name: Newport||||||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

NTE|1|L|Comment goes here. It can be a very long comment.|RE^Remark^HL70364^^^^2.5.1

SPM|1|23456&NapaGen_EHR&oid here&ISO^200110206122&NapaCo_PHL_LIMS&2.16.840.1.114222.4.1.10412&ISO||258531008^Wound swab^SCT^WND^Wound^L^1/31/2011^v unknown^Wound||||||||||||201102061830-0800|201102071830-0800

OBX|1|CWE|^^^PLT227^Sample type submitted^PLT^^2011||119303007^Microbial Isolate^SCT^^^^1/31/2011||||||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

OBR|2|23456^NapaGen_EHR^OID here^ISO|56789PHL222^NapaCo_PHL_LIMS^2.16.840.1.114222.4.1.10412^ISO|68991-9^Epidemiologically Important Information for public health reporting^LN^^^^2011|||201102061830-0800||||||Abdominal pain, Diarrhea, Nausea and Fever|||1412941681^Artze^Joanna^C^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI^^^^^^^^MD|^WPN^PH^^1^707^2643378|||||20110208132554-0800|||F||||||003.0^Salmonella gastroenteritis^I9CDX^^^^07/09/2008

NTE|1|L|Order_Observation group for extra common core data elements. this order LOINC is not in the PHINVADS value set and will result in a content error in the MQF content validation tool|RE^Remark^HL70364^^^^2.5.1

OBX|1|SN|21612-7^Reported Patient Age^LN^^^^2.34|1|^46|a^Year[time]^UCUM^^^^1.8.2|||||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

OBX|2|CWE|11449-6^Pregnancy status^LN^^^^2.34|1|7738600^Patient currently pregnant^SCT^^^^01/31/2011||||||F|||201102061830-0800|||||20110208132554-0800||||Napa County Public Health Laboratory^D^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^05D0897628|3434 Industrial Loop^^Richmond^CA^99999^USA^B|1790019875^House^Gregory^F^^DR^^^NPI&2.16.840.1.113883.4.6&ISO^L^^^NPI

NTE|1|L|These Observations' LOINC and SNOMED codes are not part of the PHINVADS value set PHVS_LabTestName_NND, PHVS_LabTestName_CDC so will result in an error in the MQF content validation.|RE^Remark^HL70364^^^^2.5.1

9 Appendix B: CRSWg Recommended Core Data Elements

9.1 Table of Recommended Data Elements

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Report	Report date/time	Date and time the report is being sent to public health			TRUE
Report	Alert creation date/time^		For automated systems, date/time a detection algorithm created the alert relevant to the condition being reported		FALSE
Report	Reporting system^§			The sending application/sending facility is required in ELR IG	FALSE
Reporter	Identifier*	Person or facility sending the report to public health	Identifier typically National Provider Identifier (NPI), may be other	Typically CLIA, may be other, e.g., license number, OID	TRUE
Reporter	Name*	Name of the person or facility sending the report to public health			TRUE
Reporter	Facility name	Name of the facility sending the report to public health	When the reporter is an person		TRUE
Reporter	Address*	Address of the person or facility sending the report to public health			TRUE
Reporter	Phone*	Phone number of the person or facility sending the report to public health			TRUE

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Reporter	Email address%	Email address of the person or facility sending the report to public health		may get only phone	TRUE
Provider [person]	Identifier*	Identifier of the person who provided care for the subject of the report	Typically, the person who identified the reportable condition	Typically, the person who ordered the laboratory test	TRUE
Provider [person]	Name*	Name of the person who provided care for the subject of the report		Typically, the person who ordered the laboratory test	TRUE
Provider [person]	Address*	Address of the person who provided care for the subject of the report		Typically, the person who ordered the laboratory test	TRUE
Provider [person]	Phone*	Phone number of the person who provided care for the subject of the report		Typically, the person who ordered the laboratory test	TRUE
Provider [person]	Email address%	Email address of the person who diagnosed the subject of the report		Typically, the person who ordered the laboratory test. May only get phone	TRUE
Provider [person]	Role	Role played by the person who provided care for the subject of the report	Role played by provider, e.g., attending provider, primary care provider	Typically, ordering provider	FALSE
Ordering facility	Identifier*	Identifier of the facility where care was provided to the subject of the report.	May be facility of provider or facility where subject was diagnosed	Typically, ordering facility	TRUE
Ordering Facility	Name*	Name of the facility where care was provided to the subject of the report.	May be facility of provider or facility where subject was diagnosed	Typically, ordering facility	TRUE
Ordering Facility	Address*	Address of the facility where care was provided to the subject of the report.	May be facility of provider or facility where subject was diagnosed	Typically, ordering facility	TRUE
Ordering Facility	Phone*	Phone number of the facility where care was provided to the subject of the report.	May be facility of provider or facility where subject was diagnosed	Typically, ordering facility	TRUE

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Ordering Facility	Email address%	Email address of the facility where care was provided to the subject of the report.	May be facility of provider or facility where subject was diagnosed	Typically, ordering facility	TRUE
Subject	Identifier*	Identifier of the subject of the report	Typically, the subject of the report is a patient	Typically, the subject of the report is a patient	TRUE
Subject	Name*	Name of the subject of the report		Typically, the subject of the report is a patient	TRUE
Subject	Address*	Address of the subject of the report		Typically, the subject of the report is a patient	TRUE
Subject	Phone*	Phone number of the subject of the report		Typically, the subject of the report is a patient	TRUE
Subject	Email address%	Email address of the subject of the report		Typically, the subject of the report is a patient	TRUE
Subject	Date of birth	Date of birth (DOB) of the subject of the report		Typically, the subject of the report is a patient	TRUE
Subject	Age	Age of the subject of the report at the time of diagnosis	Age at time reportable condition was identified	Age at time of specimen collection, using reported age or DOB	TRUE
Subject	Age units [code]*			UCUM	TRUE
Subject	Gender	Current gender of the subject of the report			TRUE
Subject	Race	Race(s) of the subject of the report			TRUE
Subject	Ethnicity	Ethnicity of the subject of the report			TRUE

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Subject	Translator needed				FALSE
Subject	Language spoken	Subject's primary or spoken language.			FALSE
Employment	Occupation, current [code]*	At the time of the report, the subject's occupation(s)			FALSE
Employment	Occupation, usual [code]*	Report subject's longest held occupation			FALSE
Employment	Industry type, current [code]*	At the time of the report, the industry type(s) of the subject's occupation(s)			FALSE
Employment	Industry type, usual [code]*	Industry type of the report subject's longest held occupation			FALSE
Employment	Employer name	At the time of the report, the name of the subject's current employer(s)			FALSE
Employment	Employer, address*	At the time of the report, the address of the of the subject's current employer(s)			FALSE
Employment	Employer, phone*	At the time of the report, the phone number of the subject's current employer(s)			FALSE
Authorized Contact for Subject	Name*	Name of the authorized contact(s) for the subject of the report	For example, parent(s) or guardian(s)		FALSE
Authorized Contact for Subject	Address*	Address of the authorized contact(s) for the subject of the report			FALSE
Authorized Contact for	Phone*	Phone number of the authorized			FALSE

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Subject		contact(s) for the subject of the report			
Authorized Contact for Subject	Relationship [code]*	Relationship of the authorized contact(s) to the subject of the report			FALSE
Clinical Information	Condition [code]*	Name of the condition diagnosed for the subject of the report	Reportable condition prompting the submission of this report	Laboratories do not diagnose (but how do they decide what constitutes a reportable lab result?), however, relevant information may be available to the lab as the reason for the study. Makes sense to put here instead of as OBX.	FALSE
Clinical Information	Condition, date/time of onset	Date and time the condition began			FALSE
Clinical Information	Condition, date/time of diagnosis	Date and time the condition was diagnosed			FALSE
Test/result	Specimen collection date/time				FALSE
Test/result	Identifier(s)* linking to laboratory report	Unique identifier(s) that provide links to a laboratory report (e.g., accession number, order number, specimen identifier, study identifier)			TRUE
Test/result	Specimen received date/time				TRUE
Test/result	Specimen type [code]*				TRUE

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Test/result	Specimen source site [code]*				TRUE
Test/result	Specimen origin [code]*	Domain from which the specimen comes, e.g., human, animal, environmental			FALSE
Test/result	Test ordered [code]*				TRUE
Test/result	Test performed [code]*				TRUE
Test/result	Test result [code]*		A result may be coded, or it may not be coded. Examples of a non-coded result include: a number, a ratio, a text report from a radiologic study, an image.		TRUE
If coded, the result is structured as a coded complex data element.					FALSE
Test/result	Result date				TRUE
Test/result	Result status				TRUE
Test/result	Reference range				TRUE
Test/result	Units				TRUE
Test/result	Abnormal flag				FALSE
Test/result	Comment				FALSE

Category	Data element	Definition	Case Reporting Notes	Laboratory Result Reporting Notes	Required in LTIAPH_ELR Constrained Profile
Test/result	Performing lab identifier*				TRUE
Test/result	Performing lab name				TRUE
Test/result	Performing person name*				TRUE
Test/result	Specimen sent to PHL	Indicator of whether a specimen relevant to this condition was submitted to a public health laboratory.			FALSE

Notes for the above table:

*: Indicates a complex data element. See example Table 1 on page 185 below regarding Complex Data Elements for Case Reporting and Laboratory Result Reporting.

^: This data element is relevant for electronic Public Health Case Reporting (PHCR) only.

§ : The sending application and sending facility are included in the MSH segment in v2.x messages, and in whatever control wrapper is used to send the document (which could be a v2.x message).

%: Confidential information must not be sent via email unless secure transport has been pre-arranged.

Example Table 1: Complex Data Elements for Case and Laboratory Result Reporting

Complex Data Element Name	Simple Data Elements included:
Identifier	Identifier
	Identifier assigning authority
	Identifier type
Name (Person)	Last name
	First name
	Middle name or initial
	Suffix
Phone[1]	Phone
	Phone type
Address[2]	Street address
	Second address line
	City
	State
	Zip or postal code
	County
	Country
	Address type
XXXXXXX [code]	XXXXXXX, name
	XXXXXXX, code
	XXXXXXX, code system

Note (1): Both phone and e-mail are handled using the XTN data type. Only the first 9 components are supported, of which XTN.2 and XTN.3 are coded elements, these are used to identify the telecommunication use code and equipment type.

Note (2): Address is handled using the XAD data type, which contains 14 components of which 8 are supported.

10 Appendix C: Table of Errata Corrected Through 7/31/2012

10.1 Table of Errata Identified and Corrected in the CalREDIE Companion Guide

Below is a list of all edits or additions made to the January edition of the Constrained Draft Companion to the HL7 2.5.1 ELR2PH Guide. All identified corrections have been incorporated into this July edition of the guide.

Seq #	Erratum #	Page	Line	Position	Changes	Corrected
1	Erratum-1	Cover	Title		Added “Constrained and “2PH” to clarify that this is an ELR2PH –compliant document (there are many different ELR HL7 guides and formats that are distinct from ELR2PH	Yes
2	Erratum-2	2	Table Row 1, Col. 6	eos	Revision History Table: Added a period to the end of the sentence in the description field of the 6-29-2011 Revision table entry. First description field, Revisions field, Page 2.	Yes
3	Erratum-3	2	Table Row 2, Col. 6	eos	Revision History Table; Added a period to the end of the sentence in the description field of the 9-13-2011 Revision table entry. Revisions table, second row, description, end of line, page 2.	Yes
4	Erratum-4	2	Table Row 3, col. 6	eos	Revision History Table; Added a period to the end of the sentence, description field of the 10-17-2011 Revision table entry on page 2.	Yes
5	Erratum-5	3	Table Row 1 Line 4, Col.6	6	Revision History Table; Inserted a period after “RE” in line 4, then inserted the words “Changed the phrase at the beginning of the next sentence in line 4 in the description for the 12-5-2011 revision Table, line 4, Position 6 in the last table comment field.	Yes

6	Erratum-6	3	Table Row 4, Col.6 last Line	eos	Corrected spelling of “ther” to the correct spelling, “there". At the end of the description field for the revision of 1-20-2011.page 3, Table, Last word, last sentence.	Yes
7	Erratum-7	4	Table Row 1	Col 6	Added new Table row. Added notes re 2/21/2012 reformat	Yes
8	Erratum-8	5	line 1		Changed Table of Contents Page 147 Citation & header to read “SNOMED Results Codes used in OBX.5 with System XXX Observation Request Codes cited in OBX.3.”	Yes
9	Erratum-9	pages 6 & 7	lines 1 & 2		Renumbered all Table of Contents page references, added page references for 6.2.1 at line 18, 6.2.1.1 at line 19, 6.2.1.2 at line 20, page 6 and 6.2.1.3 at line 1, 6.3.2.1 at line 1 and 6.3.2.2 at line 2 of page 7 (contents).	Yes
10	Erratum-10	9	4	22	Inserted “the” after “for” in the Glossary term for CLIA at line 4 so that the line reads as follows: “CLIA: An acronym for the Clinical Laboratory Improvement Act.”	Yes
11	Erratum-11	9	5	21	Inserted “the” after "for" in the Glossary (Page 9. line 5) so that the line reads as follows: “CMS: An acronym for the Center for Medicare Services.”	Yes
12	Erratum-12	9	12	20	At end of sentence; Inserted a period at the end of the sentence of the Glossary CSTE description: “CSTE: An acronym for the Council of State and Territorial Epidemiologists.”	Yes
13	Erratum-13	9	13	eos	Insert a period at the end of the sentence of the Glossary EHR description to read: “EHR: An acronym for Electronic Health Record.”	Yes
14	Erratum-14	9	14	eos	End of sentence; Insert a period at the end of the sentence of the Glossary ELR description to read: “ELR: An acronym for Electronic Laboratory Report.”	Yes
15	Erratum-15	9	22	New line	Added definition; LabCOP: An acronym for the Laboratory Community of Practice workgroup.	Yes
16	Erratum-16	10	1	New line	Inserted a definition for LTIAPH to read as follows. “LTIAPH: An acronym for the Laboratory Technical Implementation Assistance for Public Health, an APHL/CDC joint project for ELR2PH.”	Yes

17	Erratum-17	10	4	New line	Added definition; NIST: An acronym for the National Institute of Standards and Technology.	Yes
18	Erratum-18	10	7	1	Added definition; ONC: An acronym for the Office of the National Coordinator, which sets the requirement for “Meaningful Use messaging.	Yes
19	Erratum-19	10	10	9	Added the word "variants" at end of the definition; ORU^RO1.	Yes
20	Erratum-20	10	11	eos	Inserted a period at the end of the sentence of the Glossary PHCR description to read: “PHCR: An acronym for Public Health Case Report(ing).	Yes
21	Erratum-21	10	22	1	Added definition; RCMT: An acronym for the national Reportable Condition Mapping Table work group that defines the set of reportable conditions, test request and results codes, specimen codes, etc. that must be used for ELR2PH reporting.	Yes
22	Erratum-22	11	3	1	Inserted the words “or receive” between “send” and “the HL7” of the Glossary “System/Software OID “description to read: “System/Software OID: An object identifier code intended to identify the data system or software component used to create and send or receive the HL7 message.”	Yes
23	Erratum-23	12	5	eos	Inserted a link to the HL7 store; also modified the remaining sentence to indicate how to reach the CalREDIE website.	Yes
24	Erratum-24	12	7	16	Inserted a link to the CalREDIE ELR site.	Yes
25	Erratum-25	12	14 to 15	98	Inserted the following phrase: "or in some instances using bold “Olive” font on a white background."	Yes
26	Erratum-26	12	18	107	Inserted phrase “unsupported and are also” between “are" and “terminal".	Yes
27	Erratum-27	12	22	99	Deleted the word “versions” after ”Receiver”.	Yes
28	Erratum-28	13	1	23	Replaced “content” with “vocabulary”, added links to the MQF and NIST validators, with explanatory information regarding use.	Yes
29	Erratum-29	13	9	40	Added “2PH to ELR to make ELR2PH for clarity.	Yes
30	Erratum-30	14	3	29	Inserted “sender”.	Yes

31	Erratum-31	14	5	3	Inserted “receiver”.	Yes
32	Erratum-32	14	22	1	Inserted “sender”.	Yes
33	Erratum-33	14	27	phrase change	Changed the descriptive sentence for the PID.31 statement to read: “Identity Unknown Indicator” receiver usage was changed from “C” to “O”. Note: treat as usage “X”.”	Yes
34	Erratum-34	15	5	40	Inserted additional information AS FOLLOWS: .” time and information concerning other animal specimen submissions will not be considered:	Yes
35	Erratum-35	15	12	104	Added “2010” after "the"	Yes
36	Erratum-36	15	14	96	Inserted “the” between “where” and “data".	Yes
37	Erratum-37	15	15	96	Replaced “below” with “on page 27”.	Yes
38	Erratum-38	16	10	9	Replaced “implementations” with “instances”	Yes
39	Erratum-39	16	12	53	Replaced “was” with “is”	Yes
40	Erratum-40	16	12	127	Inserted the phrase “and receiver”	Yes
41	Erratum-41	16	19	35	Changed date tp data.	Yes
42	Erratum-42	20	1	30	Corrected OIDS to OIDs	Yes
43	Erratum-43	20	2	1	Deleted the phrase from the beginning of the sentence so that the sentence now begins with “Based”	Yes
44	Erratum-44	20	2	24	Substituted “participating state laboratories” for “ELC grantees”.	Yes
45	Erratum-45	20	18	21	Changed from ELR to LIMS.	Yes
46	Erratum-46	21	10	1	Added this paragraph to stress that MSH.4 is an exception to the OIDs rule. Where the CLIA number is to be used instead	Yes

47	Erratum 47	22	Table Row 7	Col 1	Inserted the NK1 segment information which was inadvertently left out.	Yes
48	Erratum 48	24	Line 3	EOS	Added new sentence: Please note that examples are provided on pages 70 and 71 in the HL7 2.5.1 ORU_0R1 February 2010 guide on pages 70-71 that have no OID values associated; there are example messages on pages 191-194 of the above document that contain invalid “placeholder” OID values that should not be used. The correct OID values are shown in the table below.	Yes
49	Erratum-49	25	1	32 and 40	Added commas after “Segments” and “Fields”.	Yes
50	Erratum-50	25	2	13	Added a comma.	Yes
51	Erratum-51	25	8	114	Replaced the word “below” with “(see the constrained segment tables section beginning on page 29); A note follows each segment table to indicate which elements were omitted, if any)”.	Yes
52	Erratum-52	25	12	82	Replaced “V2.7.1” with “v2.7”	Yes
53	Erratum-53	26	23	1	Replaced the original sentence for clarity re meaning of the heading “DT” as follows: "Refers to data types used for HL7 elements, components and sub-components."	Yes
54	Erratum-54	bottom of 26 to top of 27	27	14	Replaced the original narrative with narrative to clarify that “” may only be used during NIST testing and then only when a defined escape sequence is not available for the R element.	Yes
55	Erratum-55	27	31	94	Replaced “values” with “requirements”.	Yes
56	Erratum-56	27	32	22	Added an “s” to Description to make it Descriptions,	Yes
57	Erratum-57	28	1	1	Reviewed the Value Set, and Example data columns to identify the proper HL7 or PHVS code sets required as sources for all coded data; made some changes to identify specific PHVS tables. For complex data requiring a code system name, inserted the required code system name for each table used, and where a Table 396 name was required provided the proper code. Where HL7 or CDC code tables were not available (i.e., Zip codes, international telephone dialing codes, etc., provide an internet site reference where the information could be found. Used Bold font for all table citations, and where none were cited, indicate a “None Cited” referent in the value set column.	Yes

58	Erratum-58	28	2	1	Changed this sentence to read as “Below are the constrained table values and message structure for an HL7 Version 2.5.1 ORU^R01 ELR2PH harmonized laboratory sender/receiver message”.	Yes
59	Erratum-59	28	Table Row 1	Col. 12	Changed “four” to “five”, since there are five delimiter types including the “#” field length designator. However, the # character is not included, since it causes the MSH.2 element to not validate using the MQF validator.	Yes
60	Erratum-60	30	Table Seq. 7	Col.4	Replaced TS data type with the DTM data type	Yes
61	Eerratum-61	30	Table Seq. 7	Col. 12	Added clarification re DTM field length (4..24)	Yes
62	Erratum-62	30	table Seq. 10	Col. 12	Added a citation to GUID option.	Yes
63	Erratum-63	35	Table Seq.6	Col. 4	Replaced TS data type with the DTM data type	Yes
64	Erratum-64	37	Table seq. 5	Col. 3	Corrected cardinality to [1..*].	Yes
65	Erratum-65	40	Table Seq. 7	Col. 4	Replaced TS Data Type with DTM Data Type.	Yes
66	Erratum-66	41	Table Seq.10	Col. 3	Corrected cardinality to [0..*]	Yes
67	Erratum-67	50	Table Seq.29	Col. 4	Replaced TS data type with the DTM data type	Yes
68	Erratum-68	50	Table Seq. 33	Col. 4	Replaced TS data type with the DTM data type	Yes
69	Erratum-69	51	Table Seq. 35.8	Col. 2	Corrected component length to 1..20=	Yes
70	Erratum-70	53	Table Seq. 4.8	Col. 2	Corrected component length to 1..20=	Yes
71	Erratum-71	56	Table Seq. 3.8	Col. 2	Corrected component length to 1..20=	Yes

72	Erratum-72	62	Table seq. 20.8	Col. 2	Corrected component length to 1..20=	Yes
73	Erratum-73	66	Table Seq. 31.5	Col. 11	Inserted “Generally will be “1” for USA”	Yes
74	Erratum-74	67	Line 3 below the table	133	Inserted ”or other”	Yes
75	Erratum-75	68	1	1	Added the 4.6 Header for the PV1 segment on Page 70.	Yes
76	Erratum-76	69	Table seq. 3.6.8	Col. 2	Corrected sub-component length to 1..20=	Yes
77	Erratum-77	73	Table Seq. 44	Col. 4	Replaced TS data type with the DTM data type	Yes
78	Erratum-78	73	Table Seq. 45	Col. 4	Replaced TS data type with the DTM data type	Yes
79	Erratum-79	75	Table Seq. 5	Col. 11	Replaced the incorrect value "RE" in the example data field with "CM", which is one of the choices from HL7 Table 0038.	Yes
80	erratum-80	79	Table seq. 14	Col. 3	Corrected cardinality to [0..2]	Yes
81	Erratum-81	82	Table Seq. 21.6.1	Col. 11	Changed the Assigning authority from “NPI” to “Napa General Hospital”	Yes
82	Erratum-82	82	Table Seq. 21.7	Col. 11	Changed the code from ”NPI” to ”XX” which is more appropriate, since a health care provider usually does not assign the order numbers, the facility or it’s Information system will usually do that.	Yes
83	Erratum-83	89	Table Seq. 4.8	Col. 2	Corrected component length to 1..20=	Yes

84	Erratum-84	90	Table Seq. 7	Col. 2	Corrected field length to 4..24	Yes
85	Erratum-85	90	Table Seq. 7	Col. 4	Replaced TS data type with the DTM data type	Yes
86	Erratum-86	90	Table Seq. 8.8	Col. 4	Replaced TS data type with the DTM data type	Yes
87	Erratum-87	92	Table Seq. 16.9.1	Col. 12	Added a link to the National Provider Identifier Website for individual providers or organizational providers.	Yes
88	Erratum-88	95	Table Seq. 22.8	Col. 4	REPLACED INCORRECT ST DATA TYPE WITH DTM DATA TYPE.	Yes
89	Erratum-89	97	Table Seq. 26.1.8	Col. 2	Corrected sub-component length to 1..20=	Yes
90	Erratum-90	98	Table Seq. 26.2	Col. 12	Added referral to the ELR2PH guide for this component.	Yes
91	Erratum-91	98	Table Seq. 26.3	Col. 12	Added referral to the ELR2PH guide for this component.	Yes

92	Erratum-92	101	Table Seq. 29.1.1	Col. 3	Corrected cardinality to [1..1]	Yes
93	Erratum-93	105	Table Seq. 3.8	Col. 2	Corrected component length to 1..20=	Yes
94	Erratum-94	107	Table Seq. 6.8	Col. 2	Corrected component length to 1..20=	Yes
95	Erratum-95	109	Table Seq. 8.8	Col. 2	Corrected component length to 1..20=	Yes
96	Erratum-96	110	Table Seq. 14	Col. 4	REPLACED INCORRECT ST DATA TYPE WITH CORRECT DTM DATA TYPE.	Yes
97	Erratum-97	111	Table Seq. 17.8	Col. 2	Corrected component length to 1..20=	Yes
98	Erratum-98	112	Table Seq. 19	Col. 4	Replaced TS data type with the DTM data type	Yes
99	Erratum-99	114	Table Seq. 23.6.2	Col.3	Corrected cardinality to [1..1]	Yes

100	Erratum-100	114	Table Seq. 23.6.3	Col.3	Corrected cardinality to [1..1]	Yes
101	Erratum-101	118	row 1 below the table	Position 1	Added the end-of-segment sentence to indicate that no terminal elements were omitted from the OBX segment table.	Yes
102	Erratum-102	121	Table Seq. 4.8	Col. 2	Corrected component length to 1..20=	Yes
103	Erratum-103	122	Table Seq. 5.8	Col. 2	Corrected component length to 1..20=	Yes
104	Erratum-104	123	Table Seq. 6.8	Col. 2	Corrected component length to 1..20=	Yes
105	Erratum-105	124	Table Seq. 7.8	Col. 2	Corrected component length to 1..20=	Yes
106	Erratum-106	126	Table Seq. 8.8	Col. 2	Corrected component length to 1..20=	Yes
107	Erratum-107	127	Table Seq. 9.8	Col. 2	Corrected component length to 1..20=	Yes

108	Erratum-108	128	Table Seq. 11.8	Col. 2	Corrected component length to 1..20=	Yes
109	Erratum-109	129	Table Seq. 12.2.8	Col. 2	Corrected component length to 1..20=	Yes
110	Erratum-110	130	Table Seq. 17.1	Col. 2	Replaced TS data type with the DTM data type.	Yes
111	Erratum-111	131	Table Seq. 17.2	Col. 4	Replaced TS data type with the DTM data type.	Yes
112	Erratum-112	131	Table Seq. 18	Col. 4	Replaced TS data type with the DTM data type.	Yes
113	Erratum-113	132	Table Seq.21.8	Col. 4	Corrected component length to 1..20=	Yes
114	Erratum-114	133	Table Seq. 22.8	Col. 2	Corrected component length to 1..20=	Yes
115	Erratum-115	134	Table Seq. 24.8	Col. 2	Corrected component length to 1..20=	Yes

116	Erratum-116	135	1st line below the table	1	Added: “Note: Unsupported “X” terminal SPM Fields 25 through 29 are not included in this implementation. Unsupported “X” intervening fields and unsupported intervening components of supported fields are present.”	Yes
117	Erratum-117	136	9	6	Changed "2" to "two".	Yes
118	Erratum-118	136-137	Table Seq. 5.1 through 5.4	Col. 3	Added cardinalities to OBX.5.1 thru OBX.5.4	Yes
119	Erratum-105	137	line 5 below the table	48	Changed 2 to "two".	Yes
120	Erratum-120	138	Table Seq. OBX.5	Col. 3	Added cardinality of [1..1].	Yes
121	Erratum-121	139	2	1	Underlined the first sentence in first narrative line, Page 139.	Yes
122	Erratum-122	139-141	Table Seq. 5.2 through 5.14	Col. 3	Added Cardinalities to all OBX.5 CWE primitives.	Yes
123	Erratum-123	140	Comment lines 3 & 4	Col. 12	Replaced OBX.1 with OBX.5.1, corrected both instances of Snomed to SNOMED.	Yes
124	Erratum-124	140	Table Seq. 5.8	Col. 2	Corrected component length to 1..20=	Yes
125	Erratum-125	142	Table Header	Col. 3	Added cardinalities to all OBX.5 CX primitives.	Yes

126	Erratum-126	142	Table Seq. 5.2	Cols. 1-12	added unsupported OBX.5 CX component 5.2 as required place-holder	Yes
127	Erratum-127	142	Table Seq. 5.3	Cols. 10-12	added unsupported OBX.5 CX component 5.3 as required place-holder	Yes
128	Erratum-128	145	4	3	Inserted “vocabulary”	Yes
129	Erratum-129	145	13	82	Inserted “However” at the beginning of this sentence, changed Developing to developing	Yes
130	Erratum-130	145	15	29	Inserted “(i.e., test request) between “identifier” and “codes”.	Yes
131	Erratum-131	145	17	109	Added sentence: "New Codes are being added continuously."	Yes
132	Erratum-132	147	12	26	Replaced “and” with “These codes" before “are”	Yes
133	Erratum-133	147	20	26	Modified sentence by inserting “this usage” after “but”, and changed “require “to “requires.”	Yes
134	Erratum-134	148	2	38	Corrected OBX.4 to OBX.5	Yes
135	Erratum-135	148	17	39	Inserted “available codes” between “and” and “can”.	Yes
136	Erratum-136	148	3	19	Inserted “, if no standard code is available,”	Yes
137	Erratum-137	148	6	103	Inserted “completed" between “the” and “PHLIP”	Yes
138	Erratum-138	148	8	26	Inserted “ and source” between “specimen” and “codes”.	Yes
139	Erratum-139	148	11	16	Inserted “the’ between “to” and “SNOMED”	Yes
140	Erratum-140	148	17	57	Replaced “re” with the phrase “with respect to”.	Yes
141	Erratum-141	149	16	12	Rearranged the sentence.tp read as follows:” is strongly desired for public health purposes”	Yes

142	Erratum-142	149	18	12	Inserted the repeat character (~) after “Repeat”	Yes
143	Erratum-143	150	10	23	Changed “Describes” to “Describe”	Yes
144	Erratum-144	150	Table Row 2	Col. 11	Added "OBX" at the end of the second sentence.	Yes
145	Erratum-145	151	Table Row 2	Col.7, row 2	Changed the OBX-2 Data Type from CWE to DTM' OBX-5 will also have to be of Data Type DTM to support the illness or injury onset date & time data component. This change is used only when reporting the date and time of onset for epidemiologically important information.	Yes
146	Erratum-146	153	line 1 below the table	63	Replaced “box” with “column”	Yes
147	Erratum-147	154	4	108	Inserted “the” between “following” and “SPM” at position, changed page reference to 154	Yes
148	Erratum-148	154	3	82	Replaced the entire sentence beginning on page 154 line 8 at position 82 with the following sentence: "In order to provide both concepts, the LTIAPH convention is to use the SPM.4 “Specimen Type” field for the clinical specimen, and the associated OBX segment following the SPM segment to describe the concept that the specimen is an isolate (please refer to the table on page 153 above for examples)."	Yes
149	Erratum-149	155	27	82	Substituted “”chapter 2, page 18, Table 2.3.4 in the HL7 ELR2PH guide” in place of page 141.	Yes
150	Erratum-150	155	7	124	Corrected the page reference to 135.	Yes
151	Erratum-151	155	11	14	Replaced the original text with “the special vocabulary, section 6.4 on page 150) or in an OBX following the SPM segment for specimen-related data. Also please see the examples at the bottom of page 153 and top of page 154."	Yes
152	Erratum-152	155	11	91	Corrected page numbers to 151 and 152. See comment 97 above-the page numbers cited in 98 are not correct.	Yes
153	Erratum-153	155	14	75	Corrected the page reference to "3, on page 23 above"	Yes

154	Erratum-154	155	14	98	Added a note sentence following the original sentence for clarification beginning at position 97	Yes
155	Erratum-155	156	16	70	Inserted phrase “stipulated in to replace “dictated by”.	Yes
156	Erratum-156	156	22	44	Made this change to clarify the meaning of “CT”	Yes
157	Erratum-157	157	1	108	Inserted” components”	Yes
158	Erratum-158	157	4	93	Inserted “components”	Yes
159	Erratum-159	157	15	1	Added CODE for clarity	Yes
160	Erratum-160	157	21-22	25	The original phrase doesn’t quite provide the guidance needed, which is to use a SNOMED in SPM4 when the LOINC doesn’t provide sufficient precision for the specimen type.. Rephrased as follows: “SPM.4 versus a LOINC code with a specimen component description, use the SNOMED code rather than the LOINC code in SPM.4 as the specimen source code and descriptor”.	Yes
161	Erratum-161	157	26	57	Deleted “either” between with & Ser; replaced eos “required” with “Appropriate:".	Yes
162	Erratum-162	158	18 continuing to 19	139	Inserted “fungus or parasite”	Yes
163	Erratum-163	159	9 continuing to 10	97	Underlined the following sentence for emphasis: "More importantly for ELR2PH, these LOINC request codes can be linked to a reportable condition via the RCMT tables, but the result cannot be so linked."	Yes
164	Erratum-164	159	11 continuing to 13	9	Revised the sentence beginning at line21 position 8 to correct a misperception as follows: "Organism-specific cultures are “Ordinal”; i.e. used to report the presence or absence of the specific individual organism named in the request (positive/negative/indeterminate); the report in OBX.5 may not contain the name of the organism found (e.g. Shigella dysenteriae or Shigella sonnei)."	Yes
165	Erratum-165	159	25	10	Corrected the result, which should be detected rather than naming the genus and species, which are already provided in the test request.	Yes

166	Erratum-166	160	6 continuing to 7	55	Added underlining to the sentence for emphasis.	Yes
167	Erratum-168	160	9	1	Added “test request” between “LOINC” and “Code” for emphasis.	Yes
168	Erratum-168	160	22	31	Inserted “using” between “without” and “specific”.	Yes
169	Erratum-169	161	9	12	Added underline to “except” for emphasis; also inserted ” a request to the appropriate” between "submit" and "SDO"	Yes
170	Erratum-170	161	15	1	Inserted “When” as first word	Yes
171	Erratum-171	161	15	37	Added underline and “non-OBX.5” for emphasis.	Yes
172	Erratum-172	161	15	60	Inserted a “,” chr after Type.	Yes
173	Erratum-173	162	20	50	Added a clarification and underlining after “OBX.5”;” when neither standard codes nor local codes are available”	Yes
174	Erratum-174	164	13	24	Removed "LocallY"	Yes
175	Erratum-175	164	14	24	Removed "LocallY"	Yes
176	Erratum-176	164	18	74	Inserted “can be” after "results"	Yes
177	Erratum-177	170	Line 1	19	Moved the 8.1 header Title to header 8 to read “Appendix A Sample Messages with Storyboards.”, Moved the 8.1.1 header title to header 8.1 to read “Chlamydia/gonorrhea PCR: Reporting a Panel Result, then deleted header 8.1.1 as un-needed.	Yes
178	Erratum-178	175	Line 1	1	Revised the original Heading 9.1 title and moved it to Heading 9 to read as follows: “Appendix B CRSWg Recommended Core Data Elements”. Revised and moved the 9.1.1 header title to header 9.1 to read as follows: Table of Recommended Data Elements.”	Yes

179	Erratum-179	179	Table Row 3	Col. 1	Added superscript "1" after "Phone" for Note (1) below the table.	Yes
180	Erratum-180	179	Table Row 4	Col. 1	Inserted after “Address": a superscript “2” for Note (2) below the table.	Yes
181	Erratum-181	179	Lines 1 & 2 below the table.	insert note (1)	Added the following note for telephone/e-mail “Note (1): Both phone and e-mail are handled using the XTN data type, Only the first 9 components are supported, of which XTN.2 and XTN.3 are coded elements), these are used to identify the telecommunication use code and equipment type. ’elements) none of which are identified as phone or phone type.”	Yes
182	Erratum-182	179	Line 3 below the table	insert note (2)	Inserted “Note (2): Address is handled using the XAD data type, which contains 14 components of which 8 are supported.”	Yes
183	Erratum-183	183	Line 1	1	Added Header 10 “Appendix C: Table of Errata Corrected Through 6/8/2012”	Yes