AGFA HEALTHCARE
HL7 Conformance Statement

Enterprise Imaging 8.4.x

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1 INTRODUCTION

1.1 Revision Record

HL7 Conformance Statement Template, Livelink Node ID: 19565451		
Revision Number	**Date**	**Reason for Change**
8	March 2019	New structure for better quality communication with external parties

HL7 Conformance Statement Enterprise Imaging 8.4.x		
Revision Number	**Date**	**Reason for Change**
1-2	March 2024	Initial Revision for EI version 8.4.0.000
3-4	May 2024	Revision for 8.4.1.000. Changes to OBX fields from Message Board Attachments. Changed ORU Inbound ZDS to optional. Changed ORM Inbound NTE to align with conformance profile.
5	October 2024	Revision for 8.4.2.000. Fixed missing reference to ORU heartstation PDF. Removed ZDS from ORU Hearstation to align with it's Conformance Profile. Changed OBR 4.3 to new description.
6	January 2025	Revision for 8.4.3.000. Changed OBX-14 to required for ADT. Changed OBX-2, 3, and 5. Changed ORU inbound segments. Updated many timestamps to new format.
7	February 2025	Changed many subcomponents to R. Removed MSH-5.2, 5.3. Updated MFE-1 and PID-3.4.1.
8-9	October 2025	Revision for 8.4.4. Changed ORU inbound segments.
10-11	September 2026	Revision for 8.4.5

1.2 Purpose and Intended Audience of this Document

This document is a HL7 Conformance Statement for the HL7 Services of Enterprise Imaging 8.4.x.

The user of this document is involved with system integration and/or software design. We assume that the reader is familiar with the terminology and concepts that are used in the HL7 standard and the IHE Technical Framework.

Readers not familiar with HL7 terminology should first read the appropriate parts of the HL7 standard itself, prior to reading this conformance statement.

Although the use of this conformance statement in conjunction with the HL7 standard is intended to facilitate communication with Enterprise Imaging 8.4.x, it is not sufficient to guarantee, by itself, the inter-operation of the connection between Enterprise Imaging 8.4.x and the 3rd party HL7-based system.

To help this integration validation we provide HL7 Conformance Profiles bundled together in a zip file "001689 Enterprise Imaging 8.4.x HL7 Conformance Profiles", also available on http://www.agfahealthcare.com/hl7. These conformance profiles are related to the Core Server component and the Web Server component.

Note:

Core Server might also support trigger events that are not included in this conformance statement, provided that the message content can be converted to one of the supported trigger events.
For example, Core Server has limited support for SIU messages since some SIU trigger events can be converted to ORM trigger events (with potential loss of some SIU data which isn't supported in an ORM trigger event).
Another example is the limited support for patient linking since the A24 trigger event can be converted to an A40 trigger event.

This requires a thorough analysis by AGFA Healthcare Professional Services that ultimately determine whether or not Core Server can support a non-listed trigger event.

The integration of any device into a system of interconnected devices goes beyond the scope of the HL7 standard and this conformance statement when *interoperability* is desired. The responsibility for analyzing the applications requirements and developing a solution that integrates the AGFA equipment with other vendors' systems is the user's responsibility and should not be underestimated.

1.3 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:

ACK	Acknowledgement message
ADT	Admission, Discharge, and Transfer message
AL1	Patient Allergy Information segment
DFT	Detail Financial Transaction message
ERR	Error segment
EVN	Event Type segment
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
MFE	Master File Entry segment
MFI	Master Files Identification segment
MFN	Master Files Notification message
MRG	Merge Patient Information segment
MSA	Message Acknowledgment segment
MSH	Message Header segment
NTE	Notes and comments segment
OBR	Observation Request segment
OBX	Observation/Result segment
OF	Order Filler – Device that sends filled orders (ORM)
OP	Order Placer
ORC	Common Order segment
ORM	Order Request Message
ORU	Observation Results - Unsolicited message
PD1	Patient Additional Demographic segment
PID	Patient ID segment
PRA	Practitioner Detail segment
PV1	Patient Visit segment
QRD	Query Definition segment
RIS	Radiology Information System
SCH	Scheduling Activity Information segment

SIU	Scheduling Information Unsolicited message
STF	Staff Identification segment
ZDS	EI Study Instance Identification segment

1.4 Related Documents

- HL7 Standard v2.3.1, 2.4, 2.5
- IHE Radiology Technical Framework
- IHE IT Infrastructure Technical Framework

2 INBOUND MESSAGES

2.1 Core Server supported Trigger Events

2.1.1 Supported ACK Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column or to chapter 2.1.1.1 and 2.2.

Table 2-1 Supported ACK Events

Func Area	Event Code	ACK Trigger Event Description	Conformance profile document
ACK	ALL	General ACK Message	ENTERPRISE IMAGING INBOUND ACK.pdf

2.1.1.1 Supported ACK segments

The following segments are supported when Enterprise imaging receives an ACK message:

Segments without brackets are mandatory. Segment with square brackets are optional and segments with curly brackets (braces) are repeating.

Table 2-2 Supported ACK segments

HL7 ACK Event Code	Supported ACK segments
All	MSH MSA [ERR]

2.1.2 Supported ADT Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column or to chapter 2.1.2.1 and 2.2.

Table 2-3 Supported ADT Events

Func Area	Event Code	ADT Trigger Event Description	Conformance profile document
ADT	A01	Admit / Visit notification	ENTERPRISE IMAGING INBOUND ADT_A01.pdf
ADT	A02	Transfer a patient	ENTERPRISE IMAGING INBOUND ADT_A02.pdf
ADT	A03	Discharge / End visit	ENTERPRISE IMAGING INBOUND ADT_A03.pdf
ADT	A04	Register a patient	ENTERPRISE IMAGING INBOUND ADT_A04.pdf
ADT	A05	Pre-admit a patient	ENTERPRISE IMAGING INBOUND ADT_A05.pdf
ADT	A06	Change an outpatient to an inpatient	ENTERPRISE IMAGING INBOUND ADT_A06.pdf
ADT	A07	Change an inpatient to an outpatient	ENTERPRISE IMAGING INBOUND ADT_A07.pdf
ADT	A08	Update patient information	ENTERPRISE IMAGING INBOUND ADT_A08.pdf
ADT	A11	Cancel admit/visit notification	ENTERPRISE IMAGING INBOUND ADT_A11.pdf
ADT	A12	Cancel transfer	ENTERPRISE IMAGING INBOUND ADT_A12.pdf
ADT	A13	Cancel discharge/end visit	ENTERPRISE IMAGING INBOUND ADT_A13.pdf
ADT	A28	Add person information	ENTERPRISE IMAGING INBOUND ADT_A28.pdf
ADT	A31	Update person information	ENTERPRISE IMAGING INBOUND ADT_A31.pdf

Func Area	Event Code	ADT Trigger Event Description	Conformance profile document
ADT	A38	Cancel pre-admit	ENTERPRISE IMAGING INBOUND ADT_A38.pdf
ADT	A40	Merge patient - patient identifier list	ENTERPRISE IMAGING INBOUND ADT_A40.pdf
ADT	A47	Change patient identifier list	ENTERPRISE IMAGING INBOUND ADT_A47.pdf

2.1.2.1 Supported ADT segments

The following segments are supported when Enterprise imaging receives an ADT message:

Segments without brackets are mandatory. Segments with square brackets are optional and segments with curly brackets (braces) are repeating.

Table 2-4 Supported ADT segments

HL7 ADT Event Code	Supported ADT segments
A01; A03; A05; A06; A07; A13	MSH EVN PID [PD1] PV1 {[OBX]} {[AL1]}
A02, A11, A12, A38	MSH EVN PID [PD1] PV1 {[OBX]}
A04; A08; A28, A31	MSH EVN PID [PD1] [PV1] {[OBX]} {[AL1]}
A40, A47	MSH EVN PID [PD1] MRG

2.1.3 Supported MFN Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column or to chapter 2.1.3.1 and 2.2.

Table 2-5 Supported MFN Events

Func Area	Event Code	MFN Trigger Event Description	Conformance profile document
MFN	M02	Staff/Practitioner master file	ENTERPRISE IMAGING INBOUND MFN_M02.pdf

2.1.3.1 Supported MFN segments

The following segments are supported when Enterprise imaging receives an MFN message:

Segments without brackets are mandatory. Segments with square brackets are optional and segments with curly brackets (braces) are repeating.

Table 2-6 Supported MFN segments

HL7 MFN Event Code	Supported MFN segments
M02	MSH MFI { MFE STF [PRA] }

2.1.4 Supported ORM Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column or to chapter 2.1.4.1 and 2.2.

Table 2-7 Supported ORM Events

Func Area	Event Code	ORM Trigger Event Description	Conformance profile document
ORM	O01	Order message	ENTERPRISE IMAGING INBOUND ORM_O01.pdf

2.1.4.1 Supported ORM segments

The following segments are supported when Enterprise imaging receives an ORM message:

Segments without brackets are mandatory. Segments with square brackets are optional and segments with curly brackets (braces) are repeating.

Table 2-8 Supported ORM segments

HL7 ORM Event Code	Supported ORM segments
O01	MSH PID [PD1] [PV1] {[AL1]} ORC OBR {[NTE]} { [OBX] } [ZDS]

2.1.5 Supported ORU Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column or to chapter 2.1.5.1 and 2.2.

Table 2-9 Supported ORU Events

Func Area	Event Code	ORU Trigger Event Description	Conformance profile document
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING INBOUND ORU_R01.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING INBOUND ORU_R01_HEARTSTATION.pdf

2.1.5.1 Supported ORU segments

The following segments are supported when Enterprise imaging receives an ORU message:

Segments without brackets are mandatory. Segments with square brackets are optional and segments with curly brackets (braces) are repeating.

Table 2-10 Supported ORU segments

HL7 ORU Event Code	Supported ORU segments
R01 - default	MSH PID [PD1] [PV1] { [ORC] OBR [ZDS] {[NTE]} { Only the segments of the last iteration ORDER_OBSERVATION group will be implemented. OBX } }

HL7 ORU Event Code	Supported ORU segments
R01 (Heartstation)	MSH PID [PD1] [PV1] {[ORC] OBR {Only the segments of the last iteration ORDER_OBSERVATION group will be implemented. {OBX}}}

2.2 Core Server supported fields in Inbound segments

The following sub-chapters will indicate what are the Required and optional fields supported by Enterprise Imaging for each segment.

The supported segments per message types are listed in the chapter 2.1

2.2.1 MSH Segment

Table 2-11 MSH Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Field Separator**	**R**	**Usually "|"**
2	**Encoding Characters**	**R**	**Usually "^~\&"**
3	Sending Application	O	
3.1	**>namespace ID**	**R**	**code that identifies sending application**
4	Sending Facility	O	
4.1	**>namespace ID**	**R**	**code that identifies sending facility**
5	Receiving Application	O	
5.1	>namespace ID	O	
6	Receiving Facility	O	
6.1	>namespace ID	O	
7	Date/time of Message	O	
7.1	>Date/Time	O	YYYYMMDD[HH[MM[SS]]][+/-ZZZZ] If timezone information is present, it is taken into account for all date/time fields in the message. If timezone information is present also in other date/time fields, it overrules the timezone information in this field.
9	**Message Type**	**R**	
9.1	**>Message type**	**R**	**ADT or ORM or ORU or MFN or ACK**
9.2	**>Trigger event**	**R**	**See supported "event codes" in chapter 2.1.1, 2.1.2, 2.3.2, 2.4.2, 2.5.2**
9.3	>Message structure	O	
10	**Message Control ID**	**R**	
11	Processing ID	O	
11.1	>Processing ID	O	
12	**Version ID**	**R**	
12.1	**>Version ID**	**R**	**Supported versions: 2.3 - 2.3.1 - 2.4 - 2.5.**
18	Character Set	O	

2.2.2 MSA Segment

Table 2-12 MSA Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Acknowledgment Code**	**R**	**Supported values: AA, AR, AE**
2	**Message Control ID**	**R**	**The message control id of the original message**

2.2.3 ERR Segment

Table 2-13 ERR Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	Error Code and Location	O	Indicates the position in the message which caused the processing problem
1.1	>Segment ID	O	
1.2	>Segment sequence	O	
1.3	>Field position	O	
1.4	>Code identifying error	O	
1.4.1	**>>Identifier**	**R**	
1.4.5	**>>Alternate text**	**R**	**Description of the error in the processing application**
2	Error location	O	Indicates the position in the message which caused the processing problem. Applicable for HL7 version 2.5.
2.1	>Segment ID	O	
2.2	>Segment sequence	O	
2.3	>Field position	O	
2.4	>Field repetition	O	
2.5	>Component number	O	
2.6	>Sub-component number	O	
3	HL7 Error Code	O	Applicable for HL7 version 2.5
3.1	**>Identifier**	**R**	**Error code**
3.2	>text	O	Description of error type
4	**Severity**	**R**	**Applicable for HL7 version 2.5**
5	**Application Error Code**	**R**	**The code and description of the error in the processing application. Applicable for HL7 version 2.5**
5.1	**>Identifier**	**R**	**Internal error code**
5.2	**>Text**	**R**	**Description of the error in the processing application**

2.2.4 EVN Segment

Table 2-14 EVN Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
2	**Recorded Date/Time**	**R**	
2.1	**>Date/Time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**

2.2.5 PID Segment

Table 2-15 PID Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
3	**Patient Identifier List**	**R**	
3.1	**>ID**	**R**	**Identification number or code of the patient**
3.4	>Assigning Authority	O	The "Assigning authority" aka "Issuer of Patient ID" can consist of the following three parts: - Namespace ID // Issuer of Patient ID - Universal ID // Universal Entity ID - Universal ID Type // Universal Entity ID Type Namespace ID, or combination of Universal ID and Universal ID Type, unique define the issuer. Either only Namespace is specified, or only Universal ID and Universal ID Type are specified, or all three components are specified. The combination of "Namespace ID" - "Universal ID" - "Universal ID Type" must be unique in EI! Though the component is not required, it is strongly advised to provide a value.
3.4.1	**>>namespace ID**	**R**	**Identifier of the Assigning Authority that issued the patient id.** **Either only Namespace is specified, or only Universal ID and Universal ID Type are specified, or all three components are specified.** **If not available the default patient assigning authority for the system will be used**
3.4.2	>> universal ID	O	Universal Entity ID. This ID must be unique in EI and must be in the correct format, i.e. containing only digits and dots. Its total length <=64 characters!
3.4.3	>>universal ID type	O	Universal Entity ID Type. Only supported value : - ISO
3.5	> Identifier Type code (ID)	O	Supported values: PI = Patient Primary Identifier SS = Social Security number If empty PI will be used by default
5	**Patient Name**	**R**	
5.1	**>family name**	**R**	
5.1.1	**>>surname**	**R**	**Patient's last name**
5.1.2	>>own surname prefix	O	For alphabetic name / maiden name, if PID.5.1.1 is empty, PID.5.1.2 and PID.5.1.3 are concatenated as last name
5.1.3	>>own surname	O	For alphabetic name / maiden name, if PID.5.1.1 is empty, PID.5.1.2 and PID.5.1.3 are concatenated as last name
5.2	>given name	O	Patient's first name
5.3	>second and further given name or initials thereof	O	Patient Middle Name
5.4	>suffix	O	Patient's suffix (eg: JR or III)
5.5	>prefix	O	Patient's prefix (eg: DR)
5.7	>name type code	O	M = maiden name, only support storing last name for maiden name.
5.8	>name representation code	O	Supported are : A or empty = Alphabetic I = Ideographic

Seq	HL7 Field Name	Option	Comments
			P = Phonetic
7	Date/Time of Birth	O	
7.1	**Date/Time**	**R**	**format YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]**
8	Administrative Sex	O	M (Male), F (Female), O (Other) The DICOM Patient's Sex (0010,0040) attribute can have only the values M, F or O (for other). So when EI receives other values than the one indicated above, it will convert it to O
11	Patient Address	O	
11.1	>street address (SAD)	O	This component specifies the street or mailing address of a person or institution.
11.1.1	>>street or mailing address	O	This is used when PID-11.1.2 (Street Name) is empty
11.1.2	>>street name	O	Name of the street
11.1.3	>>dwelling number	O	House number
11.2	>other designation	O	communication_channel.Address_Line1
11.3	>city	O	Municipality code of the city. If field is empty, the city will be listed as 'Unknown' (code UKW).
11.4	>state or province	O	communication_channel.Address_Line3
11.5	>zip or postal code	O	Zip or postal code of the city
11.6	>country	O	3-digit code defining the country. This is necessary in EI for the address segment to be processed. It defaults to UKW (Unknown country) when left empty
11.7	>address type	O	O (office), H (home address) are supported. L (Legal Address) defaults to O (office) Other codes defaults to H (home address)
11.8	>other geographic designation	O	communication_channel.Address_Line2
11.9	>country/parish code	O	communication_channel.Address_Line4
13	Phone Number – Home	O	This field is used for all home communication. First one is the primary home communication channel
13.1	>telephone number	O	In case of telephone number/fax number/cellular number, the phone number is put in this field [(999)] 999-9999 [X99999][C any text]
13.2	**>telecommunication use code**	**R**	**If this is empty the communication cannot be registered.** **Supported are:** **- Primary Residence Number (PRN)** **- Work Number (WPN)** **- Network (email) Address (NET)**
13.3	**>telecommunication equipment type (ID)**	**R**	**If this is empty the communication cannot be registered.** **Supported are:** **- Telephone (PH)** **- Fax (FX)** **- Cellular Phone(CP)** **- Internet Address (Internet)**
13.4	>Email address	O	In case of Network Email Address, this needs to be filled in
14	Phone Number – Business	O	This field is used for all business communication. First one is the primary business channel
14.1	>telephone number	O	In case of telephone number/fax number/cellular number, the phone number is put in this field [(999)] 999-9999 [X99999][C any text]

Seq	HL7 Field Name	Option	Comments
14.2	**>telecommunication use code**	**R**	**Required. If this is empty the communication cannot be registered.** **Supported are:** **- Primary Residence Number (PRN)** **- Work Number (WPN)** **- Other Residence Number (ORN)** **- Network (email) Address (NET)**
14.3	**>telecommunication equipment type (ID)**	**R**	**Required. If this is empty the communication cannot be registered.** **Supported are:** **- Telephone (PH)** **- Fax (FX)** **- Cellular Phone(CP)** **- Internet Address (Internet)**
14.4	>Email address	O	In case of Network Email Address, this needs to be filled in
19	SSN Number – Patient	O	Social Security number of the patient
23	Birth Place	O	
29	Patient Death Date/Time	C	Condition Predicate:If PID.30 has a value Y, this field also needs a value.
29.1	**Date/Time**	**R**	**YYYYMMDD[HHMM[SS]][+-ZZZZ] or ""** **If timezone information is present it overrules the timezone information available in MSH-7**
30	Patient Death Indicator	O	Y or N

2.2.6 PD1 Segment

Table 2-16 PD1 Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
4	Patient Primary Care Provider Name & ID No	O	
4.1	**>ID number (ST)**	**R**	**Primary Care Physician code**
4.2	>family name	O	Physician Family Name
4.2.1	>>surname	O	
4.3	>given name	O	Physician Given Name
4.9	>assigning authority	O	Assigning authority that issued the physicians code
4.9.1	**>>namespace ID**	**R**	**Identifier of the Assigning Authority that issued the physicians code. If empty, the default assigning authority will be taken.**

2.2.7 AL1 Segment

Table 2-17 AL1 Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
3	**Allergen Code/Mnemonic/Description**	**R**	**Allergy code, name**
3.1	**>identifier**	**R**	

Seq	HL7 Field Name	Option	Comments
4	Allergy Severity Code	O	Severity code
4.1	**>identifier**	**R**	**Supported values:** **SV: Severe** **MO: Moderate** **MI: Mild** **U: Unknown.**
5	Allergy Reaction Code	O	Reaction code
6	Identification Date	O	The start date when the allergy was identified. Format : YYYYMMDD

2.2.8 MRG Segment

Determines the source patient of a patient merge when the message is an ADT_A40 event. When it's an ADT_A47 event, then this segment determines the source patient identifier(s), which is going to be replaced by the target patient identifier(s) present in the PID-segment.

Table 2-18 MRG Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Prior Patient Identifier List**	**R**	**For ADT_A40:** **Identifiers specified in the MRG segment identify the source patient that needs to be merged to the target patient identified in the PID-segment** **For ADT_A47:** **One to one field corresponding list to PID identifiers list. Identifiers specified in MRG segment are to be replaced by field corresponding identifier in PID**
1.1	**ID number**	**R**	**Identification number or code for the patient**
1.4	Assigning authority	O	The 'Assigning authority' aka 'Issuer of Patient ID' consist of the following three parts: - Namespace ID // Issuer of Patient ID - Universal ID // Universal Entity ID - Universal ID Type // Universal Entity ID Type The combination of 'Namespace ID' - 'Universal ID' - 'Universal ID Type' must be unique in EI!
1.4.1	**Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the patient id. If not available an internal patient assigning authority for the system will be used**
1.4.2	>>universal ID	O	Universal Entity ID. This ID must be unique in EI and must be in the correct format, i.e. containing only digits and dots. Its total length <= 64 characters!
1.4.3	>>universal ID type	O	Universal Entity ID Type. Only supported value : - ISO
1.5	Identifier type code	O	Supported values: - PI = Patient Primary Identifier If empty PI will be used by default Value entered should match PID 3.5 for successful merge

2.2.9 PV1 Segment

Table 2-19 PV1 Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	Set ID – PV1	O	
2	**Patient Class**	**R**	**Required for: A01, A04, A05, A06, A07** **I (Inpatient), O (Outpatient), E (Emergency), P (Preadmit), R (Recurring), B (Obstetrics), N (Not applicable)**
		O	Optional for A02, A03, A08, A11, A12, A13, A28, A31, A38
3	**Assigned Patient Location**	**R**	**Required for: A02, A12. At least one of the component must be filled in (3.1 or 3.2 or 3.3 or 3.4 or 3.11)**
		O	Optional for: A01, A03, A04, A05, A06, A07, A08, A11, A13, A28, A31, A38, ORM, ORU
3.1	>Point of care	O	Patient's location department code. When an unexisting department code is used, the department will be autocreated
3.2	>Room	O	Room in the department
3.3	>Bed	O	Bed in the room
3.4	>Facility (HD)	O	Location facility
3.4.1	**>>Namespace ID**	**R**	**Patient's location facility code. When an unexisting facility code is used, the facility will be autocreated**
3.11	>Assigning Authority for location	O	
3.11.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the department/facility code.** **If empty, the default assigning authority will be taken.**
4	Admission Type	O	Type of admission, the circumstances under which the patient was or will be admitted
7	Attending Doctor	O	Attending Physician information
7.1	**>ID number (ST)**	**R**	**physician identifier**
7.2	>Family name	O	
7.2.1	>>Surname	O	Family name of the physician
7.3	>Given name	O	Given name of the physician
7.4	>Second and further given names or initials thereof	O	Middle name of the physician.
7.5	>Suffix (e.g., JR or III)	O	Name suffix, like SR
7.6	>Prefix (e.g., DR)	O	Name prefix, like Prof
7.9	>Assigning authority	O	Assigning Authority of attending physician code.
7.9.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the attending physician code.** **If empty, the default assigning authority will be taken.**
8	Referring Doctor	O	Referring physician information (see detailed component description in PV1-7)
8.1	**>ID number (ST)**	**R**	
8.2	>Family name	O	
8.2.1	>>Surname	O	
8.3	>Given name	O	
8.4	> Second and further given names or initials thereof	O	
8.5	>Suffix	O	e.g: JR or III
8.6	>Prefix	O	e.g: DR

Seq	HL7 Field Name	Option	Comments
8.9	>Assigning authority	O	Assigning Authority of referring physician code.
8.9.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the referring physician code.** **If empty, the default assigning authority will be taken.**
15	Ambulatory Status	O	Code indicating any permanent or transient handicapped conditions
16	VIP Indicator	O	This field identifies the type of VIP. - 1, set VIP or personnel as yes - 0, set as no
17	Admitting Doctor	O	Admitting physician information (see detailed component description in PV1-7)
17.1	**>ID number (ST)**	**R**	
17.2	>Family name	O	
17.2.1	>>Surname	O	
17.3	>Given name	O	
17.4	> Second and further given names or initials thereof	O	
17.5	>Suffix	O	e.g: JR or III
17.6	>Prefix	O	e.g: DR
17.9	>Assigning authority	O	Assigning Authority of admitting physician code.
17.9.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the admitting physician code.** **If empty, the default assigning authority will be taken.**
18	Patient Type	O	Site-specific values that identify the patient type
19	**Visit Number**	**R**	**Required for A01, A02, A03, A04, A05, A06, A07, A11, A12, A13, A38**
		O	Optional for: A08, A28, A31, ORM, ORU
19.1	**>ID**	**R**	**Unique number identifying the admission.**
19.4	>Assigning authority	O	
19.4.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the admission number.** **If empty, the default assigning authority will be taken.**
44	Admit Date/Time	O	When no admit date/time is present in the message, a fallback is done to EVN-2.
44.1	**>Date/time**	**R**	**YYYYMMDD[HHHMM[SS]][+-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
44.2	>Degree of precision	O	Retained for backward compatibility only
45	Discharge Date/Time	O	When no discharge date/time is present in the message, a fallback is done to EVN-2
45.1	**>Date/time**	**R**	**YYYYMMDD[HHHMM[SS]][+-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**

2.2.10 ORC Segment

Table 2-20 ORC Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments

Seq	HL7 Field Name	Option	Comments
1	**Order Control**	**R**	**Supported in ORM:** **- NW (New order)** **- SC/XO/XX(Change Order)** **- CA (Cancel Order)** **- DC (Discontinue order)** **Supported in ORU** **SC (status changed)**
2	Placer Order number	O	
2.1	**>Entity identifier**	**R**	**Unique identifier for the order, defined by the order placer**
2.2	**>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the placer order number.** **If empty, the default assigning authority will be taken**
3	**Filler Order number**	**R**	**Required for ORM**
		O	Optional for ORU This field holds accession number (order level) or filler order number.It is not required. If an order already exists, the report is matched against the order with "patient" and "accession number" If no order exists, an ORU without ORC-3 will CREATE an order without an "accession number (order level)".
3.1	**>Entity identifier**	**R**	**Unique identifier for the order, defined by the order filler**
3.2	>Namespace ID	O	Identifier of the Assigning Authority that issued the filler order number. If empty, the default assigning authority will be taken
5	**Order Status**	**R**	**Required for ORU.** **-IP (In Progress)** **-CM (Completed)** **-DC (Discontinued)** **-CA (Cancelled)** **-SC (Scheduled)**
		O	Optional for ORM - empty, when updating an existing order no status change when creating a new oder set SPS status as Scheduled - IP: set SPS status as STARTED - CM: set SPS status as COMPLETED - DC: set SPS status as DISCONTINUED - CA: set SPS status as CANCELLED - SC: set SPS status as Ordered/Scheduled - PA: o When an existing procedure, then keep the existing SPS status + Set the Patient Arrived flag to True. o When a new procedure, then set SPS status as Ordered/Scheduled + Set the Patient Arrived flag to True.
7	Quantity/Timing	O	Identical to the Quantity/Timing in OBR-Segment. If values provided in these fields differ, EI will consider value provided in OBR-27.

Seq	HL7 Field Name	Option	Comments
7.4	>Start date/time	O	
7.4.1	**>>Date/time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
7.6	>Priority	O	1) For existing sites (migration) - High Priority codes: A, T - Normal Priority codes: S, Unknown* - Low Priority Codes: C, P, R 2) For new installations - STAT priority code: S - Urgent priority codes: A, T - High Priority code: C - Normal Priority codes: P, Unknown* - Routine Priority Code: R These values are configurable. * A value for which no mapping is applicable.
9	Date/Time of Transaction	O	Fall back for ORC-15 being empty. Used as order creation date/time. When empty, the Date/Time of processing the message is taken
9.1	**>Date/time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
12	Ordering Provider	O	Requesting Physician. If this is not filled in OBR-16 is processed instead
12.1	**>ID number**	**R**	**Unique code identifying the requesting physician**
12.2	**>Family name**	**R**	
12.2.1	**>>Surname**	**R**	**Requesting physician last name**
12.3	>Given name	O	Requesting physician first name
12.4	>Second and further given names or initials thereof	O	Middle name
12.5	>Suffix	O	e.g: JR or III
12.6	>Prefix	O	e.g: DR
12.9	>Assigning authority	O	
12.9.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the physician id. If empty, the default assigning authority will be taken.**
15	Order Effective Date/Time	O	Fall back for OBR-6 being empty. Used as order creation date/time. When empty, ORC.9 is taken.
15.1	**>Date/Time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
17	Entering Organization	O	Requesting department
17.1	**>Identifier**	**R**	**Code of the department**
17.2	>Text	O	Name of the department. If empty, the identifier will be taken as name.
17.3	>Name of Coding system	O	Identifier of the Assigning Authority that issued the department id. If empty, the default system assigning authority will be taken.

Seq	HL7 Field Name	Option	Comments
21	Ordering facility name	O	Requesting Hospital
21.1	>Organization name	O	Name of the hospital. If empty, the identifier of the requesting facility will be taken as name
21.3	**>ID number (NM)**	**R**	**Identifier of the hospital**
21.6	**>assigning authority**	**R**	**Required for ORU.**
21.6.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the requesting hospital id.** **If empty, the default assigning authority will be taken.**
25	**Order Status Modifier**	**R**	**Required for ORM.** **Order Status Modifier only supported when property on ORM inbound pipeline. Delete requested procedure upon ORM cancel with ORC-25 = DELETE, is true.**
25.1	**>identifier (ST)**	**R**	**Required for ORM.** **Only supported value : DELETE.** **For a procedure where no reading workflow or QC workflow is started and no images are available the following applies depending on the ORM inbound pipeline property setting :** **- property true : When ORM message is sent to cancel a procedure (Order control, ORC.1=CA and Order status, ORC.5=CA)and value of this field is "DELETE", the procedure will be deleted.** **-property false : A status update to procedure canceled is performed.** **In all other cases only status update to procedure canceled will be performed.**

2.2.11 OBR Segment

Table 2-21 OBR Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	Set ID - Observation Request	O	Set to 1,2,3…
2	Placer Order number	O	Identical to ORC-2
2.1	**>Entity identifier**	**R**	
2.2	**>Namespace ID**	**R**	
3	**Filler Order number**	**R**	**Identical to ORC-3**
3.1	**>Entity identifier**	**R**	
3.2	**>Namespace ID**	**O**	**Required for ORU.**
4	**Universal Service Identifier**	**R**	
4.1	**>Identifier**	**R**	**The code of the requested procedure definition**
4.2	>Text	O	The description of the requested procedure definition
4.3	>Name of coding system	O	Primary use: Issuer of Procedure Code. When empty: EI_NOAA_EXTERNAL_PROC + suffix is used. Alternative use: Fallback for Performing Department Code when no performing department is identified in OBR-43. OBR-4.3 will be used in combination with the default

Seq	HL7 Field Name	Option	Comments
			assigning authority in the lookup of the performing department.
4.4	>Alternate Identifier	O	The code of the scheduled procedure step definition
4.5	>Alternate text	O	The description of the scheduled procedure step definition
4.6	>Name of alternate coding system	O	Coding system providing the code. If empty use issuer of order filler number. If there is no issuer for order filler number, use the default assigning authority.
6	Requested Date/Time	O	Used as order creation date/time. When empty a fall back on ORC-15 and ORC-9 is done. If both empty the Date/Time of processing the message is taken
6.1	**>Date/Time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
13	Relevant Clinical Info	O	
16	Ordering Provider	O	The ordering provider should be the same as ORC-12. If ORC-12 is filled in, this will not be processed.
16.1	**>ID number (ID)**	**R**	**Physician Identifier**
16.2	>Family name	O	
16.2.1	>>Surname	O	Physician lastname
16.3	>Given name	O	Physician firstname
16.9	>Assigning authority	O	
16.9.1	**>>Namespace ID**	**R**	**Identifier of the Assigning Authority that issued the physician code.** **If empty, the default assigning authority will be taken.**
18	**Placer Field 1**	**R**	**Required for ORU. Accession number of the requested procedure.**
		C	Conditional for ORM. Accession number of the requested procedure Condition Predicate: Field is required when the message has no StudyInstanceUid specified. (no ZDS segment)
19	**Placer Field 2**	**R**	**Required for ORM. Requested procedure ID**
		O	Optional for ORU. Requested procedure ID
20	**Filler Field 1**	**R**	**Required for ORM. Scheduled Procedure Step ID**
		O	Optional for ORU. Scheduled Procedure Step ID
22	Result Rpt/Status Change - Date/Time	O	ORU only. Report Modification Date or Addendum Modification Date
22.1	**>Date/Time**	**R**	**The modification date of the report**
24	Diagnostic Serv Sect Id	O	Modality Type (Used when Procedure Definition is created on the fly)
25	Result Status	O	ORU only. Report status Default values (property 'ORU controlled reporting workflow' is set to false) - P preliminary report - F signed report - C correction to results - D report deleted - X no results available, order cancelled

Seq	HL7 Field Name	Option	Comments
			ORU controlled reporting workflow (property 'ORU controlled reporting workflow' is set to true) - UP unapproved preliminary report - P approved preliminary report - F signed report - W wet read report - PA preliminary addendum - A final addendum - D report deleted
27	Quantity/Timing	O	Identical to the Quantity/Timing in ORC-7 Segment. If values provided in these fields differ, EI will consider value provided in OBR- 27
27.4	>Start date/time	O	Used as the requested procedure scheduled study date/ time and the scheduled procedure step start date/ time. When the value is empty, the value of OBR-36 is taken as requested procedure study date/time and scheduled procedure step start date/time
27.4.1	**>>Date/Time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
27.6	>Priority	O	1) For existing sites (migration) - High Priority codes: A, T - Normal Priority codes: S, Unknown* - Low Priority Codes: C, P, R 2) For new installations - STAT priority code: S - Urgent priority codes: A, T - High Priority code: C - Normal Priority codes: P, Unknown* - Routine Priority Code: R These values are configurable. * A value for which no mapping is applicable
28	Result Copies To	O	
28.1	**>ID number (ST)**	**R**	**code of the physician**
28.2	>family name	O	
28.2.1	>>surname	O	family name of the physician
28.3	>given name	O	given name of the physician (optional)
28.9	>assigning authority	O	
28.9.1	**>>namespace ID**	**R**	**Identifier of the Assigning Authority that issued the physician code.** **If empty, the default assigning authority will be taken.**
31	Reason For Study	O	
31.2	**>Text**	**R**	**Text containing clinical information for the study.**
32	Principal Result Interpreter	O	For ORU

Seq	HL7 Field Name	Option	Comments
			1) Default behaviour (property 'ORU controlled reporting workflow' is set to false). Final report : Physician that validated the report - if first iteration of OBR-33 is empty, this physician will also handled as author of the report. Preliminary report: - physician will be handled as author of the report. 2)ORU controlled reporting workflow (property 'ORU controlled reporting workflow' is set to true) - The physician specified in this field, will always be the attending physician which will get assigned to the signoff task in case the report is preliminary. - If no entry is specified, the first physician in OBR-33 will get the task assigned. For ORM This field can be used to fill in the "reading physician". Some RIS want to indicate already to which radiologist the reading task should be assigned to. So when they send the ORM,EI stores the reading physician and when a reading task is created, it can be assigned to the already filled in "reading physician".
32.1	**>Name**	**R**	
32.1.1	**>>ID number (ST)**	**R**	**Code identifying the physician**
32.1.2	**>>Family name**	**R**	**Required for ORU. Last name of the Physician**
32.1.3	**>>Given name**	**R**	**Required for ORU. Firstname of the physician**
32.1.9	>>Assigning authority	O	Identifier of the Assigning Authority that issued the principle result interpreter code. If empty, the default assigning authority will be taken.
33	Assistant Result Interpreter	O	ORU only. 1) Default behaviour (property 'ORU controlled reporting workflow' is set to false) Final report: - the first iteration will be handled as the author of the report. - All the other iterations are reviewers. Preliminary report: - all the iterations are handled as reviewers. 2)ORU controlled reporting workflow (property 'ORU controlled reporting workflow' is set to true) -The physician specified in the first field, will always be the author of the report. If no entry is specified in OBR-32, the first physician in OBR-33 is assigned the created signoff task in case the report is preliminary. - All the other iterations are reviewers.
33.1	**>Name**	**R**	**Required for ORU.**
33.1.1	**>>ID number (ST)**	**R**	**Required for ORU. Code identifying the physician**
33.1.2	**>>Family name**	**R**	**Required for ORU. Last name of the Physician**
33.1.3	**>>Given name**	**R**	**Required for ORU. Firstname of the physician**
33.1.9	>>Assigning authority	O	Identifier of the Assigning Authority that issued the assistant result interpreter code. If empty, the default assigning authority will be taken.

Seq	HL7 Field Name	Option	Comments
34	Technician	O	
34.1	>Name	O	
34.1.1	**>>ID number (ST)**	**R**	**Required for ORU. Code of the technician**
34.1.2	>> family name	O	Family name of the technician.
34.1.3	>>given name	O	First name of the technician
34.1.9	>>Assigning authority	O	Identifier of the Assigning Authority that issued the technician code. If empty, the default assigning authority will be taken.
34.5	>Room	O	Acquisition room
35	Transcriptionist	O	ORU only. Transcriptionist of the report
35.1	**>name**	**R**	**Required for ORU.**
35.1.1	**>>ID number (ST)**	**R**	**Required for ORU. Code identifying the transcriptionist.**
35.1.2	**>>Family name**	**R**	**Required for ORU. Family name of the transcriptionist.**
35.1.3	>>Given name	O	Given name of the transcriptionist.
35.1.9	>>Assigning authority	O	Identifier of the Assigning Authority that issued the transcriptionist code. If empty, the default assigning authority will be taken.
36	Scheduled Date/Time	O	Used for requested procedure scheduled study date/time and scheduled procedure step date/time when OBR-27.4 is empty.
36.1	**>Date/Time**	**R**	**YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7**
43	Planned Patient Transport Comment	O	This field can be used to provide performing department. When the performing department code provided in OBR-43.1 (with or without an issuer in OBR-43.3) is not found in the system, it will be created. When no name is present, the department code is used as the department name. Another way to provide the performing department is by means of OBR-4.3 (universal service identifier) . If present the value will be used in combination with the default assigning authority in the lookup.
43.1	**>Identifier**	**R**	**performing department code**
43.2	>Text	O	performing department name
43.3	>Name of coding system	O	issuer of performing department code

2.2.12 OBX Segment

Table 2-22 OBX Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Set ID – OBX**	**R**	**Set to 1,2,3…**
2	**Value Type**	**R**	**Supported values for ADT:** **- TX (For Single value- or Message board 'Text' Attachment, 'Keyword' Attachment or 'Pregnancy Information')** **- FT (For Single value- or Message board 'Text' Attachment, 'Keyword' Attachment)**

Seq	HL7 Field Name	Option	Comments
			Supported values for ORM: **- TX (For Single value- or Message board 'Text' Attachment, 'Keyword' Attachment, 'Pregnancy information' or 'Patient Arrived information') - (Attachment level: Patient, Study, Order)** **- FT (For Single value- or Message board 'Text' Attachment, 'Keyword' Attachment) - (Attachment level: Patient, Study, Order)** **- RP (For 'PDF/Image' Attachment - Reference Pointer) - (Attachment level: Study, Order)** **- ED (For 'PDF/Image' Attachment - Base64 Encoded Encapsulated Data) - (Attachment level: Study, Order)**
			Supported values for ORU: **In case of reports:** **- FT (For text report content)** **- RP (For reports send as PDF with reference pointer)** **- ED (For reports send as Base64 encoded data)** **In case of attachments, 'Pregnancy information' or 'Patient Arrived information':** **- TX (For Single value- or Message board 'Text' Attachment, 'Keyword' Attachment, 'Pregnancy information' or 'Patient Arrived information') - (Attachment level: Patient, Study, Order)** **- FT (For Single value- or Message board 'Text' Attachment, 'Keyword' Attachment) - (Attachment level: Patient, Study, Order)** **- RP (For 'PDF/Image' Attachment - Reference Pointer) - (Attachment level: Study, Order)** **- ED (For 'PDF/Image' Attachment - Base64 Encoded Encapsulated Data) - (Attachment level: Study, Order)**
3	**Observation identifier**	**R**	

Seq	HL7 Field Name	Option	Comments
3.1	**>Identifier**	**R**	**For ADT:** **(1) OBX segment holding Attachment information: Value of this field must correspond with a** **'Patient level'-attachment code as defined in the Administrator desktop.** **<u>Remarks :</u>** **If the attachment code is not setup as a 'Patient level'-attachment in the Administrator Desktop, the** **attachment will not be processed.** **Handling of multiple attachments with the same attachment code OBX-3.1:** **- Single value 'Text' attachment: Concatenate the multiple texts with newline separation.** **- Message board 'Text' attachment: Each attachment gets added as a separate message board item.** **- 'Keyword' Attachment: When the attachment is setup as a single-select keyword category, these** **attachments are considered as 'not processable'. When the attachment is setup as a multi-select** **keyword category, each keyword is properly added to the list of keywords for that attachment.** **(2) OBX segment holding 'Pregnancy information': The value PREGNANT indicates that OBX-5** **holds pregnancy information.**

Seq	HL7 Field Name	Option	Comments
			For ORM: **(1) OBX segment holding Attachment information: Value of this field must correspond with an** **attachment code as defined in the Administrator desktop.** **The following attachment codes are already delivered in dedicated HL7 fields and therefore should** **not be processed as attachments in OBX-segments:** **- REASONFORSTUDY (OBR-31)** **- PROCEDURECOMMENT (NTE-3)** **- CLINICALINFO (OBR-13 or NTE-3)** **<u>Remarks:</u>** **An ORM message can update patient level attachments when the property 'Update patient** **demographics' on the ORM inbound pipeline is set to True. When the patient gets created by means** **of the ORM message, the patient level attachments are also processed.** **If the attachment code is not setup as a Patient-, Study- or Order-level attachment in the** **Administrator Desktop, the attachment will not be processed.** **Handling of multiple attachments with the same attachment code OBX-3.1:** **- Single value 'Text' attachment: Concatenate the multiple texts with newline separation.** **- Message board 'Text' attachment: Each attachment gets added as a separate message board item.** **- 'Keyword' Attachment: When the attachment is setup as a single-select keyword category, these** **attachments are considered as 'not processable'. When the attachment is setup as a multi-select** **keyword category, each keyword is properly added to the list of keywords for that attachment. 'PDF/** **Image' Attachment: Each attachment gets added as a new document/image.** **(2) OBX segment with 'Patient Arrived information': The value PATIENT_ARRIVED indicates that** **OBX-5 holds the patient arrival status.** **(3) OBX segment holding 'Pregnancy information': The value PREGNANT indicates that OBX-5** **holds pregnancy information.**

			For ORU: **(1) OBX segment holding Report information:** **- &GDT for specifying general report.** **- &ADT for specifying addendum report.** **<u>Remark</u>:** **- When OBX-2 = FT --> Only 1 OBX segment with a general report in OBX-5 and multiple addendum OBX-segments are allowed.** **- When OBX-2 = RP or ED --> only 1 OBX segment is allowed. The OBX should specify a general report. When an addendum is present, it must be included in the general report.** **(2) OBX segment holding Attachment information:** **Value of this field must correspond with an attachment code as defined in the Administrator desktop.** **The following attachment codes are already delivered in dedicated HL7 fields and therefore should not be processed as attachments in OBX-segments:** **- REASONFORSTUDY (OBR-31)** **- PROCEDURECOMMENT (NTE-3)** **- CLINICALINFO (OBR-13 or NTE-3)** **<u>Remarks</u>:** **An ORU message can contain patient level, order level, study level and report level attachments.** **When the patient and the order are created by means of the ORU message, the patient/order/studylevel attachments, 'Patient Arrived information' and 'Pregnancy information' are also processed.** **When the patient and the order already exist, only the report-level attachments are processed.** **If the attachment code is not setup as a Patient-, Study- or Order-level attachment in the Administrator Desktop, the attachment will not be processed.** **Handling of multiple attachments with the same attachment code OBX-3.1:** **- Single value 'Text' attachment: Concatenate the multiple texts with newline separation.** **- Message board 'Text' attachment: Each attachment gets added as a separate message board item.** **- 'Keyword' Attachment: When the attachment is setup as a single-select keyword category, these attachments are considered as 'not processable'. When the attachment is setup as a multi-select keyword category, each keyword is properly added to the list of keywords for that attachment.** **- 'PDF/Image' Attachment: Each attachment gets added as a new document/image.** **(3) OBX segment with 'Patient Arrived information':** **The value PATIENT_ARRIVED indicates that OBX-5 holds the patient arrival status.**

Seq	HL7 Field Name	Option	Comments
			(4) OBX segment holding 'Pregnancy information': The value PREGNANT indicates that OBX-5 holds pregnancy information.
3.2	>Text	O	Description of the observation
3.4	>Alternate identifier	O	For ORU only: OBX segment holding Attachment information: - In case of order/report level attachment: Empty - In case of study-level attachment: Accession number of the procedure/study the attachment belongs to - When no specific accession number is passed in this component, the study-level attachments are to be added to all requested procedures this report is linked to. <u>Example:</u> An ORU message is sent containing two procedures belonging to the same service request and it contains two OBX-segments with attachments: - one attachment with code STDAT20 is a 'Study-level' attachment for requested procedure with accession number ACC123 - the other attachment with code SCANNEDREQUEST is an 'Order-level' attachment which applies to both requested procedures OBX|1|RP|STDAT20^^^ACC123||\ \attachmentserver\foldername \attachmentfilename1.pdf|| OBX|2| RP|SCANNEDREQUEST||\ \attachmentserver\foldername \attachmentfilename2.pdf|| Attachment with code STDAT20 is linked to procedure with accession number ACC123 Attachment with code SCANNEDREQUEST is linked to the order.
4	Observation Sub-ID	O	sub identifier for this observation

Seq	HL7 Field Name	Option	Comments
5	**Observation Value**	**R**	**For ADT:** **(1) OBX segment holding Attachment information:** **- For Single value- or Message board 'Text' Attachment: plain text** **- For 'Keyword' Attachment: Text that matches a pre-configured keyword value for the corresponding keyword attachment code OBX-3.1 If the value doesn't exist, a new keyword value is created and set inactive and searchable.** **<u>Remarks</u>:** **An attachment can be deleted when the content of OBX-5 contains two double quotes (“”), except for message board 'Text' attachments where only the HL7-created ones will be deleted.** **If the 'Text' attachments contain the formatting command .br surrounded by the escape character specified in the HL7 message, a new line (carriage return + line feed) must replace that string when this data is being updated or inserted.** **(2) OBX segment holding Pregnancy information: YES/NO/UNKNOWN**

Seq	HL7 Field Name	Option	Comments
			For ORM: **(1) OBX segment holding Attachment information:** **- For Single value- or Message board 'Text' Attachment: Plain text** **- For 'Keyword' Attachment: Text that matches a pre-configured keyword value for the corresponding keyword attachment code OBX-3.1.** **If the value doesn't exist, a new keyword value is created and set inactive and searchable.** **- For 'PDF/Image' Attachment - Reference Pointer: Path and file name** **- For 'PDF/Image' Attachment - Base64 Encoded Encapsulated Data':** **a) In case of a PDF:** **- OBX-5.2 = TEXT** **- OBX-5.3 = PDF** **- OBX-5.4 = Base64** **- OBX-5.5 = a string containing the Base64 encoded attachment data** **b) In case of an image:** **- OBX-5.2 = IM** **- OBX-5.3 = JPEG, TIFF, GIF, PNG, BMP, JPG, TIF (the type of image)** **- OBX-5.4 = Base64** **- OBX-5.5 = a string containing the Base64 encoded attachment data** **Remarks:** **An attachment can be deleted when the content of OBX-5 contains two double quotes (“”), except for message board 'Text' attachments where only the HL7-created ones will be deleted.** **If the 'Text' attachments contain the formatting command .br surrounded by the escape character specified in the HL7 message, a new line (carriage return + line feed) must replace that string when this data is being updated or inserted.** **(2) OBX segment with 'Patient Arrived information': YES/NO** **(3) OBX segment holding Pregnancy information: YES/NO/UNKNOWN**

Seq	HL7 Field Name	Option	Comments
			For ORU: **(1) OBX segment holding Report information:** **- When OBX-2 = FT --> Plain text report** **- When OBX-2 = RP --> Path and file name of the report as a PDF** **- When OBX-2 = ED -->** **- OBX-5.2 = TEXT** **- OBX-5.3 = PDF** **- OBX-5.4 = Base64** **- OBX-5.5 = a string containing the Base64 encoded PDF report (with/without addenda)** **(2) OBX segment holding Attachment information:** **- For Single value- or Message board 'Text' Attachment: Plain text** **- For 'Keyword' Attachment: Text that matches a pre-configured keyword value for the corresponding keyword attachment code OBX-3.1.** **If the value doesn't exist, a new keyword value is created and set inactive and searchable.** **- For 'PDF/Image' Attachment - Reference Pointer: Path and file name** **- For 'PDF/Image' Attachment - Base64 Encoded Encapsulated Data':** **a) In case of a PDF:** **- OBX-5.2 = TEXT** **- OBX-5.3 = PDF** **- OBX-5.4 = Base64** **- OBX-5.5 = a string containing the Base64 encoded attachment data** **b) In case of an image:** **- OBX-5.2 = IM** **- OBX-5.3 = JPEG, TIFF, GIF, PNG, BMP, JPG, TIF (the type of image)** **- OBX-5.4 = Base64** **- OBX-5.5 = a string containing the Base64 encoded attachment data** **<u>Remarks</u>:** **An attachment can be deleted when the content of OBX-5 contains two double quotes (“”), except for message board 'Text' attachments where only the HL7-created ones will be deleted.** **If the 'Text' attachments contain the formatting command .br surrounded by the escape character specified in the HL7 message, a new line (carriage return + line feed) must replace that string when this data is being updated or inserted.** **(3) OBX segment with 'Patient Arrived information': YES/NO** **(4) OBX segment holding Pregnancy information: YES/NO/UNKNOWN**

Seq	HL7 Field Name	Option	Comments
11	**Observation Result Status**	**R**	**For ORU only:** **Only required when ORU controlled reporting workflow is set to False (disabled). If value is not present a fall back is done to OBR-25. Supported values:** **- F (final results)** **- P (preliminary)** **- C (correction)** **- X (report body no longer found - overwrite) Report gets final status.** **- D (deleted)**
13	User Defined Access Checks	O	Used to mark the message board text attachment as 'public' (PUB) or 'private' (PRV) (optional). Supported values: - PUB - PRV When empty: PUB is assumed.
14	Date/Time of the Observation	O	The creation date (YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]) of the message board item or the date of the last menstrual period (YYYYMMDD)
14.1	**>Date/Time**	**R**	**For ORM and ORU:** **YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7** **If no date time is filled in, the report will be saved with the datetime of saving/updating.** **For message board text attachments: Date/time of the creation of the message board item (format:** **YYYYMMDD[HH[MM[SS]]][+/-ZZZZ] (optional) When empty or contains an invalid date/time,** **the date/time value present in MSH-7 is used.**
		R	**For ADT:** **YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]** **If timezone information is present it overrules the timezone information if available in MSH-7** **For message board text attachments: Date/time of the creation of the message board item (format:** **YYYYMMDD[HH[MM[SS]]][+/-ZZZZ] (optional) When empty or contains an invalid date/time,** **the date/time value present in MSH-7 is used.**
16	Responsible Observer	O	For messageboard text attachments: The user that added the messageboard text attachment item (optional). When empty or the user is not known in EI, the 'System Administrator' user is used.
16.1	**ID number (ST)**	**R**	
16.2	Family Name	O	
16.2.1	Surname	O	
16.3	Given Name	O	
16.9	**Assigning Authority**	**R**	
16.9.1	**Namespace ID**	**R**	

2.2.13 ZDS Segment

Table 2-23 ZDS Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Study Instance UID**	O	Optional but required in ORM for IHE SWF Profile
1.1	**Reference pointer**	**R**	**DICOM Study Instance UID (0020,000D)**

2.2.14 NTE Segment

Table 2-24 NTE Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
3	Comment	O	Plain text of Clinical info (Comment type CI) or Procedure comment (Comment type PC)
4	Comment type	O	This segment holds extra information on the order for this patient. It is stored on order level and overwritten on updates.
4.1	**>Identifier**	**R**	**Only for ORM and ORU:** **Supported values:** **- CI (clinical info)** **- PC (procedure comment)**

2.2.15 MFI Segment

Table 2-25 MFI Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Master File Identifier**	**R**	
1.1	**>Identifier**	**R**	**Only values PRA/STF supported**
1.2	>Text	O	
3	**File-Level Event Code**	**R**	**Only value UPD supported**
6	**Response Level Code**	**R**	**Only value NE supported**

2.2.16 MFE Segment

Table 2-26 MFE Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Record-Level Event Code**	**R**	**Supported values:** **- MAD: Add record to master file** **- MDL: Delete record from master file** **- MUP: Update record for master file** **- MDC: Deactivate: discontinue using record in master file** **- MAC: Reactivate deactivated record**
2	MFN Control ID	C	
3	Effective Date/Time	O	
3.1	**>Date/Time**	**R**	**The date of the validate of the MFN Event**
4	**Primary Key Value - MFE**	**R**	**Same value as STF-1-1**
5	**Primary Key Value Type**	**R**	**Only value CE supported**

2.2.17 STF Segment

Table 2-27 STF Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
1	**Primary Key Value - STF**	**R**	
1.1	**>Identifier**	**R**	**The same value as MFE-4 / Primary doctor id**
1.3	>Name of coding system	O	The Primary doctor id issuer (AA)
2	Staff ID Code	O	
2.1	**>ID**	**R**	**The other doctor id**
2.4	>Assigning Authority	O	
2.4.1	**>>Namespace ID**	**R**	**The other doctor id issuer (AA)**
3	Staff name	O	
3.1	>Family name	O	
3.1.1	>>Surname	O	
3.2	>Given name		
3.3	>Second and further given names or initials thereof	O	Middle name
3.4	>Suffix (e.g., JR or III)	O	
3.5	>Prefix (e.g., DR)	O	
4	Staff Type	O	Used as professional-department relationship type. Default = EMPLOYEE
5	Administrative Sex	O	
8	Department	O	Will be added as department relationship to the professional
8.1	**>Identifier**	**R**	**Department id**
8.3	>Name of coding system	O	The department id issuer (AA)
9	Hospital service	O	Will be used as the facility in the department-relationship
9.1	**>Identifier**	**R**	**Facility id**
9.3	>Name of coding system	O	
10	Phone	O	
10.1	>Telephone number	O	In case of telephone number/fax number/cellular number, the phone number is put in this field. [(999)] 999-9999 [X99999][C any text]
10.2	**>Telecommunication use code**	**R**	**If this is empty the communication cannot be registered.** **Supported are:** **- Primary Residence Number (PRN)** **- Work Number (WPN)** **- Network (email) Address (NET)**
10.3	**>Telecommunication equipment type (ID)**	**R**	**If this is empty the communication cannot be registered.** **Supported are:** **- Telephone (PH)** **- Fax (FX)** **- Cellular Phone(CP)** **- Internet Address (Internet)**
10.4	>Email address	O	In case of Network Email Address, this needs to be filled in
11	Office/Home Address	O	
11.1	>Street Address (SAD)	O	This component specifies the street or mailing address of a person or institution.

Seq	HL7 Field Name	Option	Comments
11.1.1	>>Street or mailing address	O	communication_channel.Street (if STF-11.1.2 is empty)
11.1.2	>>Street name	O	communication_channel.Street
11.1.3	>>Dwelling number	O	communication_channel.Streetnr
11.2	>other designation	O	communication_channel.Address_Line1
11.3	>City	O	municipality.name (if empty -> Unknown is used)
11.4	>State or province	O	communication_channel.Address_Line3
11.5	>Zip or postal code	O	municipality.zip (if empty -> code UKW is used - mapping to name = Unknown)
11.6	>Country	O	communication_channel.country (3 digit code - if empty: code UKW - mapping to name = Unknown)
11.7	>Address type	O	communciation_channel.communication_type (H - for home address / O - for office address / L maps to O / other codes map to H)
11.8	>other geographic designation	O	communication_channel.Address_Line2
11.9	>county/parish code	O	communication_channel.Address_Line4
12	Institution Activation Date	O	Begin date of the professional/department relationship
12.1	>Date	O	
12.1.1	**>>Date/Time**	**R**	
13	Institution Inactivation date	O	End date of the professional/department relationship
13.1	>Date	O	
13.1.1	**>>Date/Time**	**R**	

2.2.18 PRA Segment

Table 2-28 PRA Fields Support in Enterprise Imaging

Seq	HL7 Field Name	Option	Comments
3	Practitioner Category	O	Corresponds with professional's position in EI. Possible values: - RAD / PHYSICIAN - PHYS / PHYSICIAN - TECH / TECHNOLOGIST - TRANS / TRANSCRIPTIONIST - SYSADM / SYSTEM ADMINISTRATOR - MAN / MANAGER - AGFA / AGFA SERVICE - REC / RECEPTIONIST If another value is present in this field this will not be added as a position of the professional
7	Privileges	O	
7.1	>Privilege	O	
7.1.1	**>>Identifier**	**R**	**Supported value(s): INTERNAL, INT**
9	Institution	O	Will be used if STF-9 is empty
9.1	**>Identifier**	**R**	
9.2	>Text	O	
9.3	>Name of coding system	O	

3 OUTBOUND MESSAGES

3.1 Core Server supported Trigger Events

3.1.1 Supported ACK Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column.

Table 3-1 Supported ACK Events

Func Area	Event Code	ACK Trigger Event Description	Conformance profile document
ACK	ALL	General Acknowledgement message	ENTERPRISE IMAGING OUTBOUND ACK.pdf

3.1.2 Supported DFT Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column.

Table 3-2 Supported DFT Events

Func Area	Event Code	DFT Trigger Event Description	Conformance profile document
DFT	P03	Order message	ENTERPRISE IMAGING OUTBOUND DFT_P03.pdf

3.1.3 Supported ORM Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column.

Table 3-3 Supported ORM Events

Func Area	Event Code	ORM Trigger Event Description	Conformance profile document
ORM	O01	Order message	ENTERPRISE IMAGING OUTBOUND ORM_O01.pdf

3.1.4 Supported ORU Events

For more information about the processed segments and supported fields, refer to the document specified in the 'Conformance profile document' column.

Table 3-4 Supported ORU Events

Func Area	Event Code	ORU Trigger Event Description	Conformance profile document
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII ENCAPSULATED DATA.pdf

Func Area	Event Code	ORU Trigger Event Description	Conformance profile document
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII LINE BY LINE.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - ASCII NARRATIVE REPORTING.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - Base64 ENCAPSULATED DATA PDF.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - FORMATTED TEXT.pdf
ORU	R01	Unsolicited transmission of an observation Message	ENTERPRISE IMAGING OUTBOUND ORU_R01 - REFERENCE POINTER.pdf

4 QUERIES

4.1 Web Server Query

Web Server translates user based patient-level queries into HL7 PDQ messages.

Web Server uses the HL7 PIX services to combine patients together as well as to allow querying for longitudinal records against external non-HL7 systems which require specific patient identities.

Web Server can use v2.5 and will accept the related responses, as well as v3 SOAP based queries.

4.1.1 Supported Query events

For more information about the processed segments and segment mappings, refer to the document specified in the Conformance profile document column.

Table 4-1 Supported Query Events

Func Area	Event Code	QRY Trigger Event	Conformance profile document[1]
QBP	Q23	Query for associated patient identities	EnterpriseImaging_WS_PIX_Outbound_QPB_Q23.pdf EnterpriseImaging_WS_PIX_Inbound_RSP_K23.pdf
QBP	Q22	Query for patient demographics	EnterpriseImaging_WS_PDQ_Outbound_QBP_Q22.pdf EnterpriseImaging_WS_PDQ_Inbound_RSP_K22.pdf EnterpriseImaging_WS_PDQ_Inbound_RSP_K21.pdf

[1] These documents are included in the zip file "001689 Enterprise Imaging 8.4.x HL7 Conformance Profiles", also available on http://global.agfahealthcare.com/hl7.