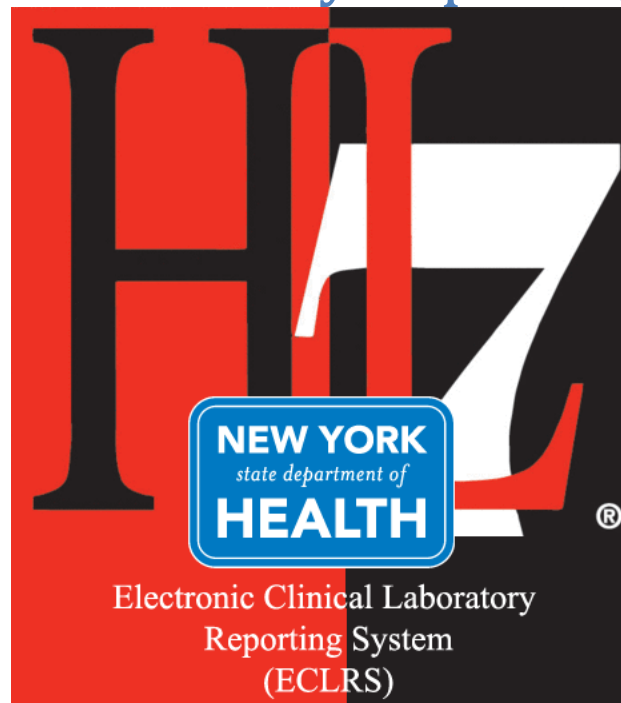# New York State Department of Health
Electronic Clinical Laboratory Reporting System (ECLRS)

Implementation Manual for HL7 Version 2.5.1
Dec 1, 2013

Acknowledgements

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Contents

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HL7 2.5.1 Data Record Layout

This implementation guide lists the specific fields required by the New York State Department of Health for electronic transfer of reportable communicable diseases, using the Electronic Clinical Laboratory Reporting System (ECLRS).   Specifically, the tables below contain a list of all the relevant data All references to the HL7 format refer to version 2.5.1.

Element Attributes

The following table describes the various attributes used by this guide to document data type attribute tables, message structure attribute tables and segment attribute tables. Not all attributes apply to all attribute tables.

Attribute	Definition
Seq	The Sequence of the elements as numbered in the HL7 message element; applies to the data type attribute table and the segment attribute table
Max Length	Maximum length of the element. The length attribute apples to data type attribute tables and segment attribute tables.
Comp	Identifies the Component
Sub-Comp	Identifies the Sub-Component
Description	HL7 descriptor of the message element. Name applies to the message attribute table, data type attribute table and the segment attribute table.
Required Status	States whether a field is required (Req), recommended (Rec) or optional (Opt) as per the NYS Health code. It may also contain a note on how the field will be used.
Recommended Values	indicates what values should be entered, under what specific conditions, and how

MSH Segment [Message Segment]

This messaging guide provides notes for supported fields. The following format is used in this document for listing and defining message segments and fields. First, the message segment use is defined and then attribute table listing all fields defined in the segment is shown. The Message Header Segment (MSH) contains information describing how to parse and process the message. This includes identification of the receiver, message type, timestamp, etc.

Seq	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
1	1			Field Separator	Req	'|'
2	4			Encoding Characters	Req	'^~\&'
3	227			Sending Application Name	Opt	**Identifies the sending application uniquely for messaging purposes. For this field only, if all three components of the HD are valued, the first component defines a member in the set defined by the second and third components. Example: |Lab1^1234^CLIA|. If there is no performing lab in the OBX, use a combination of MSH-3 and MSH-4 to define a local coding system.**
4	227	1		Sending Facility Name	Req	**Name of facility (path lab) sending the data file.**
		2		Sending Facility ID	Req	**CLIA number of the facility sending the data file.**
		3		Facility ID Type	Opt	**'CLIA'**
5	227			Receiving Application	Opt	**'ECLRS'**
6	227			Receiving Facility	Opt	**Uniquely identifies the facility that is to receive the message. This identifies the receiver of the original message. If acknowledgments are in use, this facility originates any relatedacknowledgment message.**
7	* Date			Date/Time of message	Req	**(Generated by the lab at the time the file is written.) Date and Time formatted as YYYYMMDDHHMMSS. Times may be Opt. All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time**
8	40			Security	Opt	**Not supported.**
9	15			Message Type	Req	**Must be ORU^R01^ORU_R01**

Seq	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
10	20			Message Control ID	Req	Use to communicate problems with the lab. String uniquely identifies the message instance from the sending application. Example formats for message control IDs include GUID, timestamp plus sequence number, OID plus sequence number or sequence number. The Important point is that care must be taken to insure that the message control id is unique. The sending application (MSH-3) plus MSH-10 (message control id) needs to be globally unique. Dates should be formatted as YYYYMMDDHHMMSS. Times may be Opt. All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
11	3			Processing ID	Req	'P' – Production or 'D' – Development
12	60			Version ID	Req	'2.5.1'
13	15			Sequence Number	Opt	
14	180			Continuation Pointer	Opt	
15	2			Accept Acknowledgement Type	Opt	Harmonized condition predicate: Required when MSH-21 profile id is PHLabReport-Ack or USLabReport, otherwise it may be empty or "NE".
16	2			Application Acknowledgement Type	Opt	Harmonized condition predicate: Required when MSH-21 profile id is PHLabReport-Ack or USLabReport, otherwise it may be empty or "NE". Valid values are: • AL - Always • NE - Never • ER - Error/reject conditions only • SU - Successful completion only
17	3			Country Code	Opt	This represents of names of countries, territories and areas of geographical interest. The complete set of 3166-1 codes. http://www.iso.org/iso/iso-3166-1_decoding_table Also available from PHIN VADS as: PHVS_Country_ISO_3166-1 Also known as HL7 Table 0399

Seq	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
18	16			**Character Set**	**Opt**	
19	250			**Principal Language of Message**	**Opt**	
20	20			**Alternate character set handling scheme**	**Opt**	Not used.
21	427			**Message Profile Identifier**	**Req**	Field used to reference or assert adherence to a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages. This field is allowed to repeat. If multiple profiles are listed in this field, it is assumed the profiles aren't contradictory. If they were contradictory, this would be the basis for an error. The rules described by HL7 Chapter 2.1 about constraining profiles apply. The profile ID for the profile defined in this guide should appear as a Repeat. Other profile IDs may appear in the field, as well, in cases where more constrained profiles are created from this profile. An OID for this profile is available once it is assigned. **Valid Values are:** • **PHLabReport-Ack – individual transaction with acknowlegement** • **PHLabReport-NoAck – individual transaction without acknowlegement** • **Constrainable Profile – individual transaction without ackowlegement (message type: ORU^R01^ORU_R01 and encoding: ER7 only)** • **PHLabReport-Batch – Batch Transactions** **Dynamic definitions of each value is described in HL7 section 3.3.**

Example: MSH|^~\&|Lab1^1234^CLIA|^1234^CLIA|ELR^2.16.840.1.113883.19.3.2^ISO|SPH^2.16.840.1.113883.19.3.2^ISO|20070701132554-0400||ORU^R01^ORU_R01|20070701132554000008|P^T|2.5.1|||NE|NE|USA||||PHLabReport- Ack^^2.16.840.1.114222.4.10.3^ISO

SFT Segment [Software Segment]

The software segment provides information about the sending application or other applications that manipulate the message before the receiving application processes the message.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
1	567			Software Vendor Organization	Req	Name of Software Vendor
2	15			Software Certified Version or Release Number	Req	Application version number
3	20			Software Product Name	Req	Application name
4	20			Software Binary ID	Req	Application install ID
5	1024			Software Product Information	Opt	Application Product Information
6	26			Software Install Date	Req	Date of installation formatted as YYYYMMDD

Example: SFT|1|Level Seven Healthcare Software, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|An Lab System|56734||20080817

PID Segment [Patient Identification Segment]

The Patient Identification Segment (PID) is used to provide basic demographics regarding the subject of the testing.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
1	4			Set ID – Patient ID	Req	Always send one PID per MSH. Therefore, PID-1 value is '1'
2	20	1		Patient ID	Opt	No Longer Used - Deprecated as of *HL7 Version 2.3.1*. See PID-3.
3	250			Pat Identifier List	Req	Enter only one ID number. Must be Medical record number, or patient ID number used by the reporting lab; this may be social security numbers, driver's license numbers, medical record numbers, etc.
		1		Pat ID	Req	Medical record number or patient ID number used by reporting lab; ; this may be social security numbers, driver's license numbers, medical record numbers, etc.
		2		Check Digit	Opt	Optional redundancy check used for error detection
		3		Check Scheme	Opt	Required if Check Digit is populated.
		4	1	Assigning Authority Name	Opt	Or 3-6-1
			2	Assigning Authority ID	Opt	Or 3-6-2
			3	ID Type	Opt	ISO - International Standards Organization Object Identifier; URI – Universal Resource Identier
		5		ID Type Code	Opt	Refer to User Defined Table 0203 in HL7 manual for codes.
		6	1	Assigning Facility Name	Opt	Or 3-4-1
			2	Assigning Facility ID	Opt	Or 3-4-2
			3	ID Type	Opt	ISO - International Standards Organization Object Identifier; URI – Universal Resource Identier

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
4	20	1		Alternate Patient ID – PID	Opt	No Longer Used - Deprecated as of *HL7 Version 2.3.1*. See PID-3.
5	250			Patient Name	Req	Patient name or aliases. When the name of the patient is not known, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no patient name
		1		Patient Last Name	Req	Patient surname name or aliases. When the name of the patient is not known, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no patient name
		2		Patient First Name	Req	Patient given name or aliases. When the name of the patient is not known, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no patient name
		3		Patient Middle Name/Initial	Opt	Patient middle name initial – this field may be null
		4		Patient Name Suffix	Opt	Patient name suffix – this field may be null
6	250			Mother's Maiden Name	Opt	May be included for identification purposes. Name type code is constrained to the value "M."
7	* Date			Patient Date/Time of birth (format YYYYMMDD)	Req	Patient's date of birth. The time zone component is optional. Note that the granularity of the birth date may be important. For a newborn, birth date may be known down to the minute, while for adults it may be known only to the date. Birth date may be used by the lab to calculate an age for the patient, which may affect what normal ranges apply to particular test results. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S]]]]]]]][+/-ZZZZ] Note: If a birth date is not provided in the PID, then the patient age at specimen collection must be reported as an observation associated with the specimen. If exact date of birth (DOB) is unknown, refer to the OBX-5 segment to enter the patient age. OBX-5 stipulates that the laboratory result is required. No regulatory requirements are specified, outside of readability, regarding result appearance.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
8	1			Patient Sex	Req	M – Male F – Female U – Unknown H – Hermaphrodite / Undetermined O – Other T – Transsexual
9	250			Patient Alias	Opt	No Longer Used – See ~~Field~~ PID 3-5
10	250			Patient Race	Req	HL7 Code set 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) Local codes I- American Indian or Native Alaskan A – Asian B – Black or African-American P- Native Hawaiian or Other Pacific Islander O - Other W – White U – Unknown
11	250	1		Patient Street Address	Req	Mailing address of the patient at the time when the specimen was obtained.
		2		Patient Address Line 2	Opt	Additional Mailing address information of the patient at the time when the specimen was obtained.
		3		City	Req	City address of the patient at the time when the specimen was obtained
		4		State	Req	Two letter state or province code; must be a valid USPS state abbreviation code to identify the state of residence of the patient. Valid state codes (as defined by the United States Postal Service) can be found at the following web site: http://www.usps.com/ncsc/lookups/abbr_state.txt
		5		ZIP/Postal Code	Req	This identifies the postal (ZIP) Code of an address in the United States http://zip4.usps.com/zip4/welcome.jsp In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9.
		6		Country	Opt	This represents of names of countries, territories and areas of geographical interest. The complete set of 3166-1 codes. http://www.iso.org/iso/iso-3166-1_decoding_table Also available from PHIN VADS as: PHVS_Country_ISO_3166-1 Also known as HL7 Table 0399

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
		7		Address Type	Opt	ELR Receiver - If empty the default is 'USA'
		8		Other geographic designation	Opt	
		9		County	Opt	If valued, must be a valid Federal Information Processing Standard (FIPS) code for the patient's county of residence. Valid FIPS county codes by state (as defined by the United States Environmental Protection Agency) can be found at the following web site: http://www.epa.gov/enviro/html/codes/state.html
12	4			County Code	Opt	No Longer Used – see field 11-9
13	250	1		Patient Home Phone Number	Opt	Field that may contain the telephone home number of the patient. Multiple phone numbers are allowed. Format (999)999-9999, if populated then PID 13-6, PID13-7 and PID 13-8 must all be empty
		2		Telecom use code	Opt	Should use 'NET' if component 4 (Email Address) is present.
		3		Telecom equipment type	Opt	Should use 'Internet' if component 4 (Email Address) is present.
		4		Email Address	Opt	Patient e-Mail Address in format *identifier@provider.tld* ELR Condition predicate: Required if component 7 (local number) is not present. Component 4 (Email Address) must be empty if component 7 (Local Number) is present.
		5		Country Code for phone number	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		6		Phone Area Code	Req	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		7		Phone Number	Req	ELR Condition predicate: Required if component 4 (Email Address) is not present. Component 7 (Local Number) must be empty if component 4 (Email Address) is present.
		8		Extension	Req	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		9		Any Text	Opt	

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
14	250	1		Patient Business Phone Number	Opt	Field that may contain the business telephone number of the patient. Multiple phone numbers are allowed. Format (999)999-9999, if populated then PID 14-6, PID 14-7 and PID 14-8 must all be empty
		2		Telecom use code	Opt	Should use 'NET' if component 4 (Email Address) is present.
		3		Telecom equipment type	Opt	Should use 'Internet' if component 4 (Email Address) is present.
		4		Email Address	Rec	Patient e-Mail Address in format *identifier@provider.tld* ELR Condition predicate: Required if component 7 (local number) is not present. Component 4 (Email Address) must be empty if component 7 (Local Number) is present.
		5		Country Code for phone number	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		6		Phone Area Code	Rec	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		7		Phone Number	Rec	ELR Condition predicate: Required if component 4 (Email Address) is not present. Component 7 (Local Number) must be empty if component 4 (Email Address) is present.
		8		Extension	Rec	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		9		Any Text	Opt	
15	250	1		Primary Language	Opt	Need language for phone.
		2		Patient Primary Language	Opt	Need language for phone.
16	250			Marital Status	Opt	A – Separated D – Divorced M – Married S – Single W – Widowed
17	250			Religion	Opt	HL 70006 - 2.16.840.1.113883.12.6 (code system)

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
18	250	1		Patient Account Number	Opt	ELR: Use PID-3, with identifier type of 'AN'. NHSN Condition predicate: If PID-3 does not have an identifier with the AN type code, then this field is required and must contain an anonymous (type code = ANON) account number.
		2-6		Additional Account Number Info	Opt	
19	16			SSN Number – Patient	Opt	No Longer Used - Deprecated as of HL7 Version 2.3.1. See PID-3.
20	25			Driver's License Number – Patient	Opt	No Longer Used - Deprecated as of HL7 Version 2.3.1. See PID-3.
21	250	1		Mother's Identifier	Opt	
		2-6		Additional ID info	Opt	
22	250			Ethnic Group	Req	HL7 Code Set 2135-2 – Hispanic or Latino 2186-5 – Not Hispanic or Latino blank – Unknown (Includes Declines to Answer)
23	250			Place of Birth	Opt	Do not use NAACCR birth place codes.
24	1			Multiple Birth Indicator	Opt	Use the HL70136 value set. Also available from PHIN VADS as: PHVS_YesNo_HL7_2x
25	2			Birth Order	Opt	
26	250			Citizenship	Opt	Use the HL70171 value set
27	250			Veteran's Military Status	Opt	Use the HL70172 value set
28	250			Nationality	Opt	No Longer Used – See PID-10 Race, PID-22 Ethnic Group, and PID-26 Citizenship.
29	* Date			Patient's Death Date	Opt	Patient's date of death. The time zone component is optional. Note that the granularity of the death date may be important. Death date may be known down to the minute, or it may be known only to the date. Death date may be used by the lab to calculate an age for the patient, which may affect what normal ranges apply to particular test results. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S]]]]]]]][+/-ZZZZ] All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
30	1			Patient's Death Indicator	Opt	Y=yes N=No <null> Not obtained If PID-29 is valued, then this field should be populated with "Y" since the patient is known to be dead.
31	1			Identity Unknown Indicator	Opt	

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
32	20			Identity Reliability Code	Opt	
33	Date			Last Update Date/Time	Opt	Used to indicate when demographics were last updated. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]][+/-ZZZZ]
34	241			Last Update Facility	Opt	This is the facility that originated the demographic update. ELR: Condition predicate: If PID-33 is present this is required
35				Species Code	Not Used	Not Used - Population of this field supports animal rabies testing as it relates to human rabies testing. This is a variant to HITSP where the field is not supported. If a constrained version of this guide includes support for Breed (PID-36) or Strain (PID-37), then this field would be required if Breed and or Strain is present.
36				Breed Code	Not Used	Not Used - If a constrained version of this guide includes support for Strain (PID-37), then this field would be required if Strain is present. ELR Note: The value set for PID-35, PHVS_Animal_CDC, is drawn from SNOMED CT and includes breed codes as well as codes for the species. SNOMED CT is now structured such that the selection of the specific breed also implies a specific species.
37				Strain	Not Used	Not Used
38				Production Class Code	Not Used	Not Used
39	250			Tribal Citizenship	Opt	HL7 recommends using Bureau of Indian Affairs (BIA) Tribal Identity List. The following is a link to the current live list: http://www.usa.gov/Government/Tribal_Sites/index.shtml This is a link to the most recent official static list: http:// edocket.access.gpo.gov/2008/E8-6968.htm

* Dates should be formatted as YYYYMMDDHHMMSS (e.g. October 15, 2000 at 12:33 PM would be represented as 20001015123300). Times may be Opt. All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.

Example:PID|1||36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.113883.19.3.2.1&ISO~444333333^^^&2.16.840.1.113883.4.1^ISO^SS||Everyman^Adam^A^^^L^^^^^^^BS|Mum^Martha^M^^^^M|20050602|M||2106-3^White^CDCREC^^^^04/24/2007|2222 Home Street^^Ann Arbor^MI^99999^USA^H||^PRN^PH^^1^555^5552004|^WPN^PH^^1^955^5551009|eng^English^ISO6392^^^^3/29/2007|M^Married^HL70002^^^^2.5.1||||||N^Not Hispanic or Latino^HL70189^^^^2.5.1|||||||||N|||200808151000-0700|Reliable^2.16.840.1.113883.19.3.1^ISO

*1 PID-5.5: Prefix RE; PID-5.7: Name Type Code RE; PID-5.14: Professional Sufix RE

*2 PID-35: Species Code RE: This filed supports animal rabies test. If Breed (PID-36) or Strain (PID-37) is present, then this field would be required.

NK1 Segment [Next of Kin Segment]

If the subject of the testing is something other than a person, the NK1 will document the person or organization responsible for or owning the subject. For patients who are persons, the NK1 documents the next of kin of the patient. This is particularly important for lead testing of minors, since the NK1 is used to document information about the parent or guardian.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
1	4			Set ID – NK1	Req	Must be 'NK1' For the first repeat of the NK1 segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc.
2	250			Name	Req	Name of the next of kin or associated party. Multiple names for the same entity are allowed, but the legal name must be sent in the first sequence. If the legal name is not sent, the repeat delimiter must be sent in the first sequence. ELR Condition predicate: If next of kin or associated party is a person use this field, otherwise, use field NK1-13
3	250			Relationship	Opt	Description of the relationship between the next of kin/related party and the patient. It is of particular importance when documenting the parent or guardian of a child patient
4	250	1		NK Street Address	Opt	Mailing address of the patient at the time when the specimen was obtained. Component that may contain the address of the next of kin/associated party.
		2		NK Address Line 2	Opt	Mailing address of the patient at the time when the specimen was obtained. Component that may contain the address of the next of kin/associated party.
		3		City	Opt	Mailing city of the patient at the time when the specimen was obtained. Component that may contain the address of the next of kin/associated party.
		4		State	Opt	Two letter state or province code; must be a valid USPS state abbreviation code to identify the state of residence of the patient. Valid state codes (as defined by the United States Postal Service) can be found at the following web site: http://www.usps.com/ncsc/lookups/abbr_state.txt
		5		ZIP/Postal Code	Opt	This identifies the postal (ZIP) Code of an address in the United States http://zip4.usps.com/zip4/welcome.jsp In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9.
5	250	1		NK Home Phone Number	Opt	Field that may contain the home telephone number of the next of kin/associated party. Multiple phone numbers are allowed. Format (999)999-9999, if populated then NK 5-1-6, NK 14-1-7 and PID 14-1-8 must all be empty
		2		Telecom use code	Opt	Should use 'NET' if component 4 (Email Address) is present.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
		3		Telecom equipment type	Opt	Should use 'Internet' if component 4 (Email Address) is present.
		4		Email Address	Opt	Next of Kin e-Mail Address in format identifier@provider.tld ELR Condition predicate: Required if component 7 (local number) is not present. Component 4 (Email Address) must be empty if component 7 (Local Number) is present.
		5		Country Code for phone number	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		6		Phone Area Code	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		7		Phone Number	Opt	ELR Condition predicate: Required if component 4 (Email Address) is not present. Component 7 (Local Number) must be empty if component 4 (Email Address) is present.
		8		Extension	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
6				Business Phone Number	Not Used	Not Supported
7				Contact Role	Not Used	Not Supported
8				Start Date	Not Used	Not Supported
9				End Date	Not Used	Not Supported
10				Next of Kin / Associated Parties Job Title	Not Used	Not Supported
11				Next of Kin / Associated Parties Job Code/Class	Not Used	Not Supported
12				Next of Kin / Associated Parties Employee Number	Not Used	Not Supported
13				Organization Name	Opt	ELR Condition predicate: If next of kin or associated party is an organization use this field, otherwise, use field NK1-2.
14				Marital Status	Not Used	Not Supported
15				Administrative Sex	Not Used	Not Supported
16				Date/Time of Birth	Not Used	Not Supported

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
17				Living Dependency	Not Used	Not Supported
18				Ambulatory Status	Not Used	Not Supported
19				Citizenship	Not Used	Not Supported
20				Primary Language	Opt	Required if NK 5-6, NK 5-7 and/or NK 5-8 is populated
21				Living Arrangement	Not Used	Not Supported
22				Publicity Code	Not Used	Not Supported
23				Protection Indicator	Not Used	Not Supported
24				Student Indicator	Not Used	Not Supported
25				Religion	Not Used	Not Supported
26				Mother's Maiden Name	Not Used	Not Supported
27				Nationality	Not Used	Not Supported
28				Ethnic Group	Not Used	Not Supported
29				Contact Reason	Not Used	Not Supported
30				Contact Person's Name	Opt	ELR Condition predicate: Required if NK-13 is populated. If NK-13 is not populated, NK-30 must be empty
31				Contact Person's Telephone Number	Opt	ELR Condition predicate: If NK-13 is not populated, NK-31 must be empty
32				Contact Person's Address	Opt	ELR Condition predicate: If NK-13 is not populated, NK-32 must be empty
33				Next of Kin/Associated Party's Identifiers	Not Used	Not Supported
34				Job Status	Not Used	Not Supported
35				Race	Not Used	Not Supported
36				Handicap	Not Used	Not Supported
37				Contact Person's Race	Not Used	Not Supported
38				Next of Kin Birthplace	Not Used	Not Supported

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values	
39				VIP Indicator	Not Used	Not Supported	

Example: NK1|1|Mum^Martha^M^^^^L|MTH^Mother^HL70063^^^^2.5.1| 444 Home Street^Apt B^AnnArbor^MI^99999^USA^H|^PRN^PH^^1^555^5552006

*3 NK1-13: Organization Name –NK1 CE; NK1-30: Contact Person's Name CE: NK1-31: Contact Person's Telephone Number RE; NK1-32: Contact Person's Address RE. (NK1-30-32 is required where NK1-13 is populated)

ORC Segment [Common Order Segment]

The Common Order Segment (ORC) identifies 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, what action to take regarding the order, etc.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
	3			Set ID	Req	Must be 'ORC' (see HL7 sample file).
1	2			Order Control Code	Req	Must be 'RE' (see HL7 sample file). The code is an "Observations to follow" Order control code from HL7 Table 0119. Note: this is counted as ORC-1, field number one.
2				Placer Order Number	Not Used	Not anticipated to be used for electronic laboratory reporting purposes. ELR & Lab to EHR Condition predicate: If OBR-2 Placer Order Number is populated; this field must contain the same value as OBR-2.
3				Filler Order Number	Not Used	This field must contain the same value as OBR-3 Filler Order Number - Not anticipated to be used for electronic laboratory reporting purposes.
4				Placer Group Number	Not Used	The placer group number is used to identify a group of orders. In the laboratory setting this is commonly referred to as a "requisition number." - Not anticipated to be used for electronic laboratory reporting purposes.
5				Order Status	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
6				Response Flag	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
7				Quantity/Timing	Not Used	Not Supported - Deprecated as of HL7 Version 2.5.
8				Parent	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
9				Date/Time of Transaction	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
10				Entered By	Not Used	- Not anticipated to be used for electronic laboratory reporting purposes.
11				Verified By	Not Used	- Not anticipated to be used for electronic laboratory reporting purposes.
12				Ordering Provider	Not Used	ELR Condition predicate: If OBR.16 Ordering Provider is populated, this field will contain the same value - Not anticipated to be used for electronic laboratory reporting purposes.
13				Enterer's Location	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
14				Call-Back Phone Number	Not Used	ELR Condition predicate: If OBR-17 Callback Phone Number is populated, this field will contain the same value. This should be a phone number associated with the original order placer.- Not anticipated to be used for electronic laboratory reporting purposes.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
15				Order Effective Date	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
16				Order Control Reason	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
17				Entering Organization	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
18				Entering Device	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
19				Action By	Not Used	Not anticipated to be used for electronic laboratory reporting purposes.
20				Advanced Beneficiary Notice Code	Not Used	Not Supported
21	60	1		Ordering Facility Name	Req	Enter ordering facility's name if tests are ordered from a facility without specifying an ordering provider name in OBR-16.
22	106	1		Ordering Facility Street Address Line 1	Req	Enter ordering facility's address if ORC-21 (Ordering Facility Name) is populated.
		2		Ordering Facility Street Address Line 2	Opt	Enter ordering facility's additional address (if any) if ORC-21 (Ordering Facility Name) is populated.
		3		Ordering Facility City	Req	Enter ordering facility's city if ORC-21 (Ordering Facility Name) is populated.
		4		Ordering Facility State	Req	Enter ordering facility's state if ORC-21 (Ordering Facility Name) is populated. Must be a valid USPS state abbreviation code. Valid state codes (as defined by the United States Postal Service) can be found at the following web site: http://www.usps.com/ncsc/lookups/abbr_state.txt
		5		Ordering Facility ZIP	Req	Enter ordering facility's zip code if ORC-21 (Ordering Facility Name) is populated.
		6		Ordering Facility Country	Opt	This represents of names of countries, territories and areas of geographical interest. The complete set of 3166-1 codes. http://www.iso.org/iso/iso-3166-1_decoding_table Also available from PHIN VADS as: PHVS_Country_ISO_3166-1 Also known as HL7 Table 0399
		7-10			Not Used	Not Used
23	48	1		Ordering Facility Phone	Req	Field that may contain the telephone number of the ordering facility. Multiple phone numbers are allowed. Format (999)999-9999, if populated then ORC 23-6, Orc23-7 and Orc 23-8 must all be empty
		2		Telecom use code	Opt	Should use 'NET' if component 4 (Email Address) is present.
		3		Telecom equipment type	Opt	Should use 'Internet' if component 4 (Email Address) is present.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
		4		Email Address	Opt	Next of Kin e-Mail Address in format identifier@provider.tld ELR Condition predicate: Required if component ORC 23-1 (Ordering Facility Phone is not present. Component ORC 23-4 (Email Address) must be empty if component ORC 23-1 (Ordering Facility Phone) is present.
		5		Country Code	Opt	ELR Condition predicate: This component is required or empty (RE) if component ORC 23-1 (Ordering Facility Phone) is present otherwise it must be empty.
		6		Phone Area Code	Req	ELR Condition predicate: This component is required or empty (RE) if component ORC 23-1 (Ordering Facility Phone) is present otherwise it must be empty.
		7		Phone Number	Req	ELR Condition predicate: Required if component 4 (Email Address) is not present. Component ORC 23-1 (Ordering Facility Phone) must be empty if component 4 (Email Address) is present.
		8		Phone Extension	Req	ELR Condition predicate: This component is required or empty (RE) if component ORC 23-1 (Ordering Facility Phone) is present otherwise it must be empty.
		9		Any Text	Opt	
24	106	1		Ordering Provider Street Address Line 1	Req	Enter ordering provider's address if OBR-16 (Ordering Provider Name) is populated.
		2		Ordering Provider Street Address Line 2	Req	Enter ordering provider's address if OBR-16 (Ordering Provider Name) is populated.
		3		Ordering Provider City	Req	Enter ordering provider's city if OBR-16 (Ordering Provider Name) is populated.
		4		Ordering Provider State	Req	Enter ordering provider's state if OBR-16 (Ordering Provider Name) is populated. Must be a valid USPS state abbreviation code. Valid state codes (as defined by the United States Postal Service) can be found at the following web site: http://www.usps.com/ncsc/lookups/abbr_state.txt
		5		Ordering Provider Zip	Req	Enter ordering provider's zip code if OBR-16 (Ordering Provider Name) is populated.
		6		Ordering Provider Country	Opt	This represents of names of countries, territories and areas of geographical interest. The complete set of 3166-1 codes. http://www.iso.org/iso/iso-3166-1_decoding_table - Also available from PHIN VADS as: PHVS_Country_ISO_3166-1 Also known as HL7 Table 0399

Example:ORC|RE||CHEM9700122^MediLabSeattle^45D0470381^CLIA|||||||||1234^Admit^Alan^A^III^Dr^^^&2.16.840.1.113883.19.4.6^ISO^L^^^EI^&2.16.840.1.113883.19.4.6^ISO^^^^^^^MD||^WPN^PH^^1^555^5551005|
||||||Level SevenHealthcare, Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1005 Healthcare Drive^^AnnArbor^MI^99999^USA^B|^WPN^PH^^1^555^5553001|4444 Healthcare Drive^Suite
123^AnnArbor^MI^99999^USA^B

*4 ORC-2: Placer Order Number CE; ORC-3: Filler Order Number R; ORC-4: Placer Group Number RE; ORC-12: Ordering Provider CE; ORC-14: Call Back Phone Number CE.

*5 ORC-21.7: ID type Code CE; ORC-21.10: Oganization Identifier RE.

*6 ORC-24.7: Address Type RE; ORC-24.9County/Parish Code RE.

OBR Segment [Observation Request Segment]

The Observation Request Segment (OBR) is used to capture information about one test being performed on the specimen. Most importantly, the OBR identifies the type of testing to be performed on the specimen and ties that information to the order for the testing.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
	3			Set ID – Obs. Request	Req	Must be 'OBR'
1	3			Order Control	Req	Determiner of the function of the order segment. In the ORU^R01 this should be the literal value.
2	22	1		Placer's Order Number	Opt	This identifier is assigned by the placer of the order being fulfilled by this result message. This identifier distinguishes the placer's order from all other orders created by the placer where an order is interpreted to be the testing identified in a single OBR segment. Normally, it is a type of system identifier assigned by the placer software application. The Placer Order Number and the Filler Order Number are essentially foreign keys exchanged between applications for uniquely identifying orders and the associated results across applications.
3	22	1		Filler's Order Number	Opt	Order number associated with the Filling Application. This number is assigned to the test by the organization performing the test. This field should not contain the accession number or specimen identifier for a specimen unless these identifiers meet the criteria for a filler order number. The specimen or accession identifier should be placed in SPM-2. The Filler Order Number identifies this order as distinct from all other orders being processed by this filler where an order is interpreted to be the testing identified in a single OBR segment. Normally, this is a type of system identifier assigned by the filler software application. The Filler Order Number, along with the Placer Order Number, is essentially foreign keys exchanged between applications for uniquely identifying orders and the associated results across applications. In messages containing multiple OBRs, each OBR must be identified by a unique Filler Order Number. This is critical for making parent/child results relationships work properly

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
4	250	1		Universal Service ID -identifier code for the requested observation/test.	Req	Enter LOINC, SNOMED, or Local code. LOINC CODE PREFERRED
		2		Description	Req	Description of the Universal Service ID entered in Field 4-1
		3		Name of Coding System	Req	LN – LOINC SNM – SNOMED L – Local
		4		Alternate ID	Opt	LOINC, SNOMED, or Local Code
		5		Description	Opt	Description of the Alternate ID entered in Field 4-4, if OBR 4-4 is not populated, this field must be empty
		6		Name of Alternate Coding System	Opt	LN – LOINC SNM – SNOMED L – Local
5	2			Priority		No Longer Used
6	* Date	1		Request Date/Time		No Longer Used
7	* Date	1		Observation Date/Time	Req	Date of Observation The time zone component is optional. Note that the granularity of the death date may be important. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ] All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
8	* Date			Observation End Date/Time	Opt	End of Observation Date The time zone component is optional. Note that the granularity of the death date may be important. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ] All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
9	20			Collection Volume		No Longer Used Replaced by SPM-12 Specimen Collection Amount
10	250			Collector Identifier	Opt	
11	1			Specimen Action Code	Opt	Use HL70065 code set
12	250			Danger Code	Opt	Local
13	300			Relevant Clinical Info	Rec	Indicate if patient is pregnant or other clinical information

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
14	Date					No Longer Used
15	300					No Longer Used
16	250	1		Ordering Provider ID	Opt	Identifier of the provider who ordered the testing being performed. The National Provider Identifier (NPI) may be used as the identifier. Note that ORC-12 Ordering Provider is constrained to contain the same value as this field.
		2		Provider Last Name	Req	Ordering Provider Last Name. NOTE: If there are multiple providers, enter information on only one provider.
		3		Provider First Name	Req	Ordering Provider First Name.
		4		Provider Middle Name/Init.	Opt	Ordering Provider Middle Name/Init.
		5		Provider Name Suffix	Opt	Ordering Provider Name Suffix. E.g., Jr. or III
		6-14			Not Used	
17	250	1		Order Call Back Phone Number	Opt	This is the number the laboratory can call with questions regarding the order. This should be a phone number associated with the original order placer. Note that ORC.17 Call Back Phone Number is constrained to contain the same value as this field.
		2		Telecom use code	Opt	Should use 'NET' if component 4 (Email Address) is present.
		3		Telecom equipment type	Opt	Should use 'Internet' if component 4 (Email Address) is present.
		4		Email Address	Opt	Next of Kin e-Mail Address in format identifier@provider.tld ELR Condition predicate: Required if component 7 (local number) is not present. Component 4 (Email Address) must be empty if component 7 (Local Number) is present.
		5		Phone Country Code	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		6		Phone Area Code	Req	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
		7		Phone Number	Req	ELR Condition predicate: Required if component 4 (Email Address) is not present. Component 7 (Local Number) must be empty if component 4 (Email Address) is present.
		8		Extension	Opt	ELR Condition predicate: This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
		9		Any Text	Opt	
18	60			Placer's Field 1	Opt	
19	60			Placer's Field 2	Opt	
20	60			Filler's Field 1	Opt	
21	60			Filler's Field 2	Opt	
22	* Date			Result Rpt/Status Change Date/Time	Opt	Required field in this message. Applies to the entire report. Receipt of a subsequent message with the same Filler Number and a different status in this field implies that processing may need to occur at the receiving application level to update a previous report. Format: YYYYMMDDHHMMSS.SS[…]+/-ZZZZ; if not available enter '9' for missing values; if whole date missing enter '99999999'.
23	40			Charge to Practice	Opt	
24	10			Diagnostic Serv Sect ID	Opt	2.16.840.1.113883.12.74 (code system) Diagnostic Service Sector ID - Also available from PHIN VADS as: PHVS_DiagnosticServiceSectionID_HL7_2x
25	1			Result Status	Req	F - Final result. If Res Required field in this message. Applies to the entire report. Receipt of a subsequent message with the same Filler Number and a different status in this field implies that processing may need to occur at the receiving application level to update a previous report. Format: YYYYMMDDHHMMSS.SS[…]+/-ZZZZ If Result status not available enter 'NA'.
26	400			Parent Result	Opt	Field that, together with OBR-29 Parent, allows this result to be linked to a specific OBX segment associated with another OBR segment. See *Appendix A, Section A.4. Linking Parent and Child Results,* of this document for more information on linking parent/child results. Harmonized condition predicate: This field is required when linking child sensitivities to the parent culture.
27	200			Quantity/Timing		No Longer Used - Deprecated as of *HL7 Version 2.5*. See TQ1 and TQ2 segments.
28	250			Result Copies To	Opt	

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
29	200			Parent Number	Opt	Used to link this OBR with a parent OBR. Commonly used with microbiology messages to link a susceptibility result with the parent culture that identified the organism. For this linkage to work properly, the Placer Order Number and the Filler Order Number must uniquely identify the specific parent OBR. This means that the same Filler Number cannot be used to identify multiple OBRs. See *Appendix A, Section A.4. Linking* *Parent and Child Results*, of this document for more information on linking parent/child results. Harmonized condition predicate: This field is required if OBR-24 carries the value "MB" and OBR-4 indicates the ordered test is a culture and sensitivity. Parent/child linking should be used when the specimen type changes between the parent and child result (specimen and isolate/component specimen) or for reflex tests.
30	20			Transportation Mode		No Longer Used
31	250			Reason for Study	Opt	ICD9 code is used today, but allows ICD10 when the US starts using it.
32	200	1		Principal Result Interpreter Name	Opt	Physician or other clinician who interpreted the observation and is responsible for the path report content. Used for pathology results.
			1	Pathologist ID Number	Opt	Pathologist ID Number (licence num); Unique Provider Identification Number (UPIN) assigned to a health care professional.
			2	Pathologist Last Name	Opt	Surname of the Pathologist
			3	Pathologist First Name	Opt	Given Name of the Pathologist
			4	Pathologist Middle Name/Initial	Opt	Middle Initial of the Pathologist
			5	Pathologist Name Suffix	Opt	Suffix to name of Pathologist
			6	Pathologist Name Prefix (Dr.)	Not Used	Not Used for ECLRS Reporting
			7	Degree (e.g., MD)	Not Used	Not Used for ECLRS Reporting
			8	Source table	Not Used	Not Used for ECLRS Reporting
			9	Assigning authority	Opt	State where pathologist license was issued. For example, if issued in New York State enter NY.
		2		Start Date/Time	Not Used	Not Used for ECLRS Reporting
		3		End Date/Time	Not Used	Not Used for ECLRS Reporting

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
		4		Point of Care	Not Used	Not Used for ECLRS Reporting
		5		Room	Not Used	Not Used for ECLRS Reporting
		6		Bed	Not Used	Not Used for ECLRS Reporting
		7		Facility	Not Used	Not Used for ECLRS Reporting
		8		Location Status	Not Used	Not Used for ECLRS Reporting
		9		Patient Location Status	Not Used	Not Used for ECLRS Reporting
		10		Building	Not Used	Not Used for ECLRS Reporting
		11		Floor	Not Used	Not Used for ECLRS Reporting
33				Assistant Results Interpreter	Not Used	Not Used for ECLRS Reporting
34				Technician	Not Used	Not Used for ECLRS Reporting
35				Transcriptionist	Not Used	Not Used for ECLRS Reporting
36				Scheduled Date/Time	Not Used	Not Supported
37				Number of Sample Containers	Not Used	Not Supported - See SPM-26
38				Transport Logistics of Collected Sample	Not Used	Not Supported
39				Collector's Comment	Not Used	Not Used for ECLRS Reporting
40				Transport Arrangement Responsibility	Not Used	Not Supported
41				Transport Arranged	Not Used	Not Supported
42				Escort Required	Not Used	Not Supported
43				Planned Patient Transport Comment	Not Used	Not Supported
44				Procedure Code	Not Used	Not Used for ECLRS Reporting
45				Procedure Code Modifier	Not Used	Not Used for ECLRS Reporting
46				Placer Supplemental Service Information	Not Used	Not Used for ECLRS Reporting

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
47				**Filler Supplemental Service Information**	**Not Used**	**Not Used for ECLRS Reporting**
48				**Medically Necessary Duplicate Procedure Reason**	**Not Used**	**Not Used for ECLRS Reporting**
49				**Result Handling**	**Not Used**	**Not Used for ECLRS Reporting**
50				**Parent Universal Service Identifier**	**Not Used**	**Not Used for ECLRS Reporting - This field has been retained as optional to allow ELR implementations with Labs that do not support unique placer or filler order numbers. In some cases the labs filler order number equates with a requisition number that in conjunction with the Universal Service ID will constitute a unique identifier for the order. For parent/child result linking to work in these situations, the sending lab will need to populate not only OBR-29, but this field also. The receiving application will need to use both OBR-29 and this field to properly link these results. We note that such implementations will not be conformant with this guide, but optional support for this field has been retained so that states may still communicate with these labs in a non-conformant manner** **Strongly recommend using Laboratory Order Value Set from HITSP**

- **Note: HL-7 version 2.5.1 has 50 OBR fields, not 45, as version 2.3.1**

Example: OBR|1|23456^EHR^2.16.840.1.113883.19.3.2.3^ISO|9700123^Lab^2.16.840.1.113883.19.3.1.6^ISO|5054 5-3^Bacterial susceptibility panel:-:Pt:Isolate:OrdQn:MIC^LN^^^^2.26|||200808151030-0700||||||anemia|||1234^Admit^Alan^A^III^Dr^^^&2.16.840.1.113883.19.4.6^ISO^L^^^EI^&2.16.840.1 .113883.19.4.6^ISO^^^^^^^MD|^WPN^PH^^1^555^5551005|||||2008081830-0700|||F|625-4&Bacteria identified:Prid:Pt:Stool:Nom:Culture&LN^1^Campylobacter jejuni|||23456&EHR&2.16.840.1.113883.19.3.2.3&ISO^9700122&Lab&2.16.840.1.113883.19.3.1.6&ISO|| 787.91^ DIARRHEA^I9CDX^^^^07/09/2008|1235&Slide&Stan&S&&Dr&MD&&DOC&2.16.840.1.113883.19.4.6&IS

*7 OBR-2 Placer Order Number RE; OBR-2.1 Entity Identifier R; OBR-2.2: Namespace ID RE; OBR-2.3: Universal ID R; OBR-2.4: Universal ID Type R.

*8 OBR-16.6: Prefix RE; OBR16-9: Assigning Authority CE; OBR-16.10: Name Type Code RE; OBR-16.12: Check Digit Scheme CE; OBR-16.13 ID Type Code CE; OBR-16.14: Assigning Facility RE.

OBX Segment [Observation Result Segment]

The Observation/Result Segment (OBX) contains information regarding a single observation related to a single test (OBR) or specimen (SPM). This includes identification of the specific type of observation, the result for the observation, when the observation was made, etc.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
	3			Segment Identifier		Must be 'OBX'
1	4			Set ID – Obs. Result	Req	For the first repeat of the OBX segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc.
2	2			Data type that defines the format of the observation value in OBX-5	Req	Recommended data types are: CWE (coded element), SN (structured numeric), NM (numeric) TX (text) and ST (string data). TX is used for large amounts of text. ST is used for short, possibly encodable text strings.
3	250	1		Identifier- Identifies the specific test/observation method/ or component of path report performed/reported in OBX-5.	Req	LOINC Code
		2		Text	Req	LOINC Description
		3		Name of coding system	Req	'LN' for LOINC
		4		Alternate Identifier	Opt	Local Code
		5		Text	Opt	Local Description
		6		Alternate coding system	Opt	'L' = Local
4	20			Observation Sub ID	Opt	Allows for related (multiple) OBX segments to be linked. For example, |1| in the sub-id for the first of these OBX segments, |2| in the second.
5	99999			Observation Value	Req	Field that documents each specific, allowed data type. See Section *6.1.1.1, HL7 Table 0125* for the data types that will be supported for this field. Harmonized Condition predicate: Either OBX-5 or OBX-8 (Abnormal flags) must be present in the message except if OBX-11 is 'X', result can not be obtained.
6	250	1		Unit of measure abbreviation	Rec	UCUM® is an HL7-approved code system and shall be used for units as described in the appropriate HITSP Interoperability Specification. The UCUM unit of measure for values without a unit of measure is "1". Harmonized Conditional statement: If the data type in OBX 2 is "NM" or "SN" and the OBX-11 observation result status is not 'X' then this field is required.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
		2		Unit of measure spelled out	Opt	
7	60	1		Reference Range	Rec	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. ELR Note-It is not appropriate to send the reference range for a result in an associated NTE segment. It would be appropriate to send information amplifying the reference range provided in this field in an NTE associated with this OBX.
8	5			Abnormal Flags	Opt	Indicator of the normalcy of the result found in OBX-5. Cardinality indicates the possible need for multiple abnormal flags. ELR-Note that this IG is adopting HL70078 form 2.7. NHSN has pre-adopted the CWE data type for this field from 2.7. ELR Condition predicate: Required if OBX-5 is empty the OBX-11 observation result status is not 'X', result cannot be obtained. L - Below low normal; H - Above high normal; LL - Below lower panic limits; HH - Above upper panic limits; < - Below absolute low; > - Above absolute high; N - Normal; A - Abnormal; AA - Very abnormal; U - Significant change up; D - Significant change down; B - Better; W - Worse; S - Sensitive; R - Resistant; I - Intermediate; MS - Moderately Sensitive; VS - Very Sensitive
9	5			Probability	Opt	
10	2			Nature of Abnormal Test	Opt	2.16.840.1.113883.12.80 (code system)

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
11	1			Observation Result Status	Req	Status of the observation result. A - Preliminary; C - Corrected; D - Deleted; F - Final; I - Incomplete; O - Ordered; P - Pending R - Entered; not verified; S - Partial; X - Results cannot be obtained; U - Change status to final; W – Erroneous
12	* Date			Effective Date of Reference Range	Opt	Date The time zone component is optional. Note that the granularity of the date may be important. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ] All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
13	20			User Defined Access Checks	Opt	
14	* Date			Date/Time of the Observation	Req	Date/Time of the Observation - The time zone component is optional. Note that the granularity of the date may be important. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ] All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
15	250	1		Producer's Reference	Opt	Producing Lab's CLIA code - If populated the field must identify the same performing organization as that identified in OBX-23 (Performing Organization Name).
		2		Text	Opt	Producer Lab's Name - If populated the field must identify the same performing organization as that identified in OBX-23 (Performing Organization Name).
		3-6			Not Used	
16	250			Responsible Observer	Opt	

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
17	250	1		Observation Method Code	Opt	Method of testing by the laboratory. If the LOINC code in OBX-3 is methodless, this field shall be populated. Sometimes the method may be extrapolated from the local test codes. NAACCR Additional Information on Observation Method (identified in OBX-3); Valid Codes in Table C0002.
		2		Observation Method Text	Opt	Description of the code used in field 17-1
18	22			Equipment Instance Identifier	Opt	
19	Date			Date/Time of Analysis	Req	Date/Time of the Analysis - The time zone component is optional. Note that the granularity of the date may be important. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S]]]]]]]][+/-ZZZZ] All dates should contain year, month and day, and be a valid calendar date. Year and month are not acceptable without a day. ECLRS does not store time.
20-22				Reserved for Version 2.6	Not Used	
23	567			Performing Organization Name	Opt	The information for producer ID is recorded as an XON data type. For laboratories, this field specifies the laboratory that produced the test result described in this OBX segment. This information supports CLIA regulations in the US. For producing laboratories that are CLIA-certified, the CLIA identifier should be used for the organization identifier (component 10).
24	631			Performing Organization Address	Opt	Address of the laboratory that actually performed the test when used as a reference laboratory.
25	3002			Performing Organization Medical Director	Opt	Name of the Medical Director of the reference laboratory. Required when OBX-24 indicates the performing lab is in a jurisdiction that requires this information

Example: OBX|1|CWE|625-4^Bacteria identified:Prid:Pt:Stool:Nom:Culture^LN^^^^2.26|1|66543000^Campylobacter jejuni^SCT^^^^January 2007||||||P|||200906041458|||0086^Bacterial identification^OBSMETHOD^^^^501-20080815||200906051700||||GHH Lab^L^^^^CLIA&2.16.840.1.113883.19.4.6&ISO^XX^^^1236|3434 Industrial Loop^^Ann Arbor^MI^99999^USA^B|9876543^Slide^Stan^S^^^^^NPPES&2.16.840.1.113883.19.4.6&ISO^L^^^NPI

SPM Segment [Specimen Segment]

The Specimen Information Segment (SPM) describes the characteristics of a single sample. The SPM segment carries information regarding the type of specimen, where and how it was collected, who collected it and some basic characteristics of the specimen.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
1	4			Set ID – SPM. Request	Req	Must Be 'SPM' - For the first repeat of the SPM segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc.
2	80	1		Specimen ID – Placer Assigned Identifier	Req	Unique identifier for the specimen as referenced by the Placer application, Note that the specimen id is not the same thing as the placer order number. Order numbers identify the specific test to be performed on a specimen. A particular specimen may be associated with multiple orders (and multiple placer order numbers). The specimen id may be the same as an accession number, depending on how the particular lab assigns accession numbers.
		2		Filler Assigned Identifier		Unique identifier for the specimen as referenced by the Filler application, Note that the specimen id is not the same thing as the Filler order number. Order numbers identify the specific test to be performed on a specimen. A particular specimen may be associated with multiple orders (and multiple Filler order numbers). The specimen id may be the same as an accession number, depending on how the particular lab assigns accession numbers.
3	80			Specimen Parent IDs	Opt	

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
4	250	1		Specimen Type – Identifier	Req	Coded version of the specimen source.
		2		Specimen Type – Text	Req	Description of the precise nature of the entity that is the source material for the observation.
		3		Name of Coding System	Req	Harmonized condition predicate: Required if an identifier is provided in component 4-1. A list of acceptable values can be found at http://www.hl7.org/special/committees/vocab/table_0396/index.cfm
		4		Alternate Identifier	Opt	The alternate identifier (from the alternate coding system) should be the closest match for the identifier found in component 4-1.
		5		Alternate Text	Opt	It is strongly recommended that alternate text be sent to accompany any alternate identifier. ELR Condition predicate: If the alternate Identifier component is empty, then this component must be empty.
		6		Name of Alternate Coding System	Opt	Harmonized condition predicate: Required if an alternate identifier is provided in component 4-3.
		7		Coding System Version ID	Opt	NHSN Condition predicate: Required if a coding system is identified in component 4-2. However, the particular coding system indicates versioning should be handled will be appropriate here. The length has been increased to handle longer versioning strings.
5	250			Specimen Type Modifier	Opt	Allows sending qualifiers for a SNOMED CT term from a single axis. Only used if SPM-4-1 is a SNOMED code.
6	250			Specimen Additives	Opt	2.16.840.1.113883.12.371 (code system) - Specimen Additives also available from PHIN VADS as: PHVS_AdditiveOrPreservative_HL7_2x
7	250			Specimen Collection Method	Opt	Method used to collect the specimen.
8	250			Specimen Source Site	Rec	Source from which the specimen was obtained. For environmental samples, this may describe the location of the source of the specimen. For biological samples, it may represent the anatomical site from which the specimen was collected.
9	250			Specimen Source Site Modifier	Opt	Modifier or qualifier for the specimen source site (SPM-8). Allows sending qualifiers for a SNOMED CT term from a single axis. Only used of SPM-8 is a SNOMED code. This allows use of post-coordinated terminologies for specimen source.
10	250			Specimen Collection Site	Opt	2.16.840.1.113883.12.543 (code system)
11	250			Specimen Role	Opt	2.16.840.1.113883.12.369 (code system) - Specimen Role also available from PHIN VADS as: PHVS_SpecimenRole_CDC

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
12	20			Specimen Collection Amount	Opt	Amount of sample collected. This can be reported as a volume or a weight/mass.
13	6			Grouped Specimen Count	Opt	
14	250			Specimen Description	Opt	
15	250			Specimen Handling Code	Opt	2.16.840.1.113883.12.376 (code system)
16	250			Specimen Risk Code	Opt	Risk Codes - 2.16.840.1.113883.12.489 (code system)
17	Date			Specimen Collection Date/Time	Req	Time range over which the sample was collected, as opposed to the time the sample collection device was recovered. The first component of the date range must match OBR-7 Observation Date/Time. The second component must match OBR-8 Observation End Date/Time. For OBXs reporting observations based on this specimen, OBX-14 should contain the same value as component 1 of this field. A minimum of year, month and day must be provided when the actual date/time is known. For unknown collection date/time use "0000". Format: |YYYYMMDD[HH[MM[SS[.S[S[S]]]]]]][+/-ZZZZ]^YYYYMMDD[HH[MM[SS[.S[S[S]]]]]]][+/-ZZZZ]| ECLRS does not Store Time
18	Date			Specimen Received Date/Time	Req	Time the specimen was received at the diagnostic service. The actual time that is recorded is based on how specimen receipt is managed, and may correspond to the time the sample is logged in. Format: YYYYMMDD[HH[MM[SS[.S[S[S]]]]]]][+/-ZZZZ] ECLRS does not store time
19	Date			Specimen Expiration Date/Time	Opt	Time the specimen expires at the diagnostic service. The actual time that is recorded is based on how specimen receipt is managed, and may correspond to the time the sample is logged in. Format: YYYYMMDD[HH[MM[SS[.S[S[S]]]]]]][+/-ZZZZ] ECLRS does not store time
20				Specimen Availability	Not Used	Not used for ECLRS Reporting
21				Specimen Reject Reason	Not Used	Not used for ECLRS Reporting
22				Specimen Quality	Not Used	Not used for ECLRS Reporting
23				Specimen Appropriateness	Not Used	Not used for ECLRS Reporting

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
24				Specimen Condition	Not Used	Not used for ECLRS Reporting
25				Specimen Current Quantity	Not Used	Not used for ECLRS Reporting
26				Number of Specimen Containers	Not Used	Not used for ECLRS Reporting
27				Container Type	Not Used	Not used for ECLRS Reporting
28				Container Condition	Not Used	Not used for ECLRS Reporting
29				Specimen Child Role	Not Used	Not used for ECLRS Reporting

Example: SPM|1|23456&EHR&2.16.840.1.113883.19.3.2.3&ISO^9700122&Lab&2.16.840.1.113883.19.3.1.6&ISO||WB^Whole Blood^HL70487^^^^2.5.1||THYO^Thyoglycollate broth^HL70371^^^^2.5.1|BCAE^Blood Culture, Aerobic Bottle^HL70488^^^^2.5.1|49852007^Structure of median cubital vein (body structure)^SCT^^^^20080731|||P^Patient^HL60369^^^^2.5.1|2.0^mL&MilliLiter [SI Volume Units]&UCUM&&&&1.6|||||200808151030-0700|200808151100-0700

NTE Segment [Notes and Comments Segment]

The Notes and Comments Segment (NTE) is used to convey additional comments regarding the associated segment. The NTE segment is not intended for automatic processing. The contents of the NTE segment are primarily intended for human use. Automated process should not be based upon the contents of NTE-3 (Comment); rather the content of that field should be displayed to humans.

Field	Max Length	Comp	Sub-Comp	Description	Required Status	Recommended Values
1	4			Set ID	Req	For the first repeat of the NTE segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc.
2	8			Source of Comment	Req	2.16.840.1.113883.12.105 (code system) Source of Comment - Also available from PHIN VADS as: PHVS_SourceOfComment_HL7_2x
3	6553			Comment	Req	Comment Text
4	250			Comment Type	Opt	2.16.840.1.113883.12.364 (code system) Comment Type - Also available from PHIN VADS as: PHVS_CommentType_CDC

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

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