

**Virginia Department of Health
Electronic Lab Report Implementation Guide,
HL7 Version 2.5.1**

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At the time of the publishing of this guide, VDH is aware of the change of Meaningful Use to Promoting Interoperability. VDH is actively working to update its websites and other resources to reflect this update in terminology. VDH will use the term Promoting Interoperability (PI) throughout the guide.

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Introduction

This document presents Virginia Department of Health (VDH)-specific amplifications and constraints to the *HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm)*. It is intended to assist submitters in successfully preparing messages to transmit reportable laboratory findings to VDH and demonstrating Promoting Interoperability (PI) requirements that promote the exchange of electronic health records.

Onboarding Process for Electronic Lab Reporting (ELR) in Virginia

The following are steps for ELR reporting to VDH:

Step 1. Registration: Register intent to submit ELR data for Promoting Interoperability (PI), formerly known as Meaningful Use (MU). For PI, providers must complete all steps. PI registration is NOT required for reporting entities onboarding for ELR if they are not participating in this measure.

- Register using the [VDH Meaningful Use Registration System](#).
- VDH will provide an acknowledgement of successful registration.
- Your PI status will be “Registered”.
- You are strongly encouraged to schedule a planning call with VDH. Email DIISMessaging@vdh.virginia.gov.
- Please use the [VDH ELR Submission Checklist](#) to track your progress.

Step 2. Message Structure Validation: Generate ELR messages with test data for structural validation by VDH.

- VDH will provide an invitation indicating you should begin the onboarding process. If participating in PI, your status will be “Invited to Onboard” and once you begin to submit messages it will change to “Testing and Validation”.
- Please code tests, findings, and other relevant information using LOINC and SNOMED CT. **Map or build out ALL reportable findings that your facility generates.**
- Provide VDH with a list of all unique LOINC and SNOMED CT combinations for reportable findings from your laboratory.
- Prepare message content and structure according to the [HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 \(US Realm\)](#) and the [Virginia Department of Health Electronic Lab Report Implementation Guide, HL7 Version 2.5.1](#).
- Before submitting your messages to VDH, submit sample messages through the [National Institutes of Standards and Technology’s \(NIST\) ELR validation tool](#) and use the NIST feedback to refine messages. Please be aware that the NIST validator does not assure that all message requirements will be met.
- Submit sample messages to VDH by e-mail at DIISMessaging@vdh.virginia.gov for structural validation. Email sample messages as .txt attachments.
- These messages may use data from a test environment. If production data are used, please send securely (encrypted).
- Use VDH feedback to refine the message structure to meet PI and VDH message requirements.

Step 3. Connectivity: Set up transport option with Virginia Health Information/CRISP Shared Services.

- Select a transport method.
- Work with [PHR Support](#) to establish and test transport.

Step 4. Message Content Validation: Submit ELR messages to VDH for content validation using selected transport method.

- Submit messages for content validation through the selected transport method.
- Messages for content validation must use data from the production environment.
- Provide copies of lab reports submitted to the local health department upon request by DIIS Messaging. Requested legacy lab reports should be faxed to 804-416-2427. This is a virtual fax to a secure file folder available only to the ELR team.
- Refine ELR messages per feedback to meet HL7 standards and VDH requirements and obtain approval.

Step 5. Production: Initiate ongoing submission of ELR data and participate in periodic quality assurance activities.

- Initiate regular production transmission of ELR messages to VDH.
- If participating in PI, your status will be updated from *“Testing and Validation”* to *“In Production”*.
- Use VDH feedback as necessary to ensure quality of data.
- VDH will provide you with acknowledgement of ongoing data transmission for your attestation period at the completion of this step.
- Continue with current paper-based reporting to the local health department in parallel with ELR submission until notified that submission of paper reports to the local health department can be stopped.

Step 6: Post-Production

- Notify VDH of new tests that are added with LOINC and SNOMED and send test messages to VDH’s test environment via PHR support (reminder- use the Test URL) for message validation before production rollout.
- Respond to quality assurance checks (Report Cards) and include a plan of action on improving data completeness, when requested.
- Check to make sure that Production messages are being sent correctly (check acknowledgements routinely).
- Facilities must provide VDH (DIISmessaging@vdh.virginia.gov) updated points of contact information when relevant personnel changes occur.

Facilities are expected to maintain ELR transmissions to comply with [state reporting regulations](#), system requirements and to meet PI measures, if participating. More information on these steps is available on the VDH Meaningful Use website at <http://www.vdh.virginia.gov/meaningfuluse/>.

General VDH Submission Requirements

Frequency:

- Laboratories should submit a report when a reportable finding has been identified and not wait until testing on the specimen is complete, i.e., please send preliminary findings.
- Real time or daily batched submission of ELR messages is expected.
- Batched messages should be sent as early as possible after compilation and contain all findings from the preceding interval.

Types of submissions

- Facilities are responsible for filtering out non-reportable findings.
- For any reportable hepatitis finding, all available results from the hepatitis panel should be submitted.
- Microbial sensitivity findings should be submitted for the following organisms, when available:
 - **Carbapenem-Resistant Enterobacteriaceae (CRE)**
 - **Carbapenem-resistant *Pseudomonas aeruginosa***
 - **Carbapenemase-producing *Enterobacteriaceae* or Carbapenemase-producing *Pseudomonas aeruginosa***
 - ***Candida auris***
 - ***Mycobacterium tuberculosis* complex**
 - ***Neisseria gonorrhoea***
 - ***Staphylococcus aureus* with resistance to vancomycin (VRSA), or intermediate resistance to vancomycin (VISA).**

Directors of Laboratories Demographic Variables

The [Code of Virginia 12VAC5-90-90](#). Those required to report, Section B, requires directors of laboratories to include "...address, date of birth, race, sex, and pregnancy status for females (if known) of the person from whom the specimen was obtained...". We strongly encourage laboratories to work with Ordering Facilities and Providers to obtain the following information for each patient order.

SARS-CoV-2 (COVID-19) Requirements

The [Code of Virginia 12VAC5-90-80](#). List of diseases that shall be reported, Section J requires Directors of Laboratories to include with positive SARS-CoV-2 test results...." source of specimen, test method & result, patient name, phone number, email address, address, age, date of birth, race, ethnicity, sex and pregnancy status if known..." We strongly encourage laboratories to work with Ordering Facilities and Providers to obtain the information required.

- **Race**
 - Patient Race should be provided. This is an extensible field; therefore, multiple values can be accommodated. See PID Segment, Field 10 (page 20) for guidance.

- **Ethnicity**
 - Patient Ethnicity should be provided. See PID Segment, Field 22 (page 25) for guidance
- **Sex**
 - Patient Sex should be provided. See PID Segment, Field 8 (page 20) for guidance
- **Pregnancy Status**
 - **If known**, pregnancy status should be included in a complete separate OBX segment using the following Test (LOINC) and Result (SNOMED-CT) codes:
 - LOINC 82810-3 Pregnancy Status (OBX-3)
 - SNOMED-CT 60001007 Not pregnant (OBX-5)
 - SNOMED-CT 77386006 Patient currently pregnant (OBX-5)
 - SNOMED-CT 255410009 Postpartum (OBX-5)

Identifiers

- VDH requires the use of identifiers where appropriate. Examples of expected identifiers include:
 - Medical Record Number
 - Specimen Accession Number
 - International Standards Organization Object Identifier (OID)
 - Clinical Laboratory Improvement Amendments (CLIA) number
 - National Provider Identifier (NPI)

Identifiers are used in HL7 messages to uniquely identify facilities, organizations, software systems and applications, providers, patients, coded elements, and specimens. Along with the identifier, information should also be provided on the “assigning authority” to indicate what organization, software system, or application assigned the identifier. This information is particularly important in indicating the facility associated with a patient medical record number or a specimen accession number.

OIDs, CLIA numbers, or NPIs are expected for the Universal Identifier, Assigning Authority ID, Assigning Facility ID, and Organization Identifier fields. For more information on OIDs and obtaining one, please visit <https://www.hl7.org/oid/index.cfm>

Vocabulary

VDH requires the use of standard vocabulary where appropriate. Examples of expected standard vocabulary include:

- Logical Observation Identifiers Names and Codes (LOINC)
- Systemized Nomenclature of Medicine Clinical Terms (SNOMED CT)
- Unified Code for Units of Measure (UCUM)
- International Classification of Diseases, 10th Revision (ICD-10)

Because the reporting facility is the subject matter expert regarding its test samples and results, it is responsible for performing the mapping to these vocabularies.

The use of LOINC is required in OBX-3 (Observation Identifier) and recommended in OBR-4 (Universal Service ID). The use of SNOMED CT is required in OBX-5 (Observation Value) for coded lab results (CWE data types) and recommended in SPM-4 (Specimen Type). Local codes may be included in addition to standardized codes. If sending local codes, they are expected in the second triplet of the field.

Data Types for Observations

Findings transmitted in OBX-5 should be sent in CWE or SN format (see page 50 details).

Contact Information

If you have questions or need more information about ELR message submission to VDH, please contact us at DIISMessaging@vdh.virginia.gov.

Useful Resources

HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm) – This guide provides HL7 specifications for the ELR message.

http://www.hl7.org/implement/standards/product_brief.cfm?product_id=98

Conditions Reportable by Directors of Laboratories in Virginia – Use this document for information on the findings that are required to be reported to VDH by laboratories.

<https://www.vdh.virginia.gov/content/uploads/sites/134/2023/03/Conditions-Reportable-by-Directors-of-Laboratories.pdf>

Virginia Department of Health Meaningful Use website – This website provides helpful information about the onboarding process and includes a link to the VDH Meaningful Use Registration System.

<http://www.vdh.virginia.gov/meaningfuluse/>

LOINC Lookup and Verification Lookup Service- This website provides a database to lookup valid LOINC codes to be used in reporting ELRs.

http://www.hipaaspace.com/medical_billing/coding/logical_observation_identifiers_names_codes/loinc_codes_lookup.aspx

SNOMED CT Browser- This website provides a database to lookup valid SNOMED codes to be used in reporting ELRs.

<https://browser.ihtsdotools.org/?>

Confluence COVID-19 HHS ELR Submission Guidance – This website provides guidance for ELR reporting of COVID-19 HL7 messages.

<https://confluence.hl7.org/display/OO/Proposed+HHS+ELR+Submission+Guidance+using+HL7+v2+Messages>

LOINC In Vitro Diagnostic (LIVD) Test Code Mapping – This website provides appropriate LOINC and SNOMED mappings for certain diagnostic tests. https://www.cdc.gov/csels/dls/livd-codes.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcsels%2Fdls%2Fsars-cov-2-livd-codes.html

International Classification of Diseases, 10th Revision (ICD-10) - This website provides a web-based query application that allows users to search for ICD-10 codes and provides instructional information to understand the usage of ICD-10 codes.

https://www.cdc.gov/nchs/icd/icd10cm_browsertool.htm

Message Segments, Structure, and Formatting

The section below is meant to aid in the construction of an ELR message. The table lists the expected segments of an HL7 ELR message submitted to VDH and indicates whether they are required (R) or optional (O).

HL7 ELR Message Segments		
Segment	Use	Description
Message Header (MSH)	R	The message header (MSH) segment contains information describing how to parse and process the message. It includes identification of message delimiters, sender, receiver, message type and a timestamp.
Software Segment (SFT)	R	Each application that touches the message on the way to the destination application must add a SFT segment for its application. The first repeat (i.e., the Laboratory Result Sender actor) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.
Patient Identification (PID)	R	The patient identification (PID) segment provides important identification information about the patient and is used as the primary means of communicating the identifying and demographic information about a patient.
Patient Notes and Comments (NTE)	O	This NTE segment may be used for notes or comments pertaining to the patient identified in the PID segment. It should not contain order or result related comments.
Next of Kin (NK1)	O	Please use the next of kin (NK1) segment for parent/guardian information, if it is available, when reporting testing results for children.
Patient Visit Information (PV1)	O	The patient visit information (PV1) segment contains basic inpatient or outpatient information.
Common Order (ORC)	R	The common order (ORC) segment contains basic information about the order for testing of the specimen. This segment includes identifiers for the order, who placed the order, when it was placed and what action to take regarding the order.
Observation Request (OBR)	R	The observation request (OBR) segment is used to capture information about a test ordered on the specimen. Most importantly, the OBR identifies the type of test ordered on the specimen and relates that information to the order for the testing.

HL7 ELR Message Segments		
Observation Request Notes and Comments (NTE)	O	The OBR NTE segment is generally not expected in ELR submissions to VDH.
Observation/Result (OBX)	R	For laboratory testing, the observation/result (OBX) segment normally reports the results of a test performed on a specimen. Each OBX segment contains information regarding a single observation result including the test type, result, and time.
Observation/Result Notes and Comments (NTE)	O	This NTE segment may be used for notes or comments pertaining to the result being reported in the OBX segment.
Specimen (SPM)	R	The Specimen (SPM) segment contains information regarding the type of specimen, where and how it was collected, who collected it, and some basic characteristics of the specimen.

Usage (Use) codes for the HL7 ELR message segments tables:	
C	Conditional
CE	Conditional, but may be empty
O	Optional
R	Required to be sent
RE	Required to be sent but can be empty if information is not available

The Length Column is used to specify the character limit for the segment. If no length is specified, the limit is undefined. VDH reserves the right to specify limits for these fields according to our surveillance system limitations.

The table below lists the data types included in the VDH ELR specifications.

Data Type (DT) Codes Used for Data Elements in Message Segment Tables	
Code	Text Description
CE	Coded Element
CQ	Composite Quantity with Units
CWE	Coded with Exceptions
CX	Extended Composite ID with Check Digit
DR	Date/Time Range
DTM	Date/Time
EI	Entity Identifier
EIP	Entity Identifier Pair
FN	Family Name
FT	Formatted Text Data
HD	Hierarchic Designator
ID	Coded Values for HL7 Tables
IS	Coded Values for User-Defined Tables
SN	Structured Numeric
MSG	Message Type
NM	Numeric
PL	Person Location
PRL	Parent Result Link
PT	Processing Time
SAD	Street Address
SI	Sequence ID
ST	String
TS	Time Stamp
TX	Text Data
VID	Version Identifier
XAD	Extended Address
XCN	Extended Composite ID Number and Name
XON	Extended Composite Name and ID Number for Organizations
XPN	Extended Person Name
XTN	Extended Telecommunications Number

Data Element Specifications

The tables below outline the data elements, by message segment, requested for ELR submission.

MESSAGE HEADER SEGMENT (MSH)					
The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, and timestamp.					
Field Name	Seq	DT	Length	Use	Notes/Value Set
Field Separator	MSH-1	ST	1	R	Literal value " ".
Encoding Characters	MSH-2	ST	5	R	Literal values "^~\&#" OR "^~\&".
Sending Application	MSH-3	HD	227	RE	Used to identify the sending application.
Namespace ID	MSH-3.1	IS	20	RE	Name of the sending application. Please discuss format of name and any abbreviations with VDH.
Universal ID	MSH-3.2	ST	199	RE	An OID for the sending application is expected. If the sending application does not have a standards-based ID, please discuss the use of an alternate ID with VDH.
Universal ID Type	MSH-3.3	ID	6	RE	Expecting "ISO" if an OID was used in MSH-3.2 or "ID" if an alternate identifier was used.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Sending Facility	MSH-4	HD	27	R	Used to identify the sending facility.
Namespace ID	MSH-4.1	IS	20	R	Name of the sending facility. Please discuss format of name and any abbreviations with VDH.
Universal ID	MSH-4.2	ST	199	R	The sending facility's CLIA number is required by VDH.
Universal ID Type	MSH-4.3	ID	6	R	Literal value: "CLIA". This indicates the ID type used in MSH-4.2.
Receiving Application	MSH-5	HD	227	RE	Used to identify the receiving application.
Namespace ID	MSH-5.1	IS	20	R	Literal value: "VDHELRL".
Universal ID	MSH-5.2	ST	199	R	Literal value: "2.16.840.1.113883.3.3556.6.1".
Universal ID Type	MSH-5.3	ID	6	R	Literal value: "ISO".
Receiving Facility	MSH-6	HD	227	R	Used to identify the receiving facility.
Namespace ID	MSH-6.1	IS	20	R	Literal value: "VDH".
Universal ID	MSH-6.2	ST	199	R	Literal value: "2.16.840.1.113883.3.3556".
Universal ID Type	MSH-6.3	ID	6	R	Literal value: "ISO".

Field Name	Seq	DT	Length	Use	Notes/Value Set
Date/Time of Message	MSH-7	TS	26	R	Date/Time the sending system created the message. Format: YYYYMMDD[HHMM[SS]]
Message Type	MSH-9	MSG	15	R	Defines the type of HL7 message being sent.
Message Code	MSH-9.1	ID	3	R	Literal value: "ORU".
Trigger Event	MSH-9.2	ID	3	R	Literal value: "R01".
Message Structure	MSH-9.3	ID	7	R	Literal value: "ORU_R01".
Message Control ID	MSH-10	ST	199	R	A number or other identifier that uniquely identifies the message. The recommended format for this field is a timestamp and a sequence number.
Processing ID	MSH-11	PT	3	R	Indicates the intent for processing the message. Literal values: "D" for Debugging or "P" for Production.
Version ID	MSH-12	VID	5	R	Literal value: "2.5.1" (Note that Meaningful Use requires use of an HL7 v 2.5.1 message).
Accept Acknowledgement Type	MSH-15	ID	2	RE	Indicates if/when sender wants to receive an acknowledgement that the message was received by VDH. VDH will send an acknowledgement. Expecting "AL" (Always), but VDH will accept "NE" (Never) if the sender prefers not to receive an acknowledgement. Using "AL" will assure the sender receives an acknowledgement that the message was received by VDH. This is important in assuring that the ELR message(s) was successful. Other valid values are Table HL70155 – Acknowledgement Type .

Field Name	Seq	DT	Length	Use	Notes/Value Set
Message Profile Identifier	MSH-21	EI	427	R	Indicates adherence to a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.
Entity Identifier	MSH-21.1	ST	199	R	Expecting "PHLabReport-Ack" if MSH-15 = "AL" or "PHLabReport-NoAck" if MSH-15 = "NE".
Namespace ID	MSH-21.2	IS	20	RE	Literal value: "HL7".
Universal ID	MSH-21.3	ST	199	R	Literal value: "2.16.840.1.113883.9.11".
Universal ID Type	MSH-21.4	ID	6	R	Literal value: "ISO".

SOFTWARE SEGMENT (SFT)

The software segment (SFT) provides information about the sending application or other applications that manipulate the message before it reaches the receiving application for processing.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Software Vendor Organization	SFT-1	XON	50	R	Used to identify the software vendor for the laboratory information system.
Organization Name	SFT-1.1	ST	4	CE	Name of the software vendor. Please discuss format of name and any abbreviations with VDH.

Field Name	Seq	DT	Length	Use	Notes/Value Set						
Organization Name Type Code	SFT-1.2	IS	20	RE	<p>Defines the type of name in SFT-1.1. Use a valid Type Code value. If empty, legal name is assumed. Expecting code value only. Valid values include (Table HL70204):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Display name</td> </tr> <tr> <td>L</td> <td>Legal name</td> </tr> </tbody> </table>	Value	Description	D	Display name	L	Legal name
Value	Description										
D	Display name										
L	Legal name										
Software Certified Version or Release Number	SFT-2	ST	15	R	Latest software version number of the sending system.						
Software Product Name	SFT-3	ST	20	R	The name of the software that submitted the message.						
Software Binary ID	SFT-4	ST	20	R	Expecting the software binary ID for the software that created the message. Please consult with your software vendor for this information. If the binary ID is not available, repeat the software version number from SFT-2.						
Software Install Date	SFT-6	TS	26	RE	<p>Date/Time the submitting software was installed at the sending facility.</p> <p>Format: YYYYMMDD[HHMM[SS]]</p>						

PATIENT IDENTIFICATION SEGMENT (PID)

The patient identification (PID) segment contains basic information regarding the patient.
This information includes patient name, date of birth, race and phone number.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – PID	PID-1	SI	4	R	Literal value: "1".

Field Name	Seq	DT	Length	Use	Notes/Value Set																		
Patient Identifier List	PID-3	CX	250	R	PID-3 is a repeating field that can accommodate multiple patient identifiers. Generally, this field will provide a unique patient identifier assigned by the facility or application submitting the report to public health.																		
Patient ID	PID-3.1	ST	15	R	VDH prefers that the first patient ID provided always be a laboratory assigned patient identifier or a patient medical record number. The identifier provided should allow the reporting or ordering facility to retrieve information on the patient when requested by public health.																		
Assigning Authority	PID-3.4	HD	227	R	Identifies the system, application, or organization that assigned the patient ID in PID-3.1.																		
Assigning Authority Name	PID-3.4.1	IS	20	RE	The name of the assigning authority that assigned the patient ID.																		
Assigning Authority ID	PID-3.4.2	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.																		
Assigning Authority ID Type	PID-3.4.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in PID-3.4.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.																		
Identifier Type Code	PID-3.5	ID	5	R	<p>Defines the type of patient ID in PID-3.1. Expecting code value only. Valid values include (excerpt of Table HL70203):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>AN</td> <td>Account Number</td> </tr> <tr> <td>BR</td> <td>Birth Registry Number</td> </tr> <tr> <td>DL</td> <td>Driver's License Number</td> </tr> <tr> <td>MR</td> <td>Medical Record Number</td> </tr> <tr> <td>PI</td> <td>Patient Internal Identifier</td> </tr> <tr> <td>PN</td> <td>Person Number</td> </tr> <tr> <td>PT</td> <td>Patient External Identifier</td> </tr> <tr> <td>SS</td> <td>Social Security Number</td> </tr> </tbody> </table>	Value	Description	AN	Account Number	BR	Birth Registry Number	DL	Driver's License Number	MR	Medical Record Number	PI	Patient Internal Identifier	PN	Person Number	PT	Patient External Identifier	SS	Social Security Number
Value	Description																						
AN	Account Number																						
BR	Birth Registry Number																						
DL	Driver's License Number																						
MR	Medical Record Number																						
PI	Patient Internal Identifier																						
PN	Person Number																						
PT	Patient External Identifier																						
SS	Social Security Number																						
Assigning Facility	PID-3.6	HD	227	R	Identifies the facility that assigned the patient ID in PID-3.1.																		

Field Name	Seq	DT	Length	Use	Notes/Value Set
Assigning Facility Name	PID-3.6.1	IS	20	RE	The name of the facility that assigned the patient ID.
Assigning Facility ID	PID-3.6.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility.
Assigning Facility ID Type	PID-3.6.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in PID-3.6.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Patient Name	PID-5	XPN	294	R	The complete name of the patient.
Last Name	PID-5.1	FN		R	The patient's family name/surname.
First Name	PID-5.2	ST		R	The patient's given name.
Middle Name/Initials	PID-5.3	ST		RE	The patient's middle initial or middle name.
Suffix	PID-5.4	ST		RE	The patient's suffix (e.g., JR or III).
Prefix	PID-5.5	ST		RE	The patient's prefix (e.g., DR).

Field Name	Seq	DT	Length	Use	Notes/Value Set																
Name Type Code	PID-5.7	ID		RE	<p>Defines the type of name in PID-5. Expecting code value only. Use of legal name (“L”) is expected. If empty, legal name is assumed. Valid values include (excerpt of Table HL70200):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>Adopted Name</td> </tr> <tr> <td>A</td> <td>Alias Name</td> </tr> <tr> <td>S</td> <td>Coded Pseudo-Name to ensure anonymity</td> </tr> <tr> <td>T</td> <td>Indigenous/Tribal/Community Name</td> </tr> <tr> <td>L</td> <td>Legal Name</td> </tr> <tr> <td>M</td> <td>Maiden Name</td> </tr> <tr> <td>N</td> <td>Nickname</td> </tr> </tbody> </table>	Value	Description	C	Adopted Name	A	Alias Name	S	Coded Pseudo-Name to ensure anonymity	T	Indigenous/Tribal/Community Name	L	Legal Name	M	Maiden Name	N	Nickname
Value	Description																				
C	Adopted Name																				
A	Alias Name																				
S	Coded Pseudo-Name to ensure anonymity																				
T	Indigenous/Tribal/Community Name																				
L	Legal Name																				
M	Maiden Name																				
N	Nickname																				
Mother’s Maiden Name	PID-6	XP	250	RE	The patient’s mother’s maiden name. VDH generally does not expect this information.																
Last Name	PID-6.1	FN		RE	The patient’s mother’s family name/surname.																
First Name	PID-6.2	ST		RE	The patient’s mother’s given name.																
Middle Name/Initials	PID-6.3	ST		RE	The patient’s mother’s middle initial or middle name.																
Suffix	PID-6.4	ST		RE	The patient’s mother’s suffix (e.g., JR or III).																
Prefix	PID-6.5	ST		RE	The patient’s mother’s prefix (e.g., DR).																
Name Type Code	PID-6.7	ID		RE	<p>Defines the type of name in PID-6. Literal value: “M” (Maiden Name) from Table HL70200 – Name Type is required.</p>																

Field Name	Seq	DT	Length	Use	Notes/Value Set														
Date/Time of Birth	PID-7	TS	26	RE	The patient's date of birth. Format: YYYYMMDD														
Administrative Sex Identifier	PID-8	CWE	1	RE	<p>Defines the patient's gender. Expecting Code value only. Valid values are the codes in (Table HL70001):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Ambiguous</td> </tr> <tr> <td>F</td> <td>Female</td> </tr> <tr> <td>M</td> <td>Male</td> </tr> <tr> <td>N</td> <td>Not Applicable</td> </tr> <tr> <td>O</td> <td>Other</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </tbody> </table>	Value	Description	A	Ambiguous	F	Female	M	Male	N	Not Applicable	O	Other	U	Unknown
Value	Description																		
A	Ambiguous																		
F	Female																		
M	Male																		
N	Not Applicable																		
O	Other																		
U	Unknown																		
Race	PID-10	CWE	478	RE	Race should be submitted if known. Patient may have more than one race defined.														
Identifier	PID-10.1	ST	20	RE	<p>Defines the patient's race category. Expecting code value only. Valid values are (Table HL70005):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1002-5</td> <td>American Indian or Alaska Native</td> </tr> <tr> <td>2028-9</td> <td>Asian</td> </tr> <tr> <td>2054-5</td> <td>Black or African-American</td> </tr> <tr> <td>2076-8</td> <td>Native Hawaiian or Other Pacific Islander</td> </tr> <tr> <td>2131-1</td> <td>Other Race</td> </tr> <tr> <td>2106-3</td> <td>White</td> </tr> </tbody> </table>	Value	Description	1002-5	American Indian or Alaska Native	2028-9	Asian	2054-5	Black or African-American	2076-8	Native Hawaiian or Other Pacific Islander	2131-1	Other Race	2106-3	White
Value	Description																		
1002-5	American Indian or Alaska Native																		
2028-9	Asian																		
2054-5	Black or African-American																		
2076-8	Native Hawaiian or Other Pacific Islander																		
2131-1	Other Race																		
2106-3	White																		
Text	PID-10.2	ST	199	CE	The standardized text description that corresponds with the race code in PID-10.1.														
Name of Coding Of System	PID-10.3	ID	20	CE	Literal value: "HL70005". This indicates the coding system used for race in PID-10.1.														

Field Name	Seq	DT	Length	Use	Notes/Value Set
Alternate Identifier	PID-10.4	ST	20	RE	Alternate local code used to identify patient race.
Alternate Text Description	PID-10.5	ST		CE	Text description that corresponds to the local code in PID-10.4.
Name of Alternate Coding System	PID-10.6	ID		CE	Identifies the type of code in PID-10.4. For local codes, expecting "L".
Patient Address	PID-11	XAD	513	RE	Whenever possible, provide the address for the patient's primary residence rather than the billing address.
Street Address Line 1	PID-11.1	ST	100	RE	The patient's street address (e.g., "123 Main St."). If the patient address has an apartment/suite number, please include it in Street Address Line 1.
Street Address Line 2	PID-11.2	ST	100	RE	If Street Address Line 1 exceeds the character limit, then include additional address information in Street Address Line 2.
City	PID-11.3	ST	50	RE	The city from the patient's address.
State	PID-11.4	ST	50	RE	The state from the patient's address. Use the U.S. Postal Service 2-character state abbreviation (e.g., VA).
ZIP or Postal Code	PID-11.5	ST	12	RE	The zip code from the patient's address. Use a valid 5-digit zip code.
Country	PID-11.6	ID	3	RE	Expecting "USA". This field contains the country code where the addressee is located. Refer to Table HL70399 – Country Code for valid 3-character codes as defined by ISO 3166-1. If the field is not valued, then "USA" is assumed.

Field Name	Seq	DT	Length	Use	Notes/Value Set																		
Address Type	PID-11.7	ID	3	RE	<p>Defines the type of address in PID-11. Type code "H" (Home) from Table HL70190 – Address Type is expected. If residential address is provided, use type code "H" (Home). If patient address is submitted, this field is required. Expecting code value only.</p> <p>Valid values include (excerpt of Table HL70190):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>Firm/Business</td> </tr> <tr> <td>C</td> <td>Current or Temporary</td> </tr> <tr> <td>H</td> <td>Home</td> </tr> <tr> <td>L</td> <td>Legal Address</td> </tr> <tr> <td>M</td> <td>Mailing</td> </tr> <tr> <td>O</td> <td>Office</td> </tr> <tr> <td>P</td> <td>Permanent</td> </tr> <tr> <td>RH</td> <td>Registry home</td> </tr> </tbody> </table>	Value	Description	B	Firm/Business	C	Current or Temporary	H	Home	L	Legal Address	M	Mailing	O	Office	P	Permanent	RH	Registry home
Value	Description																						
B	Firm/Business																						
C	Current or Temporary																						
H	Home																						
L	Legal Address																						
M	Mailing																						
O	Office																						
P	Permanent																						
RH	Registry home																						
County Code	PID-11.9	IS	20	RE	<p>Submit the FIPS code for the county where the patient resides, if the information is available. If address is in an independent city in Virginia, submit the city FIPS code. Use the two-digit VA state code ("51") followed by the three-digit county/city-specific code.</p>																		
Phone Number – Home	PID-13	XTN	40	RE	<p>Whenever possible, provide the patient's primary telephone number.</p>																		

Field Name	Seq	DT	Length	Use	Notes/Value Set																				
Telecom Use Code	PID-14.2	ID		RE	<p>Defines the type of phone number in PID-14. VDH prefers to receive the work number (“WPN”). Expecting code value only. Valid values are (Table HL70201):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ASN</td> <td>Answering Service Number</td> </tr> <tr> <td>BPN</td> <td>Beeper Number</td> </tr> <tr> <td>EMR</td> <td>Emergency Number</td> </tr> <tr> <td>NET</td> <td>Network (email) Address</td> </tr> <tr> <td>ORN</td> <td>Other Residence Number</td> </tr> <tr> <td>PRN</td> <td>Primary Residence Number</td> </tr> <tr> <td>VHN</td> <td>Vacation Home Number</td> </tr> <tr> <td>WPN</td> <td>Work Number</td> </tr> </tbody> </table>	Value	Description	ASN	Answering Service Number	BPN	Beeper Number	EMR	Emergency Number	NET	Network (email) Address	ORN	Other Residence Number	PRN	Primary Residence Number	VHN	Vacation Home Number	WPN	Work Number		
Value	Description																								
ASN	Answering Service Number																								
BPN	Beeper Number																								
EMR	Emergency Number																								
NET	Network (email) Address																								
ORN	Other Residence Number																								
PRN	Primary Residence Number																								
VHN	Vacation Home Number																								
WPN	Work Number																								
Telecom Equipment Type	PID-14.3	ID		RE	<p>Defines the type of technology/equipment for the phone number in PID-14. VDH prefers to receive the value for telephone (“PH”) or cellular phone (“CP”). Expecting code value only. Valid values are (Table HL70202):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>Beeper</td> </tr> <tr> <td>CP</td> <td>Cellular Phone</td> </tr> <tr> <td>FX</td> <td>Fax</td> </tr> <tr> <td>Internet</td> <td>Internet Address: Use Only if Telecommunication Use Code is NET</td> </tr> <tr> <td>MD</td> <td>Modem</td> </tr> <tr> <td>PH</td> <td>Telephone</td> </tr> <tr> <td>TDD</td> <td>Telecommunication Device for the Deaf</td> </tr> <tr> <td>TTY</td> <td>Teletypewriter</td> </tr> <tr> <td>X.400</td> <td>X.400 email address: Use Only if Telecommunication Use Code is NET</td> </tr> </tbody> </table>	Value	Description	BP	Beeper	CP	Cellular Phone	FX	Fax	Internet	Internet Address: Use Only if Telecommunication Use Code is NET	MD	Modem	PH	Telephone	TDD	Telecommunication Device for the Deaf	TTY	Teletypewriter	X.400	X.400 email address: Use Only if Telecommunication Use Code is NET
Value	Description																								
BP	Beeper																								
CP	Cellular Phone																								
FX	Fax																								
Internet	Internet Address: Use Only if Telecommunication Use Code is NET																								
MD	Modem																								
PH	Telephone																								
TDD	Telecommunication Device for the Deaf																								
TTY	Teletypewriter																								
X.400	X.400 email address: Use Only if Telecommunication Use Code is NET																								

Field Name	Seq	DT	Length	Use	Notes/Value Set												
Area Code	PID-14.6	NM	3	CE	The area code of the patient's work telephone number.												
Phone Number	PID-14.7	NM	7	CE	The patient's local work telephone number.												
Extension	PID-14.8	NM		CE	The patient's work telephone extension. VDH is expecting only numeric values in this field, if populated. Alpha characters in this field will cause messages to fail.												
Any Text	PID-14.9	ST		O	This field can contain any text, such as notes pertaining to the phone number, e.g. "Cell", "Mom", "Call after 10pm", etc.												
Marital Status	PID-16	CWE		RE	The patient's marital status should be submitted if available.												
Identifier	PID-16.1	ST		RE	<p>Defines the patient's marital status. Expecting code value only. Valid values include (excerpt of Table HL70002):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Divorced</td> </tr> <tr> <td>M</td> <td>Married</td> </tr> <tr> <td>A</td> <td>Separated</td> </tr> <tr> <td>S</td> <td>Single</td> </tr> <tr> <td>W</td> <td>Widowed</td> </tr> </tbody> </table>	Value	Description	D	Divorced	M	Married	A	Separated	S	Single	W	Widowed
Value	Description																
D	Divorced																
M	Married																
A	Separated																
S	Single																
W	Widowed																
Text	PID-16.2	ST		CE	The standardized text description that corresponds with the marital status code in PID-16.1.												
Name of Coding System	PID-16.3	ID		CE	Literal value: "HL70002". This indicates the coding system used for marital status in PID-16.1.												
Ethnic Group	PID-22	CWE	478	RE	The patient's ethnicity should be submitted if available.												

Field Name	Seq	DT	Length	Use	Notes/Value Set								
Identifier	PID-22.1	ST	20	RE	<p>Defines the patient's ethnic category. Expecting code value only. Valid values are (Table HL70189):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>Hispanic or Latino</td> </tr> <tr> <td>N</td> <td>Not Hispanic or Latino</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </tbody> </table>	Value	Description	H	Hispanic or Latino	N	Not Hispanic or Latino	U	Unknown
Value	Description												
H	Hispanic or Latino												
N	Not Hispanic or Latino												
U	Unknown												
Text	PID-22.2	ST	199	CE	The standardized text description that corresponds with the patient ethnicity code in PID-22.1.								
Name of Coding System	PID-22.3	ID	20	CE	This indicates the coding system used for ethnicity in PID-22.1. Literal value: "HL70189".								
Patient Death Date and Time	PID-29	TS	26	RE	The date and time of the patient's death. Format: <i>YYYYMMDD[HHMM[SS]]</i>								
Patient Death Indicator	PID-30	ID	1	RE	Expecting: "Y" if PID-29 is populated.								

NEXT OF KIN SEGMENT (NK1)

This segment is not expected unless relevant to the subject of the message.

This information is of particular value to public health when the patient is a minor or in custodial care.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – NK1	NK1-1	SI	4	R	For the first NK1 segment, the Set ID shall be “1”, for a second NK1 segment, the Set ID shall be “2”, etc. Subsequent NK1 segments should increment the Set ID field.
Next of Kin Name	NK1-2	XPN	250	RE	The complete name of the next of kin. If the patient is a child, please provide information in these fields on the parent or guardian, if it is available.
Last Name	NK1-2.1	FN	50	RE	The next of kin/contact’s family name/surname.
First Name	NK1-2.2	ST	30	RE	The next of kin/contact’s given name.
Middle Name/Initials	NK1-2.3	ST	30	RE	The next of kin/contact’s middle initial or middle name.
Suffix	NK1-2.4	ST	20	RE	The next of kin/contact’s suffix (e.g., JR or III).
Prefix	NK1-2.5	ST	20	RE	The next of kin/contact’s prefix (e.g., DR).
Name Type Code	NK1-2.7	ID	1	RE	Defines the type of name sent in NK1-2. Use of legal name (“L”) is expected. If empty, legal name is assumed.
Next of Kin Relationship	NK1-3	CWE	60	RE	The relationship of the next of kin/contact to the patient.

Field Name	Seq	DT	Length	Use	Notes/Value Set																														
Next of Kin Relationship Code	NK1-3.1	ST	20	RE	<p>Defines the relationship between the next of kin/contact and the patient. Expecting code value only.</p> <p>Valid values include (excerpt of Table HL70063):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>BRO</td> <td>Brother</td> </tr> <tr> <td>CGV</td> <td>Care giver</td> </tr> <tr> <td>CHD</td> <td>Child</td> </tr> <tr> <td>EMC</td> <td>Emergency contact</td> </tr> <tr> <td>FTH</td> <td>Father</td> </tr> <tr> <td>GCH</td> <td>Grandchild</td> </tr> <tr> <td>GRD</td> <td>Guardian</td> </tr> <tr> <td>GRP</td> <td>Grandparent</td> </tr> <tr> <td>MTH</td> <td>Mother</td> </tr> <tr> <td>SCH</td> <td>Stepchild</td> </tr> <tr> <td>SIB</td> <td>Sibling</td> </tr> <tr> <td>SIS</td> <td>Sister</td> </tr> <tr> <td>SPO</td> <td>Spouse</td> </tr> <tr> <td>WRD</td> <td>Ward of court</td> </tr> </tbody> </table>	Value	Description	BRO	Brother	CGV	Care giver	CHD	Child	EMC	Emergency contact	FTH	Father	GCH	Grandchild	GRD	Guardian	GRP	Grandparent	MTH	Mother	SCH	Stepchild	SIB	Sibling	SIS	Sister	SPO	Spouse	WRD	Ward of court
Value	Description																																		
BRO	Brother																																		
CGV	Care giver																																		
CHD	Child																																		
EMC	Emergency contact																																		
FTH	Father																																		
GCH	Grandchild																																		
GRD	Guardian																																		
GRP	Grandparent																																		
MTH	Mother																																		
SCH	Stepchild																																		
SIB	Sibling																																		
SIS	Sister																																		
SPO	Spouse																																		
WRD	Ward of court																																		
Text	NK1-3.2	ST	199	CE	The standardized text description that corresponds with the Next of Kin Relationship code in NK1-3.1																														
Name of Coding System	NK1-3.3	ID	20	CE	This indicates the coding system used for next of kin in NK1-3.1. Literal value: "HL70063".																														
Next of Kin Address	NK1-4	XAD	106	RE	Whenever possible, provide the address for the next of kin/contact's primary residence rather than the billing address.																														
Street Address Line 1	NK1-4.1	SAD	184	RE	The next of kin/contact's street address (e.g., "123 Main St."). If the next of kin/contact's address has an apartment/suite number, please include in Street Address Line 1.																														
Street Address Line 2	NK1-4.2	ST	120	RE	If Street Address Line 1 exceeds the character limit, then include additional address information in Street Address Line 2.																														

Field Name	Seq	DT	Length	Use	Notes/Value Set																		
City	NK1-4.3	ST	50	RE	The city from the next of kin/contact's address.																		
State	NK1-4.4	ST	50	RE	The state from the next of kin/contact's address. Use the U.S. Postal Service 2-character state abbreviation (e.g., VA).																		
Zip or Postal Code	NK1-4.5	ST	12	RE	The zip code from the next of kin/contact's address. Use a valid 5-digit zip code.																		
Country	NK1-4.6	ID	3	RE	Expecting "USA". This field contains the country code where the addressee is located. Refer to Table HL70399 - Country Code for valid 3-character codes as defined by ISO 3166-1. If the field is not valued, then "USA" is assumed.																		
Address Type	NK1-4.7	ID	3	RE	Defines the type of address in NK1-4. If residential address is provided, use type code "H" (Home). If mailing address is used, use type code "M" (Mailing). If next of kin/contact's address is submitted, this field is required.																		
County Code	NK1-4.9	IS	20	RE	Submit the FIPS code for the county where the next of kin/contact resides, if the information is available. If address is in an independent city in Virginia, submit the city FIPS code. Use the two-digit VA state code ("51") followed by the three-digit country/city-specific code.																		
Phone Number	NK1-5	XTN	40	RE	Whenever possible, provide the next of kin/contact's home telephone number.																		
Telecom Use Code	NK1-5.2	ID	3	RE	Defines the type of phone number provided in NK1-5. VDH prefers to receive the primary residence number ("PRN"). Expecting code value only. Valid values are (Table HL70201): <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ASN</td> <td>Answering Service Number</td> </tr> <tr> <td>BPN</td> <td>Beeper Number</td> </tr> <tr> <td>EMR</td> <td>Emergency Number</td> </tr> <tr> <td>NET</td> <td>Network (email) Address</td> </tr> <tr> <td>ORN</td> <td>Other Residence Number</td> </tr> <tr> <td>PRN</td> <td>Primary Residence Number</td> </tr> <tr> <td>VHN</td> <td>Vacation Home Number</td> </tr> <tr> <td>WPN</td> <td>Work Number</td> </tr> </tbody> </table>	Value	Description	ASN	Answering Service Number	BPN	Beeper Number	EMR	Emergency Number	NET	Network (email) Address	ORN	Other Residence Number	PRN	Primary Residence Number	VHN	Vacation Home Number	WPN	Work Number
Value	Description																						
ASN	Answering Service Number																						
BPN	Beeper Number																						
EMR	Emergency Number																						
NET	Network (email) Address																						
ORN	Other Residence Number																						
PRN	Primary Residence Number																						
VHN	Vacation Home Number																						
WPN	Work Number																						

Field Name	Seq	DT	Length	Use	Notes/Value Set																				
Telecom Equipment Type	NK1-5.3	ID	8	RE	<p>Defines the type of technology/equipment for the phone number in NK1-5. VDH prefers to receive the value for telephone ("PH") or cellular phone ("CP"). Expecting code value only.</p> <p>Valid values are (Table HL70202):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>Beeper</td> </tr> <tr> <td>CP</td> <td>Cellular Phone</td> </tr> <tr> <td>FX</td> <td>Fax</td> </tr> <tr> <td>Internet</td> <td>Internet Address: Use Only if Telecommunication Use Code is NET</td> </tr> <tr> <td>MD</td> <td>Modem</td> </tr> <tr> <td>PH</td> <td>Telephone</td> </tr> <tr> <td>TDD</td> <td>Telecommunication Device for the Deaf</td> </tr> <tr> <td>TTY</td> <td>Teletypewriter</td> </tr> <tr> <td>X.400</td> <td>X.400 email address: Use Only If Telecommunication Use Code is NET</td> </tr> </tbody> </table>	Value	Description	BP	Beeper	CP	Cellular Phone	FX	Fax	Internet	Internet Address: Use Only if Telecommunication Use Code is NET	MD	Modem	PH	Telephone	TDD	Telecommunication Device for the Deaf	TTY	Teletypewriter	X.400	X.400 email address: Use Only If Telecommunication Use Code is NET
Value	Description																								
BP	Beeper																								
CP	Cellular Phone																								
FX	Fax																								
Internet	Internet Address: Use Only if Telecommunication Use Code is NET																								
MD	Modem																								
PH	Telephone																								
TDD	Telecommunication Device for the Deaf																								
TTY	Teletypewriter																								
X.400	X.400 email address: Use Only If Telecommunication Use Code is NET																								
Phone Number	NK1-5.7	NM	9	RE	The next of kin/contact's local telephone number.																				
Extension	NK1-5.8	NM	5		The next of kin/contact's telephone extension.																				
Additional Notes Text	NK1-5.9	ST	199	RE	Any additional notes related to phone number may be added in this field.																				
Unformatted Telephone Number	NK1-5.12	ST		RE	Next of kin's unformatted telephone number.																				
Contact Role	NK1-7	CWE		RE	The contact role of the next of kin named in NK1-2, if available.																				

Field Name	Seq	DT	Length	Use	Notes/Value Set																		
Identifier	NK1-7.1	ID		CE	<p>Defines the contact role of the person named in NK1-2. Expecting code value only in this subfield. Valid values include (Table HL70131):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>Emergency Contact</td> </tr> <tr> <td>E</td> <td>Employer</td> </tr> <tr> <td>F</td> <td>Federal Agency</td> </tr> <tr> <td>I</td> <td>Insurance Company</td> </tr> <tr> <td>N</td> <td>Next of kin</td> </tr> <tr> <td>O</td> <td>Other</td> </tr> <tr> <td>S</td> <td>State Agency</td> </tr> <tr> <td>U</td> <td>Unknown</td> </tr> </tbody> </table>	Value	Description	C	Emergency Contact	E	Employer	F	Federal Agency	I	Insurance Company	N	Next of kin	O	Other	S	State Agency	U	Unknown
Value	Description																						
C	Emergency Contact																						
E	Employer																						
F	Federal Agency																						
I	Insurance Company																						
N	Next of kin																						
O	Other																						
S	State Agency																						
U	Unknown																						
Text	NK1-7.2	ST		RE	The standardized text description of the contact role code in NK1-7.1.																		
Name of Coding System	NK1-7.3	ID		CE	Literal value: "HL70131". This indicates the coding system used for contact role in NK1-7.1.																		
Organization Name	NK1-13	ST		CE	If next of kin or associated party is an organization use this field, otherwise, use field NK1-2.																		
Contact Person's Name	NK1-30	XPN	48		The name of the contact person at the organization named in NK1-13.																		
Last Name	NK1-30.1	FN		RE	The contact person's family name/surname.																		
First Name	NK1-30.2	ST		RE	The contact person's given name.																		
Middle Name/Initials	NK1-30.3	ST		RE	The contact person's middle initial or middle name.																		

Field Name	Seq	DT	Length	Use	Notes/Value Set
Suffix	NK1-30.4	ST		RE	The contact person's suffix (e.g., Jr or III).
Contact Person's Telephone Number	NK1-31	XTN	40	RE	Phone number of the contact person for the responsible organization.
Telecom Use Code	NK1-31.2	ID	3	RE	Defines the type of phone number provided in NK1-31. VDH prefers to receive the value for work number ("WPN"). Valid values are found in table HL70201 .
Telecom Equipment Type	NK1-31.3	ID	8	RE	Defines the type of technology/equipment for the phone number provided in NK1-31. VDH prefers to receive the value for telephone ("PH") or cellular phone ("CP"). Valid values are found in table HL70202 .
Area Code	NK1-31.6	NM		RE	The area code of the contact person's phone number.
Phone Number	NK1-31.7	NM		RE	The contact person's local telephone number.
Extension	NK1-31.8	NM		RE	The contact person's local telephone extension.
Unformatted Telephone Number	NK1-31.12	ST		RE	The contact person's unformatted telephone number.
Contact Person's Address	NK1-32	XAD	106	RE	The address of the contact person at the organization named in NK1-13.
Street Address Line 1	NK1-32.1	ST			The contact person's street address.
Street Address Line 2	NK1-32.2	ST		RE	Other designation for the contact person's street address.
City	NK1-32.3	ST		RE	The city of the contact person's address.
State	NK1-32.4	ST		RE	The state of the contact person's address.
Zip or Postal Code	NK1-32.5	ST		RE	The zip code of the contact person's address.
Country	NK1-32.6	ID		RE	Expecting "USA". This field contains the country code where the addressee is located. Refer to Table HL70399 - Country Code for valid 3-character codes as defined by ISO 3166-1. If the field is not valued, then "USA" is assumed.

PATIENT VISIT INFORMATION SEGMENT (PV1)

The patient visit information (PV1) segment contains basic inpatient or outpatient information.

Field Name	Seq	DT	Length	Use	Notes/Value Set								
Set ID – PV1	PV1-1	SI	1	R	Literal Value: "1".								
Patient Class	PV1-2	IS	20	R	<p>A gross identification of the classification of patient's visit. Expecting code value only. Valid values include (excerpt of Table HL70004):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>Emergency</td> </tr> <tr> <td>I</td> <td>Inpatient</td> </tr> <tr> <td>O</td> <td>Outpatient</td> </tr> </tbody> </table>	Value	Description	E	Emergency	I	Inpatient	O	Outpatient
Value	Description												
E	Emergency												
I	Inpatient												
O	Outpatient												
Assigned Patient Location	PV1-3	PL		C	Required if PV1-2 is "inpatient". This field identifies the current location of the patient.								
Point of Care	PV1-3.1	IS		O	For "inpatient", this could be a unit within the hospital.								
Room	PV1-3.2	IS		O	The room number for the patient, if an "inpatient".								
Bed	PV1-3.3	IS		O	This field identifies the bed if there is more than one bed in a room.								
Facility	PV1-3.4	HD		O	This field identifies the name of the facility where the order was originally placed by the provider. The ordering facility is defined as the facility in which the patient was examined, and the order was initiated.								

Field Name	Seq	DT	Length	Use	Notes/Value Set																
Namespace ID	PV1-3.4.1	IS		O	Name of the facility where the patient was seen.																
Universal ID	PV1-3.4.2	ST		O	An identifier for the facility named in PV1-3.4.1.																
Universal ID Type	PV1-3.4.3	ID		O	Expecting the type of identifier used in PV1-3.4.2.																
Admission Type	PV1-4	IS	20	O	Required if PV1-2 is "inpatient". Expecting code value only. Valid values include (Table HL70007): <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Accident</td> </tr> <tr> <td>C</td> <td>Elective</td> </tr> <tr> <td>E</td> <td>Emergency</td> </tr> <tr> <td>L</td> <td>Labor and Delivery</td> </tr> <tr> <td>N</td> <td>Newborn (Birth in healthcare facility)</td> </tr> <tr> <td>R</td> <td>Routine</td> </tr> <tr> <td>U</td> <td>Urgent</td> </tr> </tbody> </table>	Value	Description	A	Accident	C	Elective	E	Emergency	L	Labor and Delivery	N	Newborn (Birth in healthcare facility)	R	Routine	U	Urgent
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R	Routine																				
U	Urgent																				
Attending Doctor	PV1-7	XPN	48	RE	Attending Doctor																
Last Name	PV1-7.2	FN		RE	The attending doctor's family name/surname.																
First Name	PV1-7.3	ST		RE	The attending doctor's given name.																
Middle Name/Initials	PV1-7.4	ST		RE	The attending doctor's middle initial or middle name.																
Suffix	PV1-7.5	ST		RE	The attending doctor's suffix (e.g., JR or III).																

COMMON ORDER SEGMENT (ORC)

The common order (ORC) segment provides basic information about the ordered test (e.g., identifiers for the order, who placed the order, when it was placed, etc.).

Field Name	Seq	DT	Length	Use	Notes/Value Set
Order Control	ORC-1	ID	2	R	Determines the function of the order segment. Literal value: "RE".
Placer Order Number	ORC-2	EI	22	CE	The order number of the entity that placed the order. If ORC-2 (Placer Order Number) is populated, then this field must contain the same value as OBR-2.
Order Number	ORC-2.1	ST	199	R	The placer order number is expected to be unique within the placer's organization. If order numbers are ever reused, a date-stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	ORC-2.2	IS	20	RE	The name of the assigning authority that assigned the placer order number.
Assigning Authority ID	ORC-2.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Filler Order Number	ORC-3	EI	22	R	The order number of the entity that carries out the order. This field should contain the same value as OBR-3.
Order Number	ORC-3.1	ST	199	R	The filler order number is expected to be unique within the filler's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	ORC-3.2	IS	20	RE	The name of the assigning authority that assigned the filler order number.
Assigning Authority ID	ORC-3.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-3.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-3.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Placer Group Number	ORC-4	CE	22	RE	Used to identify a group of orders. In a laboratory setting, this is commonly referred to as a “requisition number”.
Order Number	ORC-4.1	ST	199	R	The placer group order number is expected to be unique within the placer’s organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	ORC-4.2	IS	20	RE	The name of the assigning authority that assigned the placer group order number.
Assigning Authority ID	ORC-4.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-4.4	ID	6	R	Expecting “CLIA” if a CLIA number is used in ORC-4.3, “NPI” if an NPI is used, “ISO” if an OID is used, or “ID” if an alternate identifier is used.
Ordering Provider	ORC-12	XCN	120	CE	This field identifies the provider who ordered the test. If OBR-16 is populated, this field will contain the same values.
ID Number	ORC-12.1	ST		RE	The ordering provider’s ID number. The National Provider Identifier (NPI) is recommended.
Last Name	ORC-12.2	FN		RE	The ordering provider’s family name/surname.
First Name	ORC-12.3	ST		RE	The ordering provider’s given name.
Middle Name/Initials	ORC-12.4	ST		RE	The ordering provider’s middle initial or middle name.
Suffix	ORC-12.5	ST		RE	The ordering provider’s suffix (e.g., JR or III).

Field Name	Seq	DT	Length	Use	Notes/Value Set
Prefix	ORC-12.6	ST		RE	The ordering provider's prefix (e.g., DR).
Assigning Authority	ORC-12.9	HD	227	CE	Identifies the system, application, or organization that assigned the ordering provider ID in ORC-12.1.
Assigning Authority Name	ORC-12.9.1	IS	20	RE	Expecting "CMS" if an NPI is used in ORC-12.1. If another type of identifier is used in ORC-12.1, expecting the name of the assigning authority for this identifier.
Assigning Authority ID	ORC-12.9.2	ST	199	R	Expecting the CMS OID "2.16.840.1.113883.3.249" if an NPI is used in ORC-12.1. If another identifier is used in ORC-12.1, expecting the CLIA number, NPI, OID, or other ID for the assigning authority.
Assigning Authority ID Type	ORC-12.9.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-12.9.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Name Type Code	ORC-12.10	ID	1	RE	Defines the type of name in ORC-12. Use of legal name ("L") is expected by VDH. If empty, legal name is assumed. See Table HL70200 – Name Type for other valid values.
Identifier Type Code	ORC-12.13	IS		CE	Component identifies the type of ID in ORC-12.1. Expecting "NPI" (if an NPI is used in ORC-12.1). See Table HL70203 – Identifier Type Code for other valid values.
Assigning Facility	ORC-12.14	HD	227	RE	Identifies the facility that assigned the ordering provider ID in ORC-12.1. Note that if an NPI is used in ORC-12.1, there is no assigning facility and this field will be empty.
Assigning Facility Name	ORC-12.14.1	IS	20	RE	The name of the facility that assigned the ordering provider ID. This field will be empty if an NPI is used in ORC-12.1.
Assigning Facility ID	ORC-12.14.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility. This field will be empty if an NPI is used in ORC-12.1.
Assigning Facility ID Type	ORC-12.14.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-12.14.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.

Field Name	Seq	DT	Length	Use	Notes/Value Set																				
Order Callback Phone Number	ORC-14	XTN	250	RE	The ordering provider's phone number. If OBR-17 Callback Phone Number is populated, this field will contain the same value. Although this field is classified as "RE", it is important for public health follow-up and the information should be provided, if possible.																				
Telecom Use Code	ORC-14.2	ID		RE	<p>Defines the type of phone number in ORC-14. VDH prefers to receive the work number ("WPN"). Expecting code value only. Valid values are (Table HL70201):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ASN</td> <td>Answering Service Number</td> </tr> <tr> <td>BPN</td> <td>Beeper Number</td> </tr> <tr> <td>EMR</td> <td>Emergency Number</td> </tr> <tr> <td>NET</td> <td>Network (email) Address</td> </tr> <tr> <td>ORN</td> <td>Other Residence Number</td> </tr> <tr> <td>PRN</td> <td>Primary Residence Number</td> </tr> <tr> <td>VHN</td> <td>Vacation Home Number</td> </tr> <tr> <td>WPN</td> <td>Work Number</td> </tr> </tbody> </table>	Value	Description	ASN	Answering Service Number	BPN	Beeper Number	EMR	Emergency Number	NET	Network (email) Address	ORN	Other Residence Number	PRN	Primary Residence Number	VHN	Vacation Home Number	WPN	Work Number		
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WPN	Work Number																								
Telecom Equipment Type	ORC-14.3	ID		RE	<p>Defines the type of technology/equipment for the phone number in ORC-14. VDH prefers to receive the telephone ("PH"). Expecting code value only. Valid values are (Table HL70202):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>Beeper</td> </tr> <tr> <td>CP</td> <td>Cellular Phone</td> </tr> <tr> <td>FX</td> <td>Fax</td> </tr> <tr> <td>Internet</td> <td>Internet Address: Use Only if Telecommunication Use Code is NET</td> </tr> <tr> <td>MD</td> <td>Modem</td> </tr> <tr> <td>PH</td> <td>Telephone</td> </tr> <tr> <td>TDD</td> <td>Telecommunication Device for the Deaf</td> </tr> <tr> <td>TTY</td> <td>Teletypewriter</td> </tr> <tr> <td>X.400</td> <td>X.400 email address: Use Only if Telecommunication Use Code is NET</td> </tr> </tbody> </table>	Value	Description	BP	Beeper	CP	Cellular Phone	FX	Fax	Internet	Internet Address: Use Only if Telecommunication Use Code is NET	MD	Modem	PH	Telephone	TDD	Telecommunication Device for the Deaf	TTY	Teletypewriter	X.400	X.400 email address: Use Only if Telecommunication Use Code is NET
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Field Name	Seq	DT	Length	Use	Notes/Value Set
Area Code	ORC-14.6	NM	3	CE	The area code of the ordering provider's telephone number.
Phone Number	ORC-14.7	NM	7	CE	The ordering provider's local telephone number.
Extension	ORC-14.8	NM		CE	The ordering provider's local telephone number extension. Expecting numeric values only.
Unformatted Telephone Number	ORC-14.12	ST		RE	The ordering provider's unformatted telephone number.
Entering Organization	ORC-17	CWE		RE	This field identifies the organization that the enterer belonged to at the time he/she enters/maintains the order, such as medical group or department.
Identifier	ORC-17.1	ST		RE	The entering organization identifier.
Text	ORC-17.2	ST		RE	The name of the entering organization.
Name of Coding System	ORC-17.3	ST		RE	This indicates the name of the coding system used in ORC-17.1.
Ordering Facility Name	ORC-21	XON	60	R	This field identifies the name of the facility where the order was originally placed by the provider. The ordering facility is defined as the facility in which the patient was examined, and the order was initiated.
Facility Name	ORC-21.1	ST		CE	This field identifies the name of the facility where the order was originally placed by the provider. The ordering facility is defined as the facility in which the patient was examined, and the order was initiated.
Facility Name Type Code	ORC-21.2	ID		RE	Defines the type of name in ORC-21.1. Use of legal name ("L") is expected by VDH. If empty, legal name is assumed. See Table HL70204 – Organizational Name Type for other valid values.
Assigning Authority	ORC-21.6	HD	227	CE	Identifies the system, application, or organization that assigned the ordering facility ID in ORC-21.10.
Assigning Authority Name	ORC-21.6.1	IS	20	RE	The name of the assigning authority that assigned the facility ID in ORC-21.10.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Assigning Authority ID	ORC-21.6.2	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	ORC-21.6.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-21.6.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Identifier Type Code	ORC-21.7	ID		CE	Expecting "XX" when ORC-21.10 is populated with the ordering facility identifier.
Organization Identifier	ORC-21.10	ST		RE	The organization identifier used to identify the ordering facility named in ORC-21.1. A CLIA, NPI, OID, or other ID is expected. CLIA is preferred when appropriate.
Ordering Facility Address	ORC-22	XAD	106	R	This field identifies the ordering facility address.
Street Address Line 1	ORC-22.1	ST	100	RE	The ordering facility's street/mailling address (e.g., "123 Main St."). If the ordering facility address has a suite number, please include it in Street Address Line 1.
Street Address Line 2	ORC-22.2	ST	100	RE	If Street Address Line 1 exceeds the character limit, then include additional address information in Street Address Line 2.
City	ORC-22.3	ST	50	RE	The city in which the ordering facility is located.
State	ORC-22.4	ST	50	RE	The state in which the ordering facility is located. Use the U.S. Postal Service 2-character state abbreviation (e.g., VA).
ZIP or Postal Code	ORC-22.5	ST	12	RE	The zip code of the ordering facility's address. Use a valid 5-digit zip code.
Country	ORC-22.6	ID	3	RE	Expecting "USA". This field contains the country code where the addressee is located. Refer to Table HL70399 – Country Code for valid 3-character codes as defined by ISO 3166-1. If the field is not valued, then "USA" is assumed.
Address Type	ORC-22.7	ID	3	RE	Defines the type of address in ORC-22. Type code "B" (Business) from Table HL70190 – Address Type is expected. If ordering facility's address is submitted, this field is required.

Field Name	Seq	DT	Length	Use	Notes/Value Set
County Code	ORC-22.9	IS	20	RE	Submit the FIPS code for the ordering facility address. If address is in an independent city in Virginia, submit the city FIPS code. Use the two-digit VA state code (“51”) followed by the three-digit county/city-specific code.
Ordering Facility Phone Number	ORC-23	XTN	48	R	The ordering facility’s phone number.
Telecom Use Code	ORC-23.2	ID		RE	Defines the type of phone number in ORC-23. VDH prefers to receive the work number (“WPN”). See Table HL70201 – Telecommunication Use Code for other valid values.
Telecom Equipment Type	ORC-23.3	ID		RE	Defines the type of technology/equipment for the phone number in ORC-23. VDH prefers to receive the telephone (“PH”). See Table HL70202 – Telecommunication Equipment Type for other valid values.
Area Code	ORC-23.6	NM	3	CE	The area code of the ordering facility’s telephone number.
Phone Number	ORC-23.7	NM	7	CE	The ordering facility’s local telephone number.
Extension	ORC-23.8	NM		CE	The ordering facility’s telephone extension. Expecting numeric values only.
Unformatted Telephone Number	ORC-23.12	ST		RE	The ordering facility's unformatted telephone number.
Ordering Provider Address	ORC-24	XAD	106	RE	This field identifies the ordering provider’s address.
Street Address Line 1	ORC-24.1	ST	100	RE	The ordering provider’s street address (e.g., “123 Main St.”). If the ordering provider’s address has a suite number, please include it in Street Address Line 1.
Street Address Line 2	ORC-24.2	ST	100	RE	If Street Address Line 1 exceeds the character limit, then include additional address information in Street Address Line 2.
City	ORC-24.3	ST	50	RE	The city in which the ordering provider is located.

Field Name	Seq	DT	Length	Use	Notes/Value Set
State	ORC-24.4	ST	50	RE	The state in which the ordering provider is located. Use the U.S. Postal Service 2-character state abbreviation (e.g., VA).
ZIP or Postal Code	ORC-24.5	ST	12	RE	The zip code of the ordering provider's address. Use a valid 5-digit zip code.
Country	ORC-24.6	ID	3	RE	Expecting "USA". This field contains the country code where the addressee is located. Refer to Table HL70399 – Country Code for valid 3-character codes as defined by ISO 3166-1. If the field is not valued, then "USA" is assumed.
Address Type	ORC-24.7	ID	3	RE	Defines the type of address in ORC-24. Type code "B" (Business) from Table HL70190 – Address Type is expected. If ordering provider address is submitted, this field is required.
County Code	ORC-24.9	IS	20	RE	Submit the FIPS code for the ordering provider address. If address is in an independent city in Virginia, submit the city FIPS code. Use the two-digit VA state code ("51") followed by the three-digit county/city-specific code.

OBSERVATION REQUEST SEGMENT (OBR)

The observation request (OBR) segment provides information about the type of test performed and relates the information to the order for the test. A separate OBR is needed for each test ordered.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – OBR	OBR-1	SI	1	R	For the first OBR segment, the Set ID shall be "1", for a second OBR segment, the Set ID shall be "2", etc. Subsequent OBR segments should increment the Set ID field.
Placer Order Number	OBR-2	EI	22	RE	The order number of the entity that placed the order. If OBR-2 (Placer Order Number) is populated, then this field must contain the same value as ORC-2.
Order Number	OBR-2.1	ST	199	R	The placer order number is expected to be unique within the placer's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Assigning Authority Name	OBR-2.2	IS	20	RE	The name of the assigning authority that assigned the placer order number.
Assigning Authority ID	OBR-2.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in ORC-2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Filler Order Number	OBR-3	EI	22	R	The order number of the entity that carries out the order. This field should contain the same value as ORC-3.
Order Number	OBR-3.1	ST	199	R	The filler order number is expected to be unique within the filler's organization. If order numbers are ever reused, a date stamp may need to be added to the end of the number to guarantee uniqueness.
Assigning Authority Name	OBR-3.2	IS	20	RE	The name of the assigning authority that assigned the filler order number.
Assigning Authority ID	OBR-3.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-3.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-3.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Universal Service ID	OBR-4	CWE	22	R	This field contains a unique identifier for the requested observation/test. For lab orders in general, LOINC <i>should</i> be used as the standard coding system in OBR-4.1 to OBR-4.3, if an appropriate LOINC exists. A local code and local test name may also be sent in OBR-4.4 to OBR-4.6. When a valid LOINC does not exist, the local code may be the only code sent.
Code (LOINC)	OBR-4.1	ST	20	RE	Expecting a LOINC for the ordered observation/test, if an appropriate LOINC exists.
Description (LOINC)	OBR-4.2	ST	199	RE	Expecting the text description for the LOINC in OBR-4.1.
ID Type (LOINC)	OBR-4.3	ST	12	RE	Expecting "LN".

Field Name	Seq	DT	Length	Use	Notes/Value Set
Code (Local)	OBR-4.4	ST	20	RE	Alternate local code the laboratory uses to uniquely identify the ordered observation/ test.
Description (Local)	OBR-4.5	ST	199	RE	The text description for the local code in OBR-4.4.
ID Type (Local)	OBR-4.6	ST	12	RE	Identifies the type of code in OBR-4.4. For local code sets, expecting "L" OR "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBR-4.7	ST	10	RE	Version of the LOINC coding system used in OBR-4.1.
Alternate Coding System Version ID	OBR-4.8	ST	10	RE	Version of the laboratory's internal coding system used in OBR-4.4.
Observation Start Date/Time	OBR-7	TS	26	R	For specimen-based observations, the start date/time of specimen collection. This field must contain the same value as OBX-14 and SPM-17.1. Format: YYYYMMDD[HHMM[SS]]
Observation End Date/Time	OBR-8	TS	26	CE	For specimen-based observations (when the specimen was collected over a period of time) the end date/time of specimen collection. This field must contain the same value as SPM-17.2. Format: YYYYMMDD[HHMM[SS]]
Relevant Clinical Information	OBR-13	ST	300	RE	This field contains additional clinical information about the patient or specimen. This field is used to report the suspected diagnosis and clinical findings on requests for interpreted diagnostic studies. VDH generally does not expect to receive information in this field. If there is important clinical information, please send it in an NTE segment.
Ordering Provider	OBR-16	XCN	250	RE	This field identifies the provider who ordered the test. If ORC-12 is populated, this field will contain the same values.
ID number	OBR-16.1	ST		RE	The ordering provider's ID number. The National Provider Identifier (NPI) is recommended.
Last Name	OBR-16.2	FN		RE	The ordering provider's family name/surname.
First Name	OBR-16.3	ST		RE	The ordering provider's given name.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Middle Name/Initials	OBR-16.4	ST		RE	The ordering provider's middle initial or middle name.
Suffix	OBR-16.5	ST		RE	The ordering provider's suffix (e.g., JR or III).
Prefix	OBR-16.6	ST		RE	The ordering provider's prefix (e.g., DR).
Assigning Authority	OBR-16.9	HD	227	CE	Identifies the system, application, or organization that assigned the ordering provider ID in OBR-16.1.
Assigning Authority Name	OBR-16.9.1	IS	20	RE	Expecting "CMS" if an NPI is used in OBR-16.1. If another type of identifier is used in OBR-16.1, expecting the name of the assigning authority for this identifier.
Assigning Authority ID	OBR-16.9.2	ST	199	R	Expecting the CMS OID "2.16.840.1.113883.3.249" if an NPI is used in OBR-16.1. If another identifier is used in OBR-16.1, expecting the CLIA number, NPI, OID, or other ID for the assigning authority.
Assigning Authority ID Type	OBR-16.9.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-16.9.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Name Type Code	OBR-16.10	ID		RE	Defines the type of name in OBR-16. Use of legal name ("L") is expected by VDH. If empty, legal name is assumed. See Table HL70200 – Name Type for other valid values.
Identifier Type Code	OBR-16.13	IS		CE	Component identifies the type of ID in OBR-16.1. Expecting "NPI" (if an NPI is used in OBR-16.1). See Table HL70203 – Identifier Type Code for other valid values.
Assigning Facility	OBR-16.14	HD	227	RE	Identifies the facility that assigned the ordering provider ID in OBR-16.1. Note that if an NPI is used in OBR-16.1, there is no assigning facility, and this field will be empty.
Assigning Facility Name	OBR-16.14.1	IS	20	RE	The name of the facility that assigned the ordering provider ID. This field will be empty if an NPI is used in OBR-16.1.
Assigning Facility ID	OBR-16.14.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility. This field will be empty if an NPI is used in OBR-16.1.

Field Name	Seq	DT	Length	Use	Notes/Value Set																				
Assigning Facility ID Type	OBR-16.14.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-16.14.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.																				
Order Callback Phone Number	OBR-17	XTN	250	RE	The ordering provider's phone number. Although this field is classified as "RE" it is important for public health follow-up and the information should be provided, if possible.																				
Telecom Use Code	OBR-17.2	ID		RE	<p>Defines the type of phone number in OBR-17. VDH prefers to receive the work number ("WPN"). Expecting code value only. Valid values are (Table HL70201):</p> <table border="1"> <thead> <tr> <th>Value (Code)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>ASN</td> <td>Answering Service Number</td> </tr> <tr> <td>BPN</td> <td>Beeper Number</td> </tr> <tr> <td>EMR</td> <td>Emergency Number</td> </tr> <tr> <td>NET</td> <td>Network (email) Address</td> </tr> <tr> <td>ORN</td> <td>Other Residence Number</td> </tr> <tr> <td>PRN</td> <td>Primary Residence Number</td> </tr> <tr> <td>PRS</td> <td>Personal</td> </tr> <tr> <td>VHN</td> <td>Vacation Home Number</td> </tr> <tr> <td>WPN</td> <td>Work Number</td> </tr> </tbody> </table>	Value (Code)	Description	ASN	Answering Service Number	BPN	Beeper Number	EMR	Emergency Number	NET	Network (email) Address	ORN	Other Residence Number	PRN	Primary Residence Number	PRS	Personal	VHN	Vacation Home Number	WPN	Work Number
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WPN	Work Number																								

Field Name	Seq	DT	Length	Use	Notes/Value Set																				
Telecom Equipment Type	OBR-17.3	ID		RE	<p>Defines the type of technology/equipment for the phone number in OBR-17. VDH prefers to receive the telephone ("PH"). Expecting code values only. Valid values are (Table HL70202):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>BP</td> <td>Beeper</td> </tr> <tr> <td>CP</td> <td>Cellular Phone</td> </tr> <tr> <td>FX</td> <td>Fax</td> </tr> <tr> <td>Internet</td> <td>Internet Address: Use Only if Telecommunication Use Code is NET</td> </tr> <tr> <td>MD</td> <td>Modem</td> </tr> <tr> <td>PH</td> <td>Telephone</td> </tr> <tr> <td>TDD</td> <td>Telecommunication Device for the Deaf</td> </tr> <tr> <td>TTY</td> <td>Teletypewriter</td> </tr> <tr> <td>X.400</td> <td>X.400 email address: Use Only if Telecommunication Use Code is NET</td> </tr> </tbody> </table>	Value	Description	BP	Beeper	CP	Cellular Phone	FX	Fax	Internet	Internet Address: Use Only if Telecommunication Use Code is NET	MD	Modem	PH	Telephone	TDD	Telecommunication Device for the Deaf	TTY	Teletypewriter	X.400	X.400 email address: Use Only if Telecommunication Use Code is NET
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TTY	Teletypewriter																								
X.400	X.400 email address: Use Only if Telecommunication Use Code is NET																								
Area Code	OBR-17.6	NM	3	CE	The area code of the ordering provider's telephone number.																				
Phone Number	OBR-17.7	NM	7	CE	The ordering provider's local telephone number.																				
Extension	OBR-17.8	NM		CE	The ordering provider's telephone extension.																				
Unformatted Telephone Number	OBR-17.12	ST		RE	The ordering provider's unformatted telephone number.																				
Results Rpt/Status Change – Date/Time	OBR-22	TS	26	R	<p>This field specifies the date/time the results were reported, or status changed.</p> <p>Format: YYYYMMDD[HHMM[SS]]</p>																				

Field Name	Seq	DT	Length	Use	Notes/Value Set								
Result Status	OBR-25	ID	1	R	<p>This field contains the status of the results for the order. Expecting code value only. Valid values include (excerpt of Table HL70123):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Some, but not all, results available.</td> </tr> <tr> <td>C</td> <td>Correction to results</td> </tr> <tr> <td>F</td> <td>Final results; results stored and verified. Can only be changed with a corrected result.</td> </tr> </tbody> </table>	Value	Description	A	Some, but not all, results available.	C	Correction to results	F	Final results; results stored and verified. Can only be changed with a corrected result.
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A	Some, but not all, results available.												
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F	Final results; results stored and verified. Can only be changed with a corrected result.												
Parent Result	OBR-26	PRL	400	CE	This field is only needed when a test must be linked to a “parent” test result. Together with OBR-29 (Parent), this field allows this result to be linked to a specific OBX segment associated with another OBR segment.								
OBX-3 Observation Identifier	OBR-26.1	CE	483	R	Must be the value from the parent OBX-3.								
OBX-4 Sub-ID	OBR-26.2	ST	20	RE	Must be the value from the parent OBX-4.								
OBX-5 Observation Value	OBR-26.3	TX	250	RE	Must be the value from the parent OBX-5.2 or OBX-5.5 or OBX-5.9 (in this priority order).								
Parent	OBR-29	EIP	200	CE	Only needed if you reference a parent result. Commonly used with microbiology messages to link a susceptibility result with the parent culture that identified the organism.								
Placer Order Number	OBR-29.1	EI	427	RE	The order number of the entity that placed the order. If OBR-2 (Placer Order Number) is populated, then this field must contain the same value.								
Order Number	OBR-29.1.1	ST	199	R	The placer order number from the parent OBR-2.								
Assigning Authority Name	OBR-29.1.2	IS	20	RE	The name of the assigning authority that assigned the placer order number.								
Assigning Authority ID	OBR-29.1.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.								

Field Name	Seq	DT	Length	Use	Notes/Value Set
Assigning Authority ID Type	OBR-29.1.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-29.1.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Filler Order Number	OBR-29.2	EI	427	R	The order number of the entity that carries out the order. This field should contain the same value as OBR-3.
Order Number	OBR-29.2.1	ST	199	R	The filler order number from the parent OBR-3.
Assigning Authority Name	OBR-29.2.2	IS	20	RE	The name of the assigning authority that assigned the filler order number.
Assigning Authority ID	OBR-29.2.3	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBR-29.2.4	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBR-29.2.3, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Reason for Study	OBR-31	ST		RE	ICD-10 codes are expected.
Identifier	OBR-31.1	ST		RE	ICD-10 codes are expected to describe the reason for study. Expecting code value only.
Text	OBR-31.2	ST	100	CE	The standardized text description that corresponds with the code in OBR-31.1. VDH data systems have a maximum text length of 100 characters in OBR-31.2.
Name of Coding System	OBR-31.3	ST		CE	Literal value "IC10" when ICD-10 codes are used in OBR-31.1.

OBSERVATION/RESULT SEGMENT (OBX)

For laboratory testing, the observation/result (OBX) segment normally reports the results of a test performed on a specimen. Each OBX segment contains information regarding a single observation result including the test type, result, and time.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – OBX	OBX-1	SI	4	R	For the first OBX segment, under an OBR, the Set ID shall be “1”, for a second OBX segment under the same OBR, the Set ID shall be “2”, etc. Subsequent OBX segments should increment the Set ID field.
Value Type	OBX-2	ID	3	RE	This field identifies the data type used in OBX-5. VDH requires the use of Coded with Exceptions (“CWE”) or Structured Numeric (“SN”) data types. See Table HL70125 – Value Type for reference.
Observation Identifier	OBX-3	CWE		R	This field contains a unique identifier for the observation/result. For observations in general, LOINC <i>must</i> be used as the standard coding system in OBX-3.1 to OBX-3.3. A local code and local observation name may also be sent in OBX-3.4 to OBX-3.6. When a valid LOINC does not exist, the local code may be the only code sent.
Code (LOINC)	OBX-3.1	ST	20	R	Expecting a LOINC for the observation/result, if an appropriate LOINC exists. NOTE: Pregnancy information should be provided as a discrete result (separate OBX segment) using LOINC in OBX-3 and appropriate SNOMED-CT code in OBX-5. Please consult the ELR team for mapping guidance if Pregnancy status is included as an Observation (OBX)
Description (LOINC)	OBX-3.2	ST	199	RE	Expecting the standardized text description for the LOINC in OBX-3.1.
ID Type (LOINC)	OBX-3.3	ST	12	R	Literal value: “LN”, if OBX-3.1 and OBX-3.2 are populated.
Code (Local)	OBX-3.4	ST	20	RE	Alternate local code the laboratory uses to uniquely identify the observation/result.
Description (Local)	OBX-3.5	ST	199	CE	The text description for the local code in OBX-3.4.
ID Type (Local)	OBX-3.6	ST	12	CE	Identifies the type of code in OBX-3.4. For local code sets, expecting “L” OR “99ZZZ”, where “ZZZ” represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-3.7	ST	10	RE	Version of the LOINC coding system used in OBX-3.1.
Alternate Coding System Version ID	OBX-3.8	ST	10	RE	Version of the laboratory’s internal coding system used in OBX-3.4.
Observation Sub-ID	OBX-4	ST	20	CE	This field is used to distinguish between multiple OBX segments (under the same parent OBR) with the same observation ID (OBX-3).

Field Name	Seq	DT	Length	Use	Notes/Value Set
Observation Value	OBX-5	Varies	99999	RE	This field contains the results of the observation/test in OBX-3. The structure of OBX-5 is defined by OBX-2. If findings are quantitative or other numeric values, they should be presented as Structured Numeric (SN) data type. If findings are qualitative or other coded results, they should be presented as Coded with Exceptions (CWE) data type using SNOMED. NOTE: Pregnancy information should be provided as a discrete result (separate OBX segment) using LOINC in OBX-3 and appropriate SNOMED-CT code in OBX-5.
CWE format for OBX-5 (5.1 to 5.9)					<i>CWE data type</i> – used to carry coded results including: <ul style="list-style-type: none"> Organisms – <i>/17872004^Neisseria meningitidis^SCT/</i> Modifiers – <i>/260373001^Detected^SCT/</i>
Identifier (SNOMED)	OBX-5.1	ST	20	R	Expecting a SNOMED code identifying the observation/result.
Text (SNOMED)	OBX-5.2	ST	199	R	Expecting a text description for the SNOMED code in OBX-5.1.
Name of Coding System (SNOMED)	OBX-5.3	ID	12	R	Identifies the type of code in OBX-5.1. Literal value: “SCT”, if OBX-5.1 and OBX-5.2 are populated.
Alternate Identifier (Local)	OBX-5.4	ST	20	RE	Alternate local code the laboratory uses to uniquely identify the result.
Alternate Text (Local)	OBX-5.5	ST	199	CE	The text description for the local code in OBX-5.4.
Name of Alternate Coding System (Local)	OBX-5.6	ID	12	CE	Identifies the type of code in OBX-5.4. For local code sets, expecting “L” OR “99ZZZ”, where “ZZZ” represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-5.7	ST	10	RE	Version of the SNOMED coding system used in OBX-5.1.
Alternate Coding System Version ID	OBX-5.8	ST	10	RE	Version of the laboratory’s internal coding system used in OBX-5.4
Original Text	OBX-5.9	ST	199	RE	Expecting a text description of the result. If a valid SNOMED code and alternate identifier are not present, then this component is required.

Field Name	Seq	DT	Length	Use	Notes/Value Set
SN format for OBX-5 (5.1 to 5.4)					<i>SN data type</i> – used to carry numeric result values including: <ul style="list-style-type: none"> Intervals – ⁰¹ (between 0 and 1) Ratios – ¹² or ¹:² (ratio of 1 to 2) Inequalities – <¹⁰ (less than 10) Categorical – ²⁺
Comparator	OBX-5.1	ST	2	RE	Must be one of ">" or "<" or ">=" or "<=" or "=" or "<>". This component defaults to "=" if empty.
Num1	OBX-5.2	NM		RE	Expecting a numeric value.
Separator/Suffix	OBX-5.3	ST	1	RE	Must be one of "-" or "+" or "/" or "." or ":".
Num2	OBX-5.4	NM		RE	Expecting a numeric value.
Units	OBX-6	CWE	250	CE	This field contains the units of measure for numeric values in OBX-5. If OBX-2 = "SN" then this field is required.
Identifier	OBX-6.1	ST	20	RE	Expecting a Unified Code for Units of Measure (UCUM). Visit HL7 for commonly used UCUM codes.
Text	OBX-6.2	ST	199	CE	Expecting the standardized text description for the UCUM code in OBX-6.1.
Name of Coding System	OBX-6.3	ID	20	CE	Identifies the type of code in OBX-6.1. Literal value: "UCUM", if OBX-6.1 and OBX-6.2 are populated.
Alternate Identifier	OBX-6.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the unit of measure.
Alternate Text	OBX-6.5	ST	199	CE	Expecting a text description for the local code in OBX-6.4.
Name of Alternate Coding System	OBX-6.6	ID	20	CE	Identifies the type of code in OBX-6.4. For local code sets, expecting "L" OR "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-6.7	ST	10	RE	Version of the UCUM coding system used in OBX-6.1.
Alternate Coding System Version ID	OBX-6.8	ST	10	RE	Version of the laboratory's internal coding system used in OBX-6.4.

Field Name	Seq	DT	Length	Use	Notes/Value Set										
Reference Range	OBX-7	ST	60	RE	Interpretation range that applies to the value reported in OBX-5. It should provide enough information to understand the abnormal flags reported in OBX-8.										
Abnormal Flags	OBX-8	CWE	20	CE	Indicates whether the result in OBX-5 is abnormal.										
Identifier	OBX-8.1	ID	12	RE	Indicates the type of abnormal result. See Table HL70078 – Abnormal Flags for valid values. Expecting code value only. Valid values include (excerpt of Table HL70078): <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Abnormal</td> </tr> <tr> <td>H</td> <td>Above high normal</td> </tr> <tr> <td>L</td> <td>Below low normal</td> </tr> <tr> <td>LL</td> <td>Below lower panic limits</td> </tr> </tbody> </table>	Value	Description	A	Abnormal	H	Above high normal	L	Below low normal	LL	Below lower panic limits
Value	Description														
A	Abnormal														
H	Above high normal														
L	Below low normal														
LL	Below lower panic limits														
Text	OBX-8.2	TX	80	CE	Expecting the standardized text description that corresponds with the code in OBX-8.1.										
Name of Coding System	OBX-8.3	ST	25	CE	Identifies the type of code in OBX-8.1. Literal value: “HL70078”, if OBX-8.1 and OBX-8.2 are populated.										
Alternate Identifier	OBX-8.4	ID	12	RE	An alternate code the laboratory uses to uniquely identify the abnormal flag.										
Alternate Text	OBX-8.5	TX	80	CE	The text description that corresponds with the local code in OBX-8.4.										
Name of Alternate Coding System	OBX-8.6	ST	25	CE	Identifies the type of code in OBX-8.4. For local code sets, expecting “L” OR “99ZZZ”, where “ZZZ” represents the alphanumeric characters used to identify the local coding system.										
Coding System Version ID	OBX-8.7	ST	10	RE	Version of the HL70078 coding system used in OBX-8.1.										
Alternate Coding System Version ID	OBX-8.8	ST	10	RE	Version of the laboratory’s internal coding system used in OBX-8.4.										

Field Name	Seq	DT	Length	Use	Notes/Value Set												
Observation Result Status	OBX-11	ID	1	R	<p>This field contains the status of the result for the observation. Expecting code value only. Valid values include (excerpt of Table HL70085):</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>Record coming over is a correction and thus replaces a final result</td> </tr> <tr> <td>F</td> <td>Final results; Can only be changed with a corrected result</td> </tr> <tr> <td>P</td> <td>Preliminary results</td> </tr> <tr> <td>S</td> <td>Partial results</td> </tr> <tr> <td>W</td> <td>Post original as wrong</td> </tr> </tbody> </table>	Value	Description	C	Record coming over is a correction and thus replaces a final result	F	Final results; Can only be changed with a corrected result	P	Preliminary results	S	Partial results	W	Post original as wrong
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Date/Time of the Observation	OBX-14	TS	26	O	<p>The clinically relevant date/time of the observation. For specimen-based laboratory reporting, provide the specimen collection date and time. This field must contain the same value as OBR-7 and SPM-17.1. Format: YYYYMMDD[HHMM[SS]]</p>												
Producer's Reference	OBX-15	CWE		O	<p>If populated, the field must identify the same performing organization as that identified in OBX-23 (Performing Organization Name).</p>												
Identifier	OBX-15.1	ST		R	<p>The producer's identifier; expecting a CLIA.</p>												
Text	OBX-15.2	ST		R	<p>The name of the producer, which corresponds to the identifier in OBX-15.1.</p>												
Identifier Type Code	OBX-15.3	ID		CE	<p>Component identifies the type of ID in OBX-15.1.</p>												
Observation Method	OBX-17	CWE	250	RE	<p>Method of testing by the laboratory. If the LOINC in OBX-3 does not indicate the test method, this field shall be populated. This field is required for COVID-19 messages only. Guidance can be found on the CDC LIVD Mapping Tool.</p>												
Identifier	OBX-17.1	ST	20	RE	<p>Optional for non-COVID lab results. Expecting a lab test method code from PHVS LabTestMethods CDC – Observation Methods.</p>												

Field Name	Seq	DT	Length	Use	Notes/Value Set
Text	OBX-17.2	ST	199	CE	The standardized text description that corresponds with the lab test method code in OBX-17.1. Expected to be empty if reporting COVID-19 testing
Name of Coding System	OBX-17.3	ID	20	CE	Identifies the type of code in OBX-17.1. Literal value: "CDCPHVS", if OBX-17.1 and OBX-17.2 are populated. For COVID-19, literal value: "99ELR"
Alternate Identifier	OBX-17.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the observation method.
Alternate Text	OBX-17.5	ST	199	CE	The text description that corresponds with the local code in OBX-17.4.
Name of Alternate Coding System	OBX-17.6	ID	20	CE	Identifies the type of code in OBX-17.4. For local code sets, expecting "L" OR "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	OBX-17.7	ST	10	RE	Version of the PHVS_LabTestMethods_CDC – Observation Methods coding system used in OBX-17.1.
Alternate Coding System Version ID	OBX-17.8	ST	10	RE	Version of the laboratory's internal coding system used in OBX-17.4.
Date/Time of Analysis	OBX-19	TS	26	RE	Date and time when the specimen testing was performed. Format: YYYYMMDD[HHMM[SS]]
Performing Organization Name	OBX-23	XON	567	R	This field identifies the laboratory that produced the test result described in this OBX segment.
Organization Name	OBX-23.1	ST	50	CE	The name of the laboratory that produced the test result. Please discuss format of name and any abbreviations with VDH.
Organization Name Type	OBX-23.2	IS	20	RE	Defines the type of name in OBX-23.1. Use of legal name ("L") is expected by VDH. If empty, legal name is assumed. See Table HL70204 – Organizational Name Type for other valid values.
Assigning Authority	OBX-23.6	HD	227	CE	Identifies the system, application, or organization that assigned the performing laboratory ID in OBX-23.10.
Assigning Authority Name	OBX-23.6.1	IS	20	RE	The name of the assigning authority that assigned the performing laboratory ID in OBX-23.10. "CLIA" is expected.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Assigning Authority ID	OBX-23.6.2	ST	199	R	The CLIA number, NPI, OID or other ID for the assigning authority. If a CLIA number is used in OBX-23.10, "2.16.840.1.113883.4.7" is expected.
Assigning Authority ID Type	OBX-23.6.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBX-23.6.2, "NPI" if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Identifier Type Code	OBX-23.7	ID		CE	Literal value: "XX", if OBX-23.10 is populated.
Organization Identifier	OBX-23.10	ST		RE	The performing laboratory identifier. The CLIA number is expected.
Performing Organization Address	OBX-24	XAD	106	R	This field identifies the performing laboratory address.
Street Address Line 1	OBX-24.1	ST	100	RE	The performing laboratory's street/mailling address (e.g., "123 Main St."). If the performing laboratory's address has a suite number, please include it in Street Address Line 1.
Street Address Line 2	OBX-24.2	ST	100	RE	If Street Address Line 1 exceeds the character limit, then include additional address information in Street Address Line 2.
City	OBX-24.3	ST	50	RE	The city in which the performing laboratory is located.
State	OBX-24.4	ST	50	RE	The state in which the performing laboratory is located. Use the U.S. Postal Service 2-character state abbreviation (e.g., VA).
ZIP or Postal Code	OBX-24.5	ST	12	RE	The zip code of the performing laboratory's address. Use a valid 5-digit zip code.
Country	OBX-24.6	ID	3	RE	Expecting "USA". This field contains the country code where the addressee is located. Refer to Table HL70399 – Country Code for valid 3-character codes as defined by ISO 3166-1. If the field is not valued, then "USA" is assumed.
Address Type	OBX-24.7	ID	3	RE	Defines the type of address in OBX-24. Type code "B" (Business) from Table HL70190 – Address Type is expected. If performing laboratory address is submitted, this field is required.
County Code	OBX-24.9	IS	20	RE	Submit the FIPS code for the performing laboratory address. If address is in an independent city in Virginia, submit the city FIPS code. Use the two-digit VA state code ("51") followed by the three-digit county/city-specific code.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Performing Organization Medical Director	OBX-25	XCN	3002	RE	This field identifies the performing laboratory's medical director.
ID number	OBX-25.1	ST		RE	The medical director's ID number. The National Provider Identifier (NPI) is recommended.
Last Name	OBX-25.2	FN		RE	The medical director's family name/surname.
First Name	OBX-25.3	ST		RE	The medical director's given name.
Middle Name/Initials	OBX-25.4	ST		RE	The medical director's middle initial or middle name.
Suffix	OBX-25.5	ST		RE	The medical director's suffix (e.g., JR or III).
Prefix	OBX-25.6	ST		RE	The medical director's prefix (e.g., DR).
Assigning Authority	OBX-25.9	HD	227	CE	Identifies the system, application, or organization that assigned the medical director ID in OBX-25.1.
Assigning Authority Name	OBX-25.9.1	IS	20	RE	Expecting "CMS" if an NPI is used in OBX-25.1. If another type of identifier is used in OBX-25.1, expecting the name of the assigning authority for this identifier.
Assigning Authority ID	OBX-25.9.2	ST	199	R	Expecting the CMS OID "2.16.840.1.113883.3.249" if an NPI is used in OBX-25.1. If another identifier is used in OBX-25.1, expecting the CLIA number, NPI, OID or other ID for the assigning authority.
Assigning Authority ID Type	OBX-25.9.3	ID	6	R	Expecting "CLIA" if a CLIA number is used in OBX-25.9.2, "NPI", if an NPI is used, "ISO" if an OID is used, or "ID" if an alternate identifier is used.
Name Type Code	OBX-25.10	ID		RE	Defines the type of name in OBX-25. Use of legal name ("L") is expected by VDH. If empty, legal name is assumed. See Table HL70200 – Name Type for other valid values.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Identifier Type Code	OBX-25.13	IS		CE	Component identifies the type of ID in OBX-25.1. Expecting “NPI” (if an NPI is used in OBX-25.1). See Table HL70203 – Identifier Type Code for other valid values.
Assigning Facility	OBX-25.14	HD	227	RE	Identifies the facility that assigned the medical director ID in OBX-25.1. Note that if an NPI is used in OBX-25.1, there is no assigning facility, and this field will be empty.
Assigning Facility Name	OBX-25.14.1	IS	20	RE	The name of the facility that assigned the medical director ID. This field will be empty if an NPI is used in OBX-25.1.
Assigning Facility ID	OBX-25.14.2	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility. This field will be empty if an NPI is used in OBX-25.1.
Assigning Facility ID Type	OBX-25.14.3	ID	6	R	Expecting “CLIA” if a CLIA number is used in OBX-25.14.2, “NPI” if an NPI is used, “ISO” if an OID is used, or “ID” if an alternate identifier is used.

OBX NTE

The NTE segment is a common format for sending notes and comments. This optional, repeating segment may be inserted after any of the OBX segments. The NTE segment applies to the information in the segment that immediately precedes it.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – NTE	NTE-1	SI	4	R	For the first NTE segment, the Set ID shall be “1”, for a second NTE segment, the Set ID shall be “2”, etc. Subsequent NTE segments under the same parent segment should increment the Set ID field.
Source of Comment	NTE-2	ID	8	RE	Expecting value “P” if orderer/placer is source of comment or “L” if lab/filler department is source of comment. Values are from Table HL70105 – Source of Comment .

Field Name	Seq	DT	Length	Use	Notes/Value Set
Comment	NTE-3	FT	1999	R	Please include any relevant comments pertaining to the test results in the preceding OBX segment. If the Comment exceeds the character limit, another Comment segment will need to be added to accommodate the remaining relevant information.
Comment Type	NTE-4	CE	60	RE	This field contains a value to identify the type of comment in NTE-3. Please see Table HL70364 – Comment Type for valid values.

SPECIMEN SEGMENT (SPM)					
The Specimen (SPM) segment contains information regarding the type of specimen, where and how it was collected, who collected it, and some basic characteristics of the specimen.					
Field Name	Seq	DT	Length	Use	Notes/Value Set
Set ID – SPM	SPM-1	SI	4	R	For the first SPM segment, the Set ID shall be “1”, for a second SPM segment, the Set ID shall be “2”, etc. Subsequent SPM segments should increment the Set ID field.
Specimen ID	SPM-2	EIP	80	R	A unique identifier for the specimen. Generally, the accession number is the specimen ID.
Filler Assigned Specimen ID	SPM-2.2	EI	427	R	A unique laboratory assigned specimen identifier.
Specimen Identifier	SPM-2.2.1	ST	199	R	The specimen identifier. The identifier should be unique within the laboratory. If specimen identifiers are ever reused, a date stamp may need to be added to the end of the identifier to guarantee uniqueness.
Assigning Facility Name	SPM-2.2.2	IS	20	RE	The name of the facility that assigned the specimen ID.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Assigning Facility ID	SPM-2.2.3	ST	199	R	The CLIA number, NPI, OID, or other ID for the assigning facility.
Assigning Facility ID Type	SPM-2.2.4	ID	6	R	Expecting “CLIA” if a CLIA number is used in SPM-2.2.3, “NPI” if an NPI is used, “ISO” if an OID is used, or “ID” if an alternate identifier is used.
Specimen Type	SPM-4	CWE	250	R	Identifies the source of the specimen.
Identifier	SPM-4.1	ST	20	RE	Expecting a unique identifier for the specimen. Please use SNOMED specimen codes or identifiers from Table HL70487 – Specimen Type .
Description	SPM-4.2	ST	199	CE	Expecting the standardized text description for the specimen identifier in SPM-4.1.
Name of Coding System	SPM-4.3	ID	20	CE	Identifies the type of code in SPM-4.1. Expecting “SCT”, if a SNOMED specimen code is used or “HL70487”, if a specimen code from Table HL70487 is used.
Alternate Identifier	SPM-4.4	ST	20	RE	Alternate code the laboratory uses to uniquely identify the specimen.
Alternate Text	SPM-4.5	ST	199	CE	The text description for the code in SPM-4.4.
Name of Alternate Coding System	SPM-4.6	ID	20	CE	Identifies the type of code in SPM-4.4. If a specimen code from Table HL70070 – Specimen Source is used in SPM-4.4, expecting “HL70070”. For local code sets, expecting “L” OR “99ZZZ”, where “ZZZ” represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-4.7	ST	10	RE	Version of the coding system used in SPM-4.1.
Alternate Coding System Version ID	SPM-4.8	ST	10	RE	Version of the laboratory’s internal coding system used in SPM-4.4.
Specimen Type Modifier	SPM-5	CWE	250	RE	Together with SPM-4 (Specimen Type), this field allows for further identification of the specimen.
Identifier	SPM-5.1	ST	20	RE	Expecting a code for the specimen type modifier. Please see PHVS ModifierOrQualifier CDC – Modifier or Qualifier for valid values.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Description	SPM-5.2	ST	199	CE	Expecting the standardized text description for the code in SPM-5.1.
Name of Coding System	SPM-5.3	ID	20	CE	Identifies the type of code in SPM-5.1. Literal value: "SCT", if SPM-5.1 and SPM-5.2 are populated.
Alternate Identifier	SPM-5.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen type modifier.
Alternate Text	SPM-5.5	ST	199	CE	Expecting a text description for the local code in SPM-5.4.
Coding System Version ID	SPM-5.7	ST	10	RE	Version of the SNOMED coding system used in SPM-5.1.
Alternate Coding System Version ID	SPM-5.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-5.4.
Specimen Additives	SPM-6	CWE	250	RE	Information regarding any substances added to the specimen before or at the time of specimen collection.
Identifier	SPM-6.1	ST	20	RE	Expecting a code for the specimen additive. Please see Table HL70371 – Specimen Additives for valid values.
Description	SPM-6.2	ST	199	CE	Expecting the standardized text description for the code in SPM-6.1.
Name of Coding System	SPM-6.3	ID	20	CE	Identifies the type of code in SPM-6.1. Literal value: "HL70371", if SPM-6.1 and SPM-6.2 are populated.
Alternate Identifier	SPM-6.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen additive.
Alternate Text	SPM-6.5	ST	199	CE	Expecting a text description for the local code in SPM-6.4.
Name of Alternate Coding System	SPM-6.6	ID	20	CE	Identifies the type of code in SPM-6.4. For local code sets, expecting "L" OR "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-6.7	ST	10	RE	Version of the coding system used in SPM-6.1.
Alternate Coding System Version ID	SPM-6.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-6.4.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Specimen Collection Method	SPM-7	CWE	250	RE	Identifies the method used to collect the specimen.
Identifier	SPM-7.1	ST	20	RE	Expecting a code for the specimen collection method. Use SNOMED specimen codes or values from Table HL70488 – Specimen Collection Method .
Description	SPM-7.2	ST	199	CE	Expecting the standardized text description for the code in SPM-7.1.
Name of Coding System	SPM-7.3	ID	20	CE	Identifies the type of code in SPM-7.1. Expecting “SCT” if a SNOMED specimen code is used in SPM-7.1 and SPM-7.2 or “HL70488” if a specimen code from Table HL70488 is used.
Alternate Identifier	SPM-7.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen collection method.
Alternate Text	SPM-7.5	ST	199	CE	Expecting a text description for the local code in SPM-7.4.
Name of Alternate Coding System	SPM-7.6	ID	20	CE	Identifies the type of code in SPM-7.4. For local code sets, expecting “L” OR “99ZZZ”, where “ZZZ” represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-7.7	ST	10	RE	Version of the coding system used in SPM-7.1.
Alternate Coding System Version ID	SPM-7.8	ST	10	RE	Version of the laboratory’s internal coding system used in SPM-7.4.
Specimen Source Site	SPM-8	CWE	250	RE	Identifies the source from which the specimen was obtained. For biological samples, the source may be the anatomical site where the specimen was collected.
Identifier	SPM-8.1	ST	20	RE	Expecting a code for the specimen source site. Please see PHVS_BodySite_HITSP – Body Site for valid values.
Description	SPM-8.2	ST	199	CE	Expecting the standardized text description for the code in SPM-8.1.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Name of Coding System	SPM-8.3	ID	20	CE	Identifies the type of code in SPM-8.1. Literal value: "SCT", if SPM-8.1 and SPM-8.2 are populated.
Alternate Identifier	SPM-8.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen source site.
Alternate Text	SPM-8.5	ST	199	CE	Expecting a text description for the local code in SPM-8.4.
Name of Alternate Coding System	SPM-8.6	ID	20	CE	Identifies the type of code in SPM-8.4. For local code sets, expecting "L" OR "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-8.7	ST	10	RE	Version of the coding system used in SPM-8.1.
Alternate Coding System Version ID	SPM-8.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-8.4.
Original Text	SPM-8.9	ST		RE	If specimen source site identifier and alternate identifier are not present, then this component is desired.
Specimen Source Site Modifier	SPM-9	CWE	250	RE	Together with SPM-8 (Specimen Source Site), this field allows for further identification of the source from which the specimen was obtained.
Identifier	SPM-9.1	ST	20	RE	Expecting a code for the specimen source site modifier. Please see PHVS ModifierOrQualifier – Modifier or Qualifier for valid values.
Description	SPM-9.2	ST	199	CE	Expecting the standardized text description for the code in SPM-9.1.
Name of Coding System	SPM-9.3	ID	20	CE	Identifies the type of code in SPM-9.1. Literal value: "SCT", if SPM-9.1 and SPM-9.2 are populated.
Alternate Identifier	SPM-9.4	ST	20	RE	An alternate code the laboratory uses to uniquely identify the specimen source site modifier.
Alternate Text	SPM-9.5	ST	199	CE	Expecting a text description for the local code in SPM-9.4.

Field Name	Seq	DT	Length	Use	Notes/Value Set
Name of Alternate Coding System	SPM-9.6	ID	20	CE	Identifies the type of code in SPM-9.4. For local code sets, expecting "L" OR "99ZZZ", where "ZZZ" represents the alphanumeric characters used to identify the local coding system.
Coding System Version ID	SPM-9.7	ST	10	RE	Version of the coding system used in SPM-9.1.
Alternate Coding System Version ID	SPM-9.8	ST	10	RE	Version of the laboratory's internal coding system used in SPM-9.4.
Specimen Collection Site	SPM-10	CWE	250	O	This optional field differs from SPM-8 (Specimen Source Site) in that it identifies the point of entry into the source site for specimen collection.
Specimen Collection Amount	SPM-12	CQ	20	RE	Identifies the amount of specimen collected. This can be reported as a volume or a weight/mass.
Quantity	SPM-12.1	NM	16	R	This field contains the quantity of the specimen collected.
Units	SPM-12.2	CE	183	RE	This field contains the units of measure for the amount of specimen collected.
Specimen Description	SPM-14	ST	250	O	This field contains additional information about the specimen.
Specimen Collection Date/Time	SPM-17	DR	26	R	Identifies the date and time range over which the sample was collected.
Range Start Date/Time	SPM-17.1	TS	26	RE	The date and time when specimen collection started. This value should match OBR-7 (Observation Start Time) and OBX-14 (Date/Time of the Observation). Format: YYYYMMDD[HHMM[SS]]
Range End Date/Time	SPM-17.2	TS	26	RE	The date and time when specimen collection stopped. This value should match OBR-8 (Observation End Date/Time). Format: YYYYMMDD[HHMM[SS]]
Specimen Received Date/Time	SPM-18	TS	26	R	Identifies the date and time when the specimen was received at the diagnostic service. Format: YYYYMMDD[HHMM[SS]]

Value Sets

The value sets used in the ELR message are listed below, with links to allow you to access the full value sets. Most value sets associated with ELR 2.5.1 messaging are available from the PHIN VADS site at <https://phinvads.cdc.gov/vads/SearchVocab.action>. PHIN VADS is a web-based enterprise vocabulary system for accessing, searching, and distributing vocabularies used in public health and clinical care practice.

[CDC LIVD Mapping Tool](#)

[Commonly Used UCUM Codes for Healthcare Units](#)

[PHVS LabTestMethods CDC](#) – Observation Methods

[PHVS ModifierOrQualifier CDC](#) – Modifier or Qualifier

[PHVS BodySite HITSP](#) – Body Site

[Table HL70001 – Administrative Sex](#)

[Table HL70002 – Marital Status](#)

[Table HL70004 – Patient Class](#)

[Table HL70005 – Race](#)

[Table HL70007 – Admission Type](#)

[Table HL70063 – Relationship](#)

[Table HL70070 – Specimen Source](#)

[Table HL70078 – Abnormal Flags](#)

[Table HL70085 – Observation Result Status](#)

[Table HL70105 – Source of Comment](#)

[Table HL70123 – Result Status](#)

[Table HL70125 – Value Type](#)

[Table HL70131 – Contact Role](#)

[Table HL70155 – Acknowledgement Type](#)

[Table HL70189 – Ethnic Group](#)

[Table HL70190 – Address Type](#)

[Table HL70200 – Name Type](#)

[Table HL70201 – Telecommunication Use Code](#)

[Table HL70202 – Telecommunication Equipment Type](#)

[Table HL70203 – Identifier Type Code](#)

[Table HL70204 – Organizational Name Type](#)

[Table HL70364 – Comment Type](#)

[Table HL70371 – Specimen Additives](#)

[Table HL70399 – Country Code](#)

[Table HL70487 – Specimen Type](#)

[Table HL70488 – Specimen Collection Method](#)

Revision History

VERSION	RELEASED	APPROVED BY	BRIEF DESCRIPTION
Version 1.0	2011		<ul style="list-style-type: none"> Version 1.0.
Version 2.0	12/4/2012		<ul style="list-style-type: none"> Additions and changes to the PV1 and NK1 segments.
Version 3.0	4/18/2014	VDH ELR Workgroup	<ul style="list-style-type: none"> Significant revisions throughout the document reflecting changes in HL7 standards and VDH ELR submission requirements. Revisions include: Addition of the <i>Onboarding Process for ELR in Virginia</i>. Addition of the <i>General VDH Submission Requirements</i>. Defined acceptable identifiers (e.g., CLIA numbers, OIDS) and vocabulary (e.g., LOINC, SNOMED, UCUM). Refined guidance on ELR message segments, structure, and formatting.
Version 3.5	8/1/2014	VDH ELR Workgroup	<ul style="list-style-type: none"> Updated VDH expectations for MSH-15 (Accept Acknowledgement Type). Corrected the CMS OID from “2.6.840.1.113883.19.4.6” to “2.16.840.1.113883.3.249”. Defined “order callback phone number” in OBR-17 to be the ordering provider’s phone number rather than the ordering facility’s phone number. Added the <i>Revision History</i>.
Version 4	9/22/2014	VDH ELR Workgroup	<ul style="list-style-type: none"> Updated submission requirements for MSH-21 (Message Profile Identifier). Updated submission requirements (from “United States” to “USA”) for address country codes.
Version 4.5	1/12/2015	VDH ELR Workgroup	<ul style="list-style-type: none"> Updated <i>Onboarding Process for ELR in Virginia</i> section. Determined NK1-3 field should be submitted as a triplet (NK1-3.1, NK1-3.2, NK1-3.3). Identified data types and field lengths for OBX-8 (Abnormal Flags), OBX-6 (Units), and OBX-17 (Observation Method). Updated fax number from (804) 864-7970 to (804) 864-8052 for faxing paper lab copies.
Version 5.0	8/1/2018	VDH ELR Workgroup	<ul style="list-style-type: none"> Addition of LOINC and SNOMED resources link under Useful Resources section. Significant additions made to the NK1 segment. Addition of the Patient Visit Information (PV1) segment. Addition of the fields PID-14.9, PID-16, NK1-5.12, NK1-7, ORC-14, ORC-17, ORC-23.12, OBR-17.12, OBR-31, OBX-15, and SPM-8.9. Updated definition of Ordering Organization in ORC-21 to provide more specific language for clarity. Addition of the language “Expecting code value only” to all necessary tables for clarity.

VERSION	RELEASED	APPROVED BY	BRIEF DESCRIPTION
			<ul style="list-style-type: none"> Added a paragraph to the cover page indicating that VDH is aware of the change of terminology to Promoting Interoperability. VDH is not using the term Promoting Interoperability until all VDH resources reflect this change.
Version 6.0	9/5/2024	VDH ELR Workgroup	<ul style="list-style-type: none"> Updated language to account for non-Meaningful Use onboarding and addition of character limit-specific language. Added Program Area to PID segment NTE for Pregnancy information. Updated types of submissions to account for updated microbial sensitivity findings. Updated relevant links to Useful Resources section. Formatting changes to adjust for spacing and edits. Addition of table for PID-8 and two HL7 code-relevant tables; updated to include additional fields. Addition of Demographic variables, including pregnancy status guidance under General VDH Submission Requirements Addition of SARS-CoV-2 specific reporting guidance under General VDH Submission Requirements Removal of PID NTE for Pregnancy status per the request of DDP.