HL7 v2.5 Inbound ORU (Results)
Specification

Version 1.0

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Revision History

Date	Version	By	Comments
3/2/2015	1.0	Nathan Hardesty-Dyck	Create initial document Source document: NYeC HL7 V2.5 ORU Results Inbound Feed Specification (DOC-0103)

Overview

This specification is for organizations preparing HL7 interfaces to Healthix. It dictates the format and context of required and expected ORU message types, segments and fields. Healthix prefers HL7 version 2.5 messages but will except well-formed HL7 2.x messages.

Healthix requires data providers to include all required data elements in their feeds (denoted by an **R** in the "use" column of the segment tables). Healthix also expects data providers to include all expected data elements if they are available (denoted by an **E** in the "use" column of the segment tables). The value of Healthix is directly related to the quality of accurate, consistent, and complete information. The inclusion of all expected data elements increases the value of Healthix to users and patients. Consequently, it is imperative that you send all required and expected data elements if they are available.

This specification is for ORU message types only. Non-ORU specifications are documented separately.

Important Notes

Patient Identifiers:

Healthix patient encounters are identified by Visit Numbers. Corresponding visit numbers must be present in all related ADT, result, medication order, and medical document messages in order to tie all this information to the visit.

Healthix uses the following identifier hierarchy:

External Patient ID = Healthix-generated ID (MPI)

Internal Patient ID = Unique MRN from a site (PID-3 or PID-2)

Encounter ID = Unique visit number from a site (PV1-19)

- A single patient can have different MRNs from different sites.
- A single patient can have multiple encounters from one site.

Healthcare information systems may use Account Numbers or Case Numbers for billing purposes and consequently an encounter number, as well. In these cases, an encounter number may reside in PID-18 and/or PV1-19. If PID-18 is used consistently for an encounter instead of PV1-19, the Account Number in PID-18 should be copied to the Visit Number in PV1-19. A *case* or *account* may correspond to multiple visits. In that instance, the encounter is either a single visit or series of visits associated with a single *case* or *account*. Either way, the unique identifier for the encounter must reside in PV1-19.

Placer and Filler Order Numbers

Placer Order Number : A number generated by the person or service that requests (places order for) an observation battery, e.g., the physician, the practice, clinic, or ward service, that orders a lab test, X-ray, vital signs, etc. This number assigned by the ordering application. *A placer number can be transmitted in OBR2 or ORC2. If the placer number is transmitted in both OBR2 and ORC 2 – they MUST BE the same value. If there is no value transmitted in ORC2, there MUST be a value in OBR2.*

Filler Number: A number generated by the person, or service, that produces the observations (fills the order) requested by the requestor. The clinical laboratory is a producer of lab test results (filler of a lab order), the nursing service is the producer of vital signs observations (the filler of orders to measure vital signs), and so on. *A placer number can be transmitted in OB32 or ORC3. If the placer number is included in both OBR3 and ORC 3 – they MUST BE the same value. If there is no value transmitted in ORC3, there MUST be a value in OBR3.*

Summary of Inbound Message Types and Segments

Below are the message type and segments currently supported by Healthix for medications. All others will be ignored by Healthix load processes. Field-level details are provided in the 'Segment Details' section of this document.

			Segments Accepted							
Type	**Structure**	**Message Description**	**MSH**	**PID**	**PV1**	**PV2**	**ORC**	**OBR**	**NTE**	**OBX**
ORU_R01	R01	Unsolicited transmission of an observation message	R	R	R	O	O,G	R	O	OG

LEGEND	R: Required Segment
	O: Optional Segment
	G: Grouped Segment

Message Details

Key to symbols used in this section:

- Brackets [ ] indicate that the segment is an **optional** item in the message.
- Braces { } indicate that the segment can be a **repeating** item in the message.

R01 – Unsolicited transmission of an observation message

Segment	Description	Required	Optional	Repeating	Grouped
MSH	Message Header	Required			
{	--- PID Supergroup begin		Optional		Group
[	--- PID group begin		Optional		Group
PID	Patient Identification	Required			
[	--- PV1 group begin		Optional		Group
PV1	Patient Visit	Required			
[PV2]	Patient Visit - Additional Information		Optional		
]	--- PV1 group end				
]	--- PID group end				
{	--- ORC group begin	Required		Repeating	Group
[ORC]	Common Order		Optional		
OBR	Observation Request	Required			
[{NTE}]	Notes and Comments		Optional	Repeating	
[{	--- OBX group begin		Optional	Repeating	Group
OBX	Observation/Result	Required			
[{NTE}]	Notes and Comments		Optional	Repeating	
}]	--- OBX group end				
}	--- ORC group end				
}	--- PID Supergroup end				

Note that a required segment within an optional group is required only if the group exists.

Segment Details

Supported Segments - ORU

The following table shows the ORU message segments that are imported by Healthix. All other segments are ignored.

Segment	Description	Supported
MSH	Message Header	Yes
EVN	Event Type	Yes
PID	Patient Identification	Yes
PV1	Patient Visit	Yes
PV2	Patient Visit – Additional Information	Yes
ORC	Common Order	Yes
OBR	Observation Request	Yes
NTE	Notes and Comments	Yes
OBX	Observation/Result	Yes

Segment Attribute Tables

Segment Attribute Table Abbreviations

The abbreviated terms and their definitions, as used in the segment table headings, are as follows:

KEY - SEGMENT ATTRIBUTES	
Abbreviation	**Definition**
Seq	Sequence of the elements as they are numbered in the HL7 segment.
Len	Maximum length of the element. Length of an element is calculated using the following rules: Field length = (Sum of all supported component lengths) + (component number of the last supported component) – 1. Component length = (Sum of all supported sub-component lengths) + (sub-component number of the last supported component) – 1.
DT	Data type used for HL7 element. (Refer to Chapter 2A of HL7 V2.5 standard)
Use	Usage indicates that the field or sub-field is required, expected, or optional. R – Required. Must be populated. E – Expected. Must be populated if available. O – Optional. May be populated.
Card	Cardinality indicates the minimum and maximum number of times the element may appear. [0..0] Element never present. [0..1] Element may be omitted and it can have at most, one Occurrence. [1..1] Element must have exactly one Occurrence. [0..n] Element may be omitted or may repeat up to *n* times. [1..n] Element must appear at least once, and may repeat up to *n* times. [0..*] Element may be omitted or repeat for an unlimited number of times. [1..*] Element must appear at least once, and may repeat unlimited number of times. [m..n] Element must appear at least “m” and at most “n” times.
HL7 Element Name	HL7 descriptor of the element in the segment.

MSH - Message Header Segment

The message header is mandatory for every message.

MESSAGE HEADER SEGMENT (MSH)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	1	ST	R	[1..1]	Field Separator
2	4	ST	R	[1..1]	Encoding Characters
3	227	HD	E	[0..1]	Sending Application
4	227	HD	R	[0..1]	Sending Facility[1]
5	227	HD	O	[0..1]	Receiving Application
6	227	HD	O	[0..1]	Receiving Facility
7	26	TS	O	[0..1]	Date/Time Of Message
8	40	ST	O	[0..0]	Security
9	15	MSG	R	[1..1]	Message Type
9.1	3	ID	R	[1..1]	Message Code
9.2	3	ID	R	[1..1]	Trigger Event
9.3	7	ID	E	[1..1]	Message Structure
10	50	ST	O	[0..1]	Message Control ID
11	3	PT	O	[0..1]	Processing ID
12	60	VID	R	[1..1]	Version ID **(v2.5)**

[1] Note: While Sending Facility is not required in HL7.2.5, it is **required** to facilitate data sharing across multiple participants within Healthix. A facility is defined as either having an operating certification (hospitals, clinics, laboratories, etc.) or a private medical practice.

EVN - Event Type Segment

The Event Type Segment conveys information about the event that triggered the message and is required in all ADT messages.

EVENT TYPE SEGMENT (EVN)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	3	ID	O	[0..1]	Event Type Code
2	26	TS	R	[1..1]	Recorded Date/Time
3	26	TS	O	[0..1]	Date/Time Planned Event
4	3	IS	O	[0..1]	Event Reason Code
5	250	XCN	E	[0..*]	Operator ID
6	26	TS	E	[0..1]	Event Occurred
7	241	HD	E	[0..1]	Event Facility

PID – Patient Identification Segment

The Patient Identification Segment is used as the primary means of conveying patient identification information.

Patient Identification SEGMENT (PID)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	4	SI	O	[0..1]	Set ID - PID
2	20	CX	E	[0..1]	Patient ID
3	250	CX	R	[1..1]	Patient Identifier List
3.1	15	ST	R	[1..1]	ID Number (MRN)
3.2	1	ST	O	[0..1]	Check Digit
3.3	3	ID	O	[0..1]	Check Digit Scheme
3.4	227	HD	O	[0..1]	Assigning Authority
3.5	5	ID	R	[1..1]	Identifier Type Code (**default MRN**)
4	20	CX	E	[0..1]	Alternate Patient ID - PID
5	250	XPN	R	[1..1]	Patient Name
6	250	XPN	E	[0..1]	Mother's Maiden Name
7	26	TS	R	[1..1]	Date/Time of Birth
8	1	IS	R	[1..1]	Administrative Sex*
9	250	XPN	E	[0..1]	Patient Alias
10	250	CE	E	[0..*]	Race
11	250	XAD	E	[0..1]	Patient Address
11.1	184	SAD	E	[0..1]	Street Address
11.2	120	ST	E	[0..1]	Other Designation
11.3	50	ST	E	[0..1]	City
11.4	50	ST	E	[0..1]	State or Province
11.5	12	ST	E	[0..1]	Zip or Postal Code
11.6	3	ID	E	[0..1]	Country
12	20	IS	O	[0..1]	County Code
13	250	XTN	E	[0..1]	Phone Number – Home
14	250	XTN	E	[0..1]	Phone Number – Business
15	250	CE	E	[0..1]	Primary Language
16	250	CE	E	[0..1]	Marital Status
17	250	CE	E	[0..1]	Religion
18	250	CX	E	[0..1]	Patient Account Number
19	16	ST	E	[0..1]	SSN Number
20	25	DLN	E	[0..1]	Driver's License Number
21	250	CX	O	[0..1]	Mother's Identifier
22	250	CE	O	[0..1]	Ethnic Group
23	250	ST	O	[0..1]	Birth Place
24	1	ID	O	[0..1]	Multiple Birth Indicator
25	2	NM	O	[0..1]	Birth Order
26	250	CE	E	[0..1]	Citizenship
27	250	CE	O	[0..1]	Veterans Military Status

Patient Identification SEGMENT (PID)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
28	250	CE	E	[0..1]	Nationality
29	26	TS	E	[0..1]	Patient Death Date and Time
30	1	ID	E	[0..1]	Patient Death Indicator
31	1	ID	O	[0..1]	Identity Unknown Indicator
32	20	IS	O	[0..1]	Identity Reliability Code
33	26	TS	E	[0..1]	Last Update Date/Time
34	241	HD	E	[0..1]	Last Update Facility

***PID-8 Administrative Sex (IS)**

Healthix determines the sex of the patient using this field, which must contain one of the following user-defined codes:

Code	Description
F	Female
M	Male
O	Other
U	Unknown
A	Ambiguous or Not applicable
N	Not applicable

PV1 – Patient Visit Segment

The Patient Visit Segment is used to transmit encounter-specific information.

Patient Visit SEGMENT (PV1)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	4	SI	O	[0..1]	Set ID - PV1
2	250	CWE	R	[1..1]	Patient Class*****
3	80	PL	E	[0..1]	Assigned Patient Location
3.1	20	IS	E	[0..1]	Point of Care
3.2	20	IS	E	[0..1]	Room
3.3	20	IS	E	[0..1]	Bed
4	250	CWE	E	[0..1]	Admission Type
5	250	CX	E	[0..1]	Pre-admit Number
6	80	PL	O	[0..1]	Prior Patient Location
7	250	XCN	E	[0..1]	Attending Doctor
8	250	XCN	E	[0..1]	Referring Doctor
9	250	XCN	E	[0..1]	Consulting Doctor
10	250	CWE	E	[0..1]	Hospital Service
10.1		ST	E	[0..1]	Identifier
10.2		ST	E	[0..1]	Text
11	80	PL	O	[0..1]	Temporary Location
12	2	IS	O	[0..1]	Pre-admit Test Indicator
13	2	IS	O	[0..1]	Re-admission Indicator

Patient Visit SEGMENT (PV1)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
14	250	CWE	E	[0..1]	Admit Source
14.1		ST	E	[0..1]	Identifier
14.2		ST	E	[0..1]	Text
15	2	IS	O	[0..1]	Ambulatory Status
16	2	IS	O	[0..1]	VIP Indicator
17	250	XCN	E	[0..1]	Admitting Doctor
18	2	IS	O	[0..1]	Patient Type
19	250	CX	R	[0..1]	Visit Number
20	50	FC	O	[0..1]	Financial Class
21	2	IS	O	[0..1]	Charge Price Indicator
22	2	IS	O	[0..1]	Courtesy Code
23	2	IS	O	[0..1]	Credit Rating
24	2	IS	O	[0..1]	Contract Code
25	8	DT	O	[0..1]	Contract Effective Date
26	12	NM	O	[0..1]	Contract Amount
27	3	NM	O	[0..1]	Contract Period
28	2	IS	O	[0..1]	Interest Code
29	4	IS	O	[0..1]	Transfer to Bad Debt Code
30	8	DT	O	[0..1]	Transfer to Bad Debt Date
31	10	IS	O	[0..1]	Bad Debt Agency Code
32	12	NM	O	[0..1]	Bad Debt Transfer Amount
33	12	NM	O	[0..1]	Bad Debt Recovery Amount
34	1	IS	O	[0..1]	Delete Account Indicator
35	8	DT	O	[0..1]	Delete Account Date
36	250	CWE	O	[0..1]	Discharge Disposition
37	47	DLD	E	[0..1]	Discharged to Location
38	250	CE	O	[0..1]	Diet Type
39	199	IS	O	[0..1]	Servicing Facility
40	1	IS	O	[0..1]	Bed Status
41	2	IS	O	[0..1]	Account Status
42	80	PL	O	[0..1]	Pending Location
43	80	PL	O	[0..1]	Prior Temporary Location
44	26	TS	E	[0..1]	Admit Date/Time
45	26	TS	E	[0..1]	Discharge Date/Time

***PV1-2 Patient Class (IS)**

Healthix categorizes patients by the following user-defined codes:

Code	Description
E	Emergency
I	Inpatient
O	Outpatient
P	Preadmit
R	Recurring Patient

B	Obstetrics
C	Commercial Account
N	Not Applicable
U	Unknown

PV2 – Patient Visit Additional Information Segment

The Patient Visit Additional Information Segment is a continuation of visit-specific information and should contain the Admit Reason, Visit Reason, Chief Complaint information.

Patient Visit Additional Information SEGMENT (PV2)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	80	PL	O	[0..1]	Prior Pending Location
2	250	CE	O	[0..1]	Accommodation Code
3	250	CE	E	[0..1]	Admit Reason
3.1		ST	E	[0..1]	Identifier
3.2		ST	E	[0..1]	Text
4	250	CE	O	[0..1]	Transfer Reason
5	25	ST	O	[0..*]	Patient Valuables
6	25	ST	O	[0..1]	Patient Valuables Location
7	2	IS	O	[0..*]	Visit User Code
8	26	TS	O	[0..1]	Expected Admit Date/Time
9	26	TS	O	[0..1]	Expected Discharge Date/Time
10	3	NM	O	[0..1]	Estimated Length of Inpatient Stay
11	3	NM	O	[0..1]	Actual Length of Inpatient Stay
12	50	ST	E	[0..1]	Visit Description
45	250	CE	E	[0..*]	Transfer Reason

ORC – Common Order Segment

The Common Order Segment is used to transmit order information. The ORC is required only in the General Order message (ORM) and the Pharmacy Order message (OMP).

Common Order SEGMENT (ORC)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	2	ID	O	[0..1]	Order Control
2	427	EI	E	[0..1]	Placer Order Number
3	427	EI	E	[0..1]	Filler Order Number
4	22	EI	O	[0..1]	Placer Group Number
5	2	ID	E	[0..1]	Order Status
6	1	ID	O	[0..1]	Response Flag
7	207	TQ	E	[0..*]	Quantity/Timing
8	200	EIP	O	[0..1]	Parent
9	26	TS	E	[0..1]	Date/Time of Transaction
10	250	XCN	E	[0..1]	Entered By
11	250	XCN	E	[0..1]	Verified By
12	250	XCN	E	[0..1]	Ordering Provider
13	80	PL	E	[0..1]	Enterer's Location

Common Order SEGMENT (ORC)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
14	250	XTN	E	[0..1]	Call Back Phone Number
15	26	TS	O	[0..1]	Order Effective Date/Time
16	250	CE	O	[0..1]	Order Control Code Reason
17	250	CE	E	[0..1]	Entering Organization
18	250	CE	O	[0..1]	Entering Device
19	250	XCN	O	[0..1]	Action By
20	250	CE	E	[0..1]	Advanced Beneficiary Notice Code
21	250	XON	E	[0..1]	Ordering Facility Name
22	250	XAD	E	[0..1]	Ordering Facility Address
23	250	XTN	E	[0..1]	Ordering Facility Phone Number
24	250	XAD	E	[0..1]	Ordering Provider Address
25	250	CWE	O	[0..1]	Order Status Modifier
26	60	CWE	O	[0..1]	Advanced Beneficiary Notice Override Reason
27	26	TS	O	[0..1]	Filler's Expected Availability Date/Time
28	250	CWE	E	[0..1]	Confidentiality Code
29	250	CWE	E	[0..1]	Order Type
30	250	CNE	O	[0..1]	Enterer Authorization Mode

OBR – Observation Request Segment

The Observation Request Segment (OBR) contains attributes related to the order for the observation reported in this message.

Observation Request SEGMENT (OBR)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	4	SI	O	[0..1]	Set ID - OBR
2	427	EI	E	[0..1]	Placer Order Number
3	427	EI	R	[0..1]	Filler Order Number
4	841	CE	R	[1..1]	Universal Service Identifier
4.1	20	ST	R	[1..1]	Identifier
4.2	199	ST	E	[0..1]	Text
4.3	199	ID	O	[0..1]	Name of Coding System
4.4	20	ST	O	[0..1]	Alternate Identifier
4.5	199	ST	O	[0..1]	Alternate Text
4.6	199	ID	O	[0..1]	Name of Alternate Coding System
5	2	ID	E	[0..1]	Priority – OBR
6	26	TS	E	[0..1]	Requested Date/Time
7	26	TS	R	[1..1]	Observation Date/Time
8	26	TS	O	[0..1]	Observation End Date/Time
9	20	CQ	O	[0..1]	Collection Volume
10	250	XCN	O	[0..1]	Collector Identifier
11	1	ID	O	[0..1]	Specimen Action Code
12	250	CE	O	[0..1]	Danger Code
13	300	ST	O	[0..1]	Provider IDs NPI
14	26	TS	E	[0..1]	Specimen Received Date/Time

Observation Request SEGMENT (OBR)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
15	3485	SPS	E	[0..1]	Specimen Source
15.1	841	CWE	E	[0..1]	Specimen Source Name or Code
15.*.*	*	*	O	*	*
16	250	XCN	E	[0..1]	Ordering Provider
17✦✦	250	XTN	E	[0..2]	Order Callback Phone Number
17.2	3	ID	E	[0..1]	Telecommunication Use Code
17.3	8	ID	E	[0..1]	Telecommunication Equipment Type
17.4	199	ST	E	[0..1]	Email Address
17.5	3	NM	E	[0..1]	Country Code
17.6	5	NM	E	[0..1]	Area code
17.7	9	NM	E	[0..1]	Local Number
17.8	5	NM	E	[0..1]	Extension
18	60	ST	O	[0..1]	Placer Field 1
19	60	ST	O	[0..1]	Placer Field 2
20	60	ST	O	[0..1]	Filler Field 1
21	60	ST	O	[0..1]	Filler Field 2
22	26	TS	R	[1..1]	Results Rpt/Status Change Date/Time
23	40	MOC	O	[0..1]	Charge to Practice
24	10	ID	R	[1..1]	Diagnostic Service Section ID*
25	1	ID	R	[1..1]	Result Status
26	400	PRL	O	[0..1]	Parent Result
27	200	TQ	E	[0..0]	Quantity/Timing

✦✦ OBR 17 is used to transmit contact information for the ordering provider. Healthix expects to receive a phone number, fax number and email address if they are available. Email address should be placed in OBR 17.4. Phone number and fax should be transmitted using repeating OBR 17 fields, separated by a tilde (~). A maximum of 2 instances of OBR 17 are permitted.

Sample phone, fax and email transmission:

^WPN^PH^JOHNDOE@SOMEPLACE.COM^^123^1234567~^WPN^RX^^^123^1234568

***OBR-24 Diagnostic Service Section ID (ID)**

This field is the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here. Refer to the table below for valid entries.

HL7 Table 0074 - Diagnostic Service Section ID

Value	Description
AU	Audiology
BG	Blood Gases
BLB	Blood Bank
CUS	Cardiac Ultrasound
CTH	Cardiac Catheterization
CT	CAT Scan
CH	Chemistry
CP	Cytopathology
EC	Electrocardiac (e.g., EKG, EEC, Holter)
EN	Electroneuro (EEG, EMG,EP,PSG)
HM	Hematology
ICU	Bedside ICU Monitoring
IMM	Immunology
LAB	Laboratory
MB	Microbiology
MCB	Mycobacteriology
MYC	Mycology
NMS	Nuclear Medicine Scan
NMR	Nuclear Magnetic Resonance
NRS	Nursing Service Measures
OUS	OB Ultrasound
OT	Occupational Therapy
OTH	Other
OSL	Outside Lab
PHR	Pharmacy
PT	Physical Therapy
PHY	Physician (Hx. Dx, admission note, etc.)
PF	Pulmonary Function
RAD	Radiology
RX	Radiograph
RUS	Radiology Ultrasound
RC	Respiratory Care (therapy)
RT	Radiation Therapy
SR	Serology
SP	Surgical Pathology
TX	Toxicology
VUS	Vascular Ultrasound

VR	Virology
XRC	Cineradiograph

NTE – Notes and Comments Segment

The Notes and Comments segment is expected to be used only with result messages. It may be used to pass result comments from the source message.

Notes and Comments Segment (NTE)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	4	SI	O	[0..1]	Set ID - NTE
2	8	ID	O	[0..1]	Source of Comment
3	65536	FT	E	[0..1]	Comment
4	250	CE	O	[0..1]	Comment Type

OBX – Observation Result Segment

The Observation Result Segment is used to convey observations in both ADT and result messages.

Observation ReSult SEGMENT (OBX)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
1	4	SI	O	[0..1]	Set ID – OBX
2	2	ID	E	[0..1]	Value Type
3	250	CE	R	[1..1]	Observation Identifier
3.1	20	ST	R	[1..1]	Identifier
3.2	199	ST	E	[0..1]	Text
3.3		ID	O	[0..1]	Name of Coding System
3.4		ST	O	[0..1]	Alternate Identifier
3.5		ST	O	[0..1]	Alternate Text
3.6		ID	O	[0..1]	Name of Alternate Coding System
4	20	ST	E	[0..1]	Observation Sub-ID
5	no limit	TX	R	[1..1]	Text Data
6	250	CE	E	[0..1]	Units
6.1	20	ST	E	[0..1]	Identifier
6.2	199	ST	E	[0..1]	Text
6.3		ID	O	[0..1]	Name of Coding System
6.4		ST	O	[0..1]	Alternate Identifier
6.5		ST	O	[0..1]	Alternate Text
6.6		ID	O	[0..1]	Name of Alternate Coding System
7	60	ST	E	[0..1]	References Range
8	5	CWE	E	[0..5]	Abnormal Flags
9	5	NM	O	[0..1]	Probability
10	2	ID	O	[0..1]	Nature of Abnormal Test
11	1	ID	R	[1..1]	Observation Result Status
12	26	TS	O	[0..1]	Effective Date of Reference Range Values

Observation ReSult SEGMENT (OBX)					
Seq	**Len**	**DT**	**Use**	**Card**	**HL7 Element Name**
13	20	ST	O	[0..1]	User Defined Access Checks
14	26	TS	E	[0..1]	Date/Time of the Observation
15	250	CE	E	[0..1]	Producer's ID
15.1	20	ST	E	[0..1]	Identifier
15.2		ST	O	[0..1]	Text
15.3		ID	O	[0..1]	Name of Coding System
15.4		ST	O	[0..1]	Alternate Identifier
15.5		ST	O	[0..1]	Alternate Text
15.6		ID	O	[0..1]	Name of Alternate Coding System
16	250	XCN	E	[0..*]	Responsible Observer

Relevant Data Types

Data Type 2.5:CE - Coded Element

Seq	Description	Usage	Table	Type
1	Identifier	X		
2	Text	X		
3	Name of Coding System	X	2.5:396	
4	Alternate Identifier	X		
5	Alternate Text	X		
6	Name of Alternate Coding System	X	2.5:396	

Data Type 2.5:CQ - Composite Quantity with Units

Seq	Description	Usage	Table	Type
1	Quantity	X		
2	Units	X		2.5:CE

Data Type 2.5:CWE - Coded with Exceptions

Seq	Description	Usage	Table	Type
1	Identifier	X		
2	Text	X		
3	Name of Coding System	X	2.5:396	
4	Alternate Identifier	X		
5	Alternate Text	X		
6	Name of Alternate Coding System	X	2.5:396	
7	Coding System Version ID	X		
8	Alternate Coding System Version ID	X		
9	Original Text	X		

Data Type 2.5:CX - Extended Composite ID with Check Digit

Seq	Description	Usage	Table	Type
1	ID Number	X		
2	Check Digit	X		
3	Check Digit Scheme	X	2.5:61	
4	Assigning Authority	X	2.5:363	2.5:HD
5	Identifier Type Code	X	2.5:203	
6	Assigning Facility	X		2.5:HD
7	Effective Date	X		
8	Expiration Date	X		
9	Assigning Jurisdiction	X		2.5:CWE
10	Assigning Agency or Department	X		2.5:CWE

Data Type 2.5:DLN – Driver's License Number

Seq	Description	Usage	Table	Type
1	License Number	X		
2	Issuing State, Province, Country	X	2.5:333	
3	Expiration Date	X		

Data Type 2.5:DR - Date/Time Range

Seq	Description	Usage	Table	Type
1	Range Start Date/Time	X		2.5:TS
2	Range End Date/Time	X		2.5:TS

Data Type 2.5:ED – Encapsulated Data

Seq	Description	Usage	Table	Type
1	Source Application	O		2.5:HD
2	Type of Data	R	0191	2.5:ID
3	Data Subtype	O	0291	2.5:ID
4	Encoding	R	0299	2.5:ID
5	Data	R		2.5:TX

Definition: This data type transmits encapsulated data from a source system to a destination system. It contains the identity of the source system, the type of data, the encoding method of the data, and the data itself. This data type is similar to the RP (reference pointer) data type except that instead of pointing to the data on another system, it contains the data which is to be sent to that system.

Maximum Length: 65536

Data Type 2.5:EI - Entity Identifier

Seq	Description	Usage	Table	Type
1	Entity Identifier	X		
2	Namespace ID	X	2.5:363	
3	Universal ID	X		
4	Universal ID Type	X	2.5:301	

Data Type 2.5:FN - Family Name

Seq	Description	Usage	Table	Type
1	Surname	X		
2	Own Surname Prefix	X		
3	Own Surname	X		
4	Surname Prefix From Partner/Spouse	X		
5	Surname From Partner/Spouse	X		

Data Type 2.5:HD - Hierarchic Designator

Seq	Description	Usage	Table	Type
1	Namespace ID	X	2.5:300	
2	Universal ID	X		
3	Universal ID Type	X	2.5:301	

Data Type 2.5:ID – Coded Value for HL7 Defined Tables

Maximum Length: Varies - dependent on length of longest code in code set.

The value of this field follows the formatting rules for an ST field except that it is drawn from a table of legal values. There shall be an HL7 table number associated with ID data types. An example of an ID field is OBR-25(*result status*). This data type should be used only for HL7 tables. The reverse is not true, since in some circumstances it is more appropriate to use the CNE or CWE data type for HL7 tables.

Data Type 2.5:IS - Coded Value for User Defined Tables

Maximum Length: 20

The value of such a field follows the formatting rules for a ST field except that it is drawn from a site defined (or user-defined) table of legal values. There shall be an HL7 table number associated with IS data types. An example of an IS field is the Event reason code defined in Section 3.3.1.4, "Event reason code". This data type should be used only for user-defined tables. The reverse is not true, since in some circumstances, it is more appropriate to use the CWE data type for user-defined tables.

Data Type 2.5:MSG - Message Type

Seq	Description	Usage	Table	Type
1	Message Code	X	2.5:76	
2	Trigger Event	X	2.5:3	
3	Message Structure	X	2.5:354	

Data Type 2.5:OSD - Order Sequence Definition

Seq	Description	Usage	Table	Type
1	Sequence/Results Flag	X	2.5:524	
2	Placer Order Number: Entity Identifier	X		
3	Placer Order Number: Namespace ID	X	2.5:363	
4	Filler Order Number: Entity Identifier	X		
5	Filler Order Number: Namespace ID	X	2.5:363	
6	Sequence Condition Value	X		
7	Maximum Number of Repeats	X		
8	Placer Order Number: Universal ID	X		
9	Placer Order Number: Universal ID Type	X	2.5:301	
10	Filler Order Number: Universal ID	X		
11	Filler Order Number: Universal ID Type	X	2.5:301	

Data Type 2.5:PL - Person Location

Seq	Description	Usage	Table	Type
1	Point of Care	X	2.5:302	
2	Room	X	2.5:303	
3	Bed	X	2.5:304	
4	Facility	X		2.5:HD
5	Location Status	X	2.5:306	
6	Person Location Type	X	2.5:305	
7	Building	X	2.5:307	
8	Floor	X	2.5:308	
9	Location Description	X		
10	Comprehensive Location Identifier	X		2.5:EI
11	Assigning Authority for Location	X		2.5:HD

Data Type 2.5:RI - Repeat Interval

Seq	Description	Usage	Table	Type
1	Repeat Pattern	X	2.5:335	
2	Explicit Time Interval	X		

Data Type 2.5:SAD - Street Address

Seq	Description	Usage	Table	Type
1	Street or Mailing Address	Today		
2	Street Name	Today		
3	Dwelling Number	Today		

Data Type 2.5:SPS - Specimen Source

Seq	Description	Usage	Table	Type
1	Specimen Source Name or Code	X		2.5:CWE
2	Additives	X	2.5:371	2.5:CWE
3	Specimen Collection Method	X		
4	Body Site	X	2.5:163	2.5:CWE
5	Site Modifier	X	2.5:495	2.5:CWE
6	Collection Method Modifier Code	Today		2.5:CWE
7	Specimen Role	Today	2.5:369	2.5:CWE

Data Type 2.5:ST – String Data

Maximum Length: 199

String data is left justified with trailing blanks optional. Any displayable (printable) ACSII characters (hexadecimal values between 20 and 7E, inclusive, or ASCII decimal values between 32 and 126), except the defined escape characters and defined delimiter characters.

Example: |almost any data at all|

To include any HL7 delimiter character (except the segment terminator) within a string data field, use the appropriate HL7 escape sequence.

Data Type 2.5:TQ - Timing Quantity

Seq	Description	Usage	Table	Type
1	Quantity	X		2.5:CQ
2	Interval	X		2.5:RI
3	Duration	X		
4	Start Date/Time	X		2.5:TS
5	End Date/Time	X		2.5:TS
6	Priority	X		
7	Condition	X		
8	Text	X		
9	Conjunction	X	2.5:472	
10	Order Sequencing	X		2.5:OSD
11	Occurrence Duration	X		2.5:CE
12	Total Occurrences	X		

Data Type 2.5:TS - Time Stamp

Seq	Description	Usage	Table	Type
1	Time	X		2.5:DTM
2	Degree of Precision	X	2.5:529	

Data Type 2.5:VID - Version Identifier

Seq	Description	Usage	Table	Type
1	Version ID	X	2.5:104	
2	Internationalization Code	X	2.5:399	2.5:CE
3	International Version ID	X		2.5:CE

Data Type 2.5:XAD - Extended Address

Seq	Description	Usage	Table	Type
1	Street Address	X		2.5:SAD
2	Other Designation	X		
3	City	X		
4	State or Province	X		
5	Zip or Postal Code	X		
6	Country	X	2.5:399	
7	Address Type	X	2.5:190	
8	Other Geographic Designation	X		
9	County/Parish Code	X	2.5:289	
10	Census Tract	X	2.5:288	
11	Address Representation Code	X	2.5:465	
12	Address Validity Range	X		2.5:DR
13	Effective Date	X		2.5:TS
14	Expiration Date	X		2.5:TS

Data Type 2.5:XCN - Extended Composite ID
Number and Name for Persons

Seq	Description	Usage	Table	Type
1	ID Number	X		
2	Family Name	X		2.5:FN
3	Given Name	X		
4	Second and Further Given Names or Initials Thereof	X		
5	Suffix (e.g., JR or III)	X		
6	Prefix (e.g., DR)	X		
7	Degree (e.g., MD)	X	2.5:360	
8	Source Table	X	2.5:297	
9	Assigning Authority	X	2.5:363	2.5:HD
10	Name Type Code	X	2.5:200	

11	Identifier Check Digit	X		
12	Check Digit Scheme	X	2.5:61	
13	Identifier Type Code	X	2.5:203	
14	Assigning Facility	X		2.5:HD
15	Name Representation Code	X	2.5:465	
16	Name Context	X	2.5:448	2.5:CE
17	Name Validity Range	X		2.5:DR
18	Name Assembly Order	X	2.5:444	
19	Effective Date	X		2.5:TS
20	Expiration Date	X		2.5:TS
21	Professional Suffix	X		
22	Assigning Jurisdiction	X		2.5:CWE
23	Assigning Agency or Department	X		2.5:CWE

Data Type 2.5:XON - Extended Composite Name and Identification Number for Organizations

Seq	Description	Usage	Table	Type
1	Organization Name	X		
2	Organization Name Type Code	X	2.5:204	
3	ID Number	X		
4	Check Digit	X		
5	Check Digit Scheme	X	2.5:61	
6	Assigning Authority	X	2.5:363	2.5:HD
7	Identifier Type Code	X	2.5:203	
8	Assigning Facility	X		2.5:HD
9	Name Representation Code	X	2.5:465	
10	Organization Identifier	X		

Data Type 2.5:XPN - Extended Person Name

Seq	Description	Usage	Table	Type
1	Family Name	X		2.5:FN
2	Given Name	X		
3	Second and Further Given Names or Initials Thereof	X		
4	Suffix (e.g., JR or III)	X		
5	Prefix (e.g., DR)	X		
6	Degree (e.g., MD)	X	2.5:360	
7	Name Type Code	X	2.5:200	
8	Name Representation Code	X	2.5:465	
9	Name Context	X	2.5:448	2.5:CE
10	Name Validity Range	X		2.5:DR
11	Name Assembly Order	X	2.5:444	
12	Effective Date	X		2.5:TS
13	Expiration Date	X		2.5:TS
14	Professional Suffix	X		

Data Type 2.5:XTN - Extended Telecommunication Number

Seq	Description	Usage	Table	Type
1	Telephone Number	X		
2	Telecommunication Use Code	E	2.5:201	
3	Telecommunication Equipment Type	E	2.5:202	
4	Email Address	E		
5	Country Code	E		
6	Area/City Code	E		
7	Local Number	E		
8	Extension	E		
9	Any Text	X		
10	Extension Prefix	X		
11	Speed Dial Code	X		
12	Unformatted Telephone number	X		