ORU Message HL7 Conformance Profile

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Purpose of this document

This specification provides a set of baseline requirements for a HL7 interface to effectively send ORU messages to Agfa HealthCare Engage Suite via the Health Level Seven (HL7) standard. The intention of this specification is to describe HL7 Broker's usage of the HL7 standard for communication with various Hospital Information System applications.

Acronyms and Abbreviations

Definitions, terms and abbreviations used in this document, many of which are defined within the HL7 standard. Abbreviations and terms are as follows:

Abbreviation	Full Form
ADT	Admission, Discharge, and Transfer message
AL1	Patient Allergy Information segment
EVN	Event Type segment
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
MRG	Merge Patient Information segment
MSH	Message Header segment
NTE	Notes and comments segment
OBR	Observation Request segment
OBX	Observation/Result segment
ORC	Common Order segment
ORM	Order Request message
ORU	Observation Results - Unsolicited message
PID	Patient ID segment
PV1	Patient Visit segment
PV2	Patient Visit Additional Information Segment
RIS	Radiology Information System

Related Documents

- HL7 Standard , see www.hl7.org
- IHE Radiology Technical Framework Revision 18.0 – Final Text, August 2019 – see www.ihe.net

Revision Record

Revision Number	Date	Reason for Change
1	October 18, 2019	Initial version for Engage Suite 2.2019-3

Supported Trigger Events

Function Area	Event Code	ORU Trigger Event
ORU	R01	Unsolicited Observation Message

Processed Segments

MSH
PID
[PV1] // Relevant to Lab ORM messages
OBR
[{NTE}]
ORC
[{OBX}]
[{NTE}]
PV2

Message Definition

MSH Segment Mappings

Seq	HL7 Field Name	Value Required	Comments
1	Field Separator	Yes	Should always be "|"
2	Encoding Characters	Yes	Should always be "^~\&"
3	Sending Application	Yes	
4	Sending Facility	Yes	
5	Receiving Application	Yes	
6	Receiving Facility	Yes	Send the ordering/performing facility's ID. Facility name can be sent in MSH-6.2.
7	Date/time of Message	Yes	Date/time format (YYYYMMDDHHMISS)
8	Security	No	
9	Message Type	Yes	Extract the message type and event type components
10	Message Control ID	Yes	Generated by sending application
11	Processing ID	Yes	
12	Version ID	Yes	

Seq	HL7 Field Name	Value Required	Comments
13	Sequence Number	No	
14	Continuation Pointer	No	
15	Accept Acknowledgement Type	No	
16	Application Acknowledgement Type	No	
17	Country Code	No	
18	Character Set	Yes	If missing, then set to ISO_IR 100
19	Principal Language of Message	No	

PID Segment Mappings

Seq	HL7 Field Name	Value Required	Comments
1	Set ID – Patient ID	No	
2	Patient ID (External ID)	Yes	
3	Patient ID (Internal ID)	Yes	For regular flow: • Include in the 1st repetition. ***For Lab's Assigning Authority Flow:*** 1. The segment can have repetitions. 2. Format: MRN ID^^^Assigning Authority^Type Code
4	Alternate Patient ID	No	***For Lab's Assigning Authority Flow:*** 1. The segment can have repetitions. 2. Format: MRN ID^^^Assigning Authority^Type Code
5	Patient Name	Yes	Format: Last Name^First Name^Middle Name
6	Mother's Maiden Name	No	Not Used
7	Date of Birth	No	Format: YYYYMMDD
8	Sex	No	M (Male), F (Female), O (Other), U (Unknown)
9	Patient Alias	No	Not Used
10	Race	No	
11	Patient Address	No	Format: Address1^Address2^City^State^Zip
12	Country Code	No	Not Used
13	Phone Number – Home	No	
14	Phone Number – Business	No	
15	Primary Language	No	Not Used
16	Marital Status	No	

Seq	HL7 Field Name	Value Required	Comments
17	Religion	No	
18	Patient Account Number	Yes	Patient Case Number ***For Lab's Assigning Authority Flow***, the format is: Account Number^^^Assigning Authority^Type Code^Assigning Facility^Effective Date^Expiration Date
19	SSN Number – Patient	No	Included as other patient ID
20	Driver's Lic Num – Patient	No	***For Lab's Assigning Authority Flow***, the format is: Licence Number^Assigning Authority^Expiration Date
21	Mother's Identifier	No	Not Used
22	Ethnic Group	No	Not Used
23	Birth Place	No	Not Used
24	Multiple Birth Indicator	No	Not Used
25	Birth Order	No	Not Used
26	Citizenship	No	Not Used
27	Veterans Military Status	No	Not Used
28	Nationality	No	Not Used
29	Patient Death Date/Time	No	Not Used
30	Patient Death Indicator	No	Not Used

PV1 Segment Mappings

PV1 segment is primarily required for Lab ORMs. Here are the mapping details.

Seq	HL7 Field Name	Value Required	Comments
1	Set ID - Patient Visit	No	
2	Patient Class	Yes	
3	Assigned Patient Location	No	Format: Nurse Location^Room Info^Bed Info
4	Admission Type	No	
5	Pre-admit Number	Yes	Not Used
6	Prior Patient Location	No	Not Used
7	Attending Doctor	No	Format: Physician ID^Last Name^First Name^Middle Name ***For Lab's Assigning Authority Flow:***

Seq	HL7 Field Name	Value Required	Comments
			Physician ID^Last Name^First Name^Middle Name^^^^^Assigning Authority^^^^Type Code^^^^^^^Effective Date^Expiration Date If Assigning authority and Type code are blank, 1. Assigning Authority is picked up from MSH 4.1 2. Type Code is set to NPI
8	Referring Doctor	No	Format: Physician ID^Last Name^First Name^Middle Name ***For Lab's Assigning Authority Flow:*** Physician ID^Last Name^First Name^Middle Name^^^^^Assigning Authority^^^^Type Code^^^^^^^Effective Date^Expiration Date If Assigning authority and Type code are blank, 1. Assigning Authority is picked up from MSH 4.1 2. Type Code is set to NPI
9	Consulting Doctor	No	Format: Physician ID^Last Name^First Name^Middle Name ***For Lab's Assigning Authority Flow:*** Physician ID^Last Name^First Name^Middle Name^^^^^Assigning Authority^^^^Type Code^^^^^^^Effective Date^Expiration Date If Assigning authority and Type code are blank, 1. Assigning Authority is picked up from MSH 4.1 2. Type Code is set to NPI
10	Hospital Service	No	Not Used
11	Temporary Location	No	Not Used
12	Pre-admit Test Indicator	No	Not Used
13	Readmission Indicator	No	Not Used
14	Admit Source	No	
15	Ambulatory Status	No	
16	VIP Indicator	No	
17	Admitting Doctor	No	Format: Physician ID^Last Name^First Name^Middle Name ***For Lab's Assigning Authority Flow:*** Physician ID^Last Name^First Name^Middle Name^^^^^Assigning Authority^^^^Type Code^^^^^^^Effective Date^Expiration Date

Seq	HL7 Field Name	Value Required	Comments
			If Assigning authority and Type code are blank, 1. Assigning Authority is picked up from MSH 4.1 2. Type Code is set to NPI
18	Patient Type	No	Required for Lab ORMs
19	Visit Number	Yes	Required for Lab ORMs
20	Financial Class Eff. Date	No	Not Used
21	Charge Price Indicator	No	
22	Courtesy Code	No	Not Used
23	Credit Rating	No	Not Used
24	Contract Code	No	Not Used
25	Contract Effective Date	No	Not Used
26	Contract Amount	No	Not Used
27	Contract Period	No	Not Used
28	Interest Code	No	Not Used
29	Transfer to Bad Debt Code	No	Not Used
30	Transfer to Bad Debt Date	No	Not Used
31	Bad Debt Agency Code	No	Not Used
32	Bad Debt Transfer Amount	No	Not Used
33	Bad Debt Recovery Amt	No	Not Used
34	Delete Account Indicator	No	Not Used
35	Delete Account Date	No	Not Used
36	Discharge Disposition	No	Not Used
37	Discharged to Location	No	Not Used
38	Diet Type	No	Not Used
39	Servicing Facility	No	Not Used
40	Bed Status	No	Not Used
41	Account Status	Yes	Not Used
42	Pending Location	No	Not Used
43	Prior Temporary Location	No	Not Used
44	Admit Date/Time	No	Not Used
45	Discharge Date/Time	No	Not Used
46	Current Patient Balance	No	Not Used
47	Total Charges	No	Not Used
48	Total Adjustments	No	Not Used
49	Total Payments	No	Not Used
50	Alternate Visit ID	No	Not Used
51	Visit Indicator	No	Not Used
52	Other Healthcare Provider	No	Not Used

PV2 Segment Mappings

Seq	HL7 Field Name	Value Required	Comments
8	Expected Admit Date/Time	No	encounterPlannedDate is mapped to PV2.8.1 to fetch the expected admit date of planned patient visits

OBR Segment Mappings

Seq	Description	Value Required	Comments
1	Set ID - OBR	No	Sequence Number (1.1 int)
2	Placer Order Number	No	RIS ExamID or Accession Number
3	Filler Order Number	CR	RIS ExamID or Accession Number. Required for Radiology Order
4	Universal Service Identifier	Yes	For Labs only. Format: Test ID^Test Name
5	Priority - OBR	No	Not Used
6	Requested Date/Time	No	Not Used
7	Observation Date/Time #	Yes	For Lab ORMs. Scheduled Date/Time format yyyymmddhhnnss
8	Observation End Date/Time #	No	Not Used
9	Collection Volume *	No	Not Used
10	Collector Identifier *	No	For Labs only. Accessioner Information. Format: Accessioner ID^Accessioner Last Name^Accessioner First Name
11	Specimen Action Code *	No	Not Used
12	Danger Code	No	Not Used
13	Relevant Clinical Information	No	Not Used
14	Specimen Received Date/Time *	CR	Required for labs
15	Specimen Source	No	Not Used
16	Ordering Provider	No	Format: Physician Internal ID^Last Name^First Name^Middle Name
17	Order Callback Phone Number	No	
18	Placer Field 1	No	Not Used
19	Placer Field 2	No	Not Used
20	Filler Field 1 +	No	Not Used
21	Filler Field 2 +	No	For Radiology: Ordering Provider NPI. Should correspond to the physician sent in OBR-16.1

Seq	Description	Value Required	Comments
			For Labs: Lab Name and address. Format: Lab Name^Lab Address1^Lab address2^City^State^Zip
22	Results Rpt/Status Chng - Date/Time +	No	Required for Labs. Exam Event Time (22.1 date time format yyyymmddhhnnss)
23	Charge to Practice +	No	Not Used
24	Diagnostic Serv Sect ID	No	For Radiology - Modality. For Labs - Test Family
25	Result Status +	No	Report Status
26	Parent Result +	No	Not Used
27	Quantity/Timing	No	Not Used
28	Result Copies To	No	Not Used
29	Parent	No	Not Used
30	Transportation Mode	No	Not Used
31	Reason for Study	No	For Radiology only. Format: Test ID^Test Name
32	Principal Result Interpreter +	No	For Radiology only. Radiologist Information. Format: Physician Internal ID^Last Name^First Name^Middle Name
33	Assistant Result Interpreter +	No	Not Used
34	Technician +	No	Not Used
35	Transcriptionist +	No	Not Used
36	Scheduled Date/Time +	No	For Radiology ORMs. Scheduled Date/Time format yyyymmddhhnnss
37	Number of Sample Containers *	No	Not Used
38	Transport Logistics of Collected Sample *	No	Not Used
39	Collector's Comment *	No	Not Used
40	Transport Arrangement Responsibility	No	Not Used
41	Transport Arranged	No	Not Used
42	Escort Required	No	Not Used
43	Planned Patient Transport Comment	No	Not Used
44	Procedure Code	No	Not Used
45	Procedure Code Modifier	No	Not Used
46	Placer Supplemental Service Information	No	Not Used
47	Filler Supplemental Service Information	No	Not Used

NTE Segment Mappings

The NTE segment is used for sending textual notes and comments for information transmitted in other segments. The comment applies to the segment preceding the NTE segment.

Seq	HL7 Field Name	Value Required	Comments
1	Set ID Notes	Y	Sequential
2	Source of Comment	N	
3	Comment	Y	Comment and Notes

ORC Segment Mappings

Seq	HL7 Field Name	Value Required	Comments
1	Order Control	No	
2	Placer Order Number	CR	Order No. Required for Labs only. Either ORC2.1 or ORC3.1 should be populated
3	Filler Order Number	CR	Accession No. Required for Labs only. Either ORC2.1 or ORC3.1 should be populated
4	Placer Group Number	No	Not Used
5	Order Status	Yes	Report Status. Required for Labs
6	Response Flag	No	Not Used
7	Quantity/Timing	No	Not Used
8	Parent	No	Not Used
9	Date/Time of Transaction	No	Not Used
10	Entered By	No	Not Used
11	Verified By	No	Not Used
12	Ordering Provider	No	Not Used
13	Enterer's Location	No	Not Used
14	Call Back Phone Number	No	Not Used
15	Order Effective Date/Time	No	Not Used
16	Order Control Code Reason	No	Not Used
17	Entering Organization	No	Not Used
18	Entering Device	No	Not Used
19	Action By	No	Not Used
20	Advanced Beneficiary Notice Code	No	Not Used

Seq	HL7 Field Name	Value Required	Comments
21	Ordering Facility Name	No	Tied to the ID sent in MSH-6.1
22	Ordering Facility Address	No	Format: Address1^Address2^City^State^Zip
23	Ordering Facility Phone Number	No	Not Used
24	Ordering Provider Address	No	Format: Address1^Address2^City^State^Zip
25	Order Status Modifier	No	Not Used

OBX Segment Mappings

Seq	HL7 Field Name	Value Required	Comments
1	Set ID - OBX	Yes	Start at 1. Increment sequentially
2	Value Type	No	ED, ST, NM, DT, RP or CD.
3	Observation Identifier	Yes	
4	Observation Sub-ID	Yes	Not used
5	Observation Value	Yes	Value passed in OBX;5 is driven by OBX;2. For Radiology: One line of the report text. For Labs: Result value for the lab parameter mentioned in OBX3. An encapsulated base64 file is received in OBX5.5
6	Units	Yes	Required for Labs
7	Reference Range	Yes	Required for Labs
8	Abnormal Flags	Yes	Required for Labs
9	Probability	No	Not Used
10	Nature of Abn Test	No	Not Used
11	Observ Result Status	Yes	Result status (Required for Labs)
12	Date Last Observe Normal Values	No	Not Used
13	User access checks	No	Not Used
14	DT of the Observation	Yes	Result Date time
15	Producer's ID	No	Not Used
16	Responsible Observer	Yes	Required for Labs only. Instrument and technician details. Format: Instrument Name^Instrument ID^Performed Tech ID^Performed Tech Last Name^Performed Tech First Name^Performed Tech Middle Name^Verified Tech ID^Verified Tech Last Name^Verified Tech First Name

Seq	HL7 Field Name	Value Required	Comments
17	Observation Method		Not Used