

Technical HL7 Conformance Profile

ENTERPRISE IMAGING

INBOUND ORM_O01

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Publication date:

10-2025

Publication number:

8.4.4 (technical)

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Message Profile

About this Conformance

This profile describes the ORM message structure used to import order messages from a 3rd party order filler application into Enterprise Imaging. ORM messages treated by this interface are seen as Orders from an Order placer system, and are available in the Order waiting list in Impax RIS.

The orders will appear in Enterprise Imaging as if they were created with Receptionist's desktop application.

The use case is described in the IHE Radiology Technical Framework - Chapter 4.4 & Chapter 4.13.

- * Transaction 4 : Procedure Scheduled.

- * Transaction 13: Procedure Update

Remarks:

Segments present in the message structure, but marked as -not supported- are allowed to be present in the message, but are not processed. The same counts for fields, components, subcomponents marked as not supported.

Conformance parameters

Message Profile

- HL7 Version: 2.3,2.3.1,2.4,2.5
- Profile Type: Constrainable

Encoding Method

ER7

Interaction 1

Dynamic Definition

- Accept Acknowledgement: AL
- Application Acknowledgement: NE
- Acknowledgement Mode: Immediate

Static Definition

- Message Type: ORM
- Trigger Event: O01
- Message Structure: ORM_O01

Message structure

MSH PID [PD1] [PV1] {[AL1]} ORC OBR {[NTE]} {[OBX]} [ZDS]

MSH - Message Header

- Usage: Required
- Cardinality:1..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
1	Field Separator	R	1..1	ST		
2	Encoding Characters	R	1..1	ST		
3	Sending Application	O	0..1	HD	HL70361	
3.1	namespace ID	R	1..1	IS	HL70363	
4	Sending Facility	O	0..1	HD	HL70362	
4.1	namespace ID	R	1..1	IS	HL70363	
7	Date/Time Of Message	O	0..1	TS		
7.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
9	Message Type	R	1..1	CM_MSC	HL70076	
9.1	message type	R	1..1	ID	HL70076	e.g. ORM
9.2	trigger event	R	1..1	ID	HL70003	e.g. 001
9.3	message structure	O	0..	ID	HL70354	e.g. ORM_001
10	Message Control ID	R	1..1	ST		
12	Version ID	R	1..1	VID	HL70104	
12.1	version ID	R	1..1	ID	HL70104	e.g. 2.4
18	Character Set	O	0..1	ID	HL70211	

1. Field Separator

2. Encoding Characters

3. Sending Application

4. Sending Facility

7. Date/Time Of Message

7.1. Date/Time

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

10. Message Control ID

12. Version ID

Supported versions: 2.3 - 2.3.1 - 2.4 - 2.5.

18. Character Set

Segment group: PATIENT

- Usage: Required
- Cardinality:1..1

PID - Patient identification

- Usage: Required
- Cardinality:1..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
3	Patient Identifier List	R	1..*	CX		
3.1	ID	R	1..1	ST		
3.4	assigning authority	O	0..	HD		
3.4.1	namespace ID	R	1..1	IS	HL70363	
3.4.2	universal ID	O	0..	ST		
3.4.3	universal ID type	O	0..	ID	HL70301	
3.5	identifier type code (ID)	O	0..	ID	HL70203	
5	Patient Name	R	1..*	XPN		
5.1	family name	R	1..1	FN		
5.1.1	surname	R	1..1	ST		
5.1.2	own surname prefix	O	0..	ST		

Seq.	Name	Opt.	Card.	Type	Table	Contents
5.1.3	own surname	O	0..	ST		
5.2	given name	O	0..	ST		
5.3	second and further given names or initials thereof	O	0..	ST		
5.4	suffix (e.g., JR or III)	O	0..	ST		
5.5	prefix (e.g., DR)	O	0..	ST		
5.7	name type code	O	0..	ID	HL70200	
5.8	Name Representation code	O	0..	ID	HL70465	
7	Date/Time Of Birth	O	0..1	TS		
7.1	Date/Time	R	1..1	NM		
8	Administrative Sex	O	0..1	IS	HL70001	
11	Patient Address	O	0..*	XAD		
11.1	street address (SAD)	O	0..	SAD		
11.1.1	street or mailing address	O	0..	ST		
11.1.2	street name	O	0..	ST		
11.1.3	dwelling number	O	0..	ST		
11.2	other designation	O	0..	ST		
11.3	city	O	0..	ST		
11.4	state or province	O	0..	ST		
11.5	zip or postal code	O	0..	ST		
11.6	country	O	0..	ID	HL70399	
11.7	address type	O	0..	ID	HL70190	
11.8	other geographic designation	O	0..	ST		
11.9	county/parish code	O	0..	IS	HL70289	
13	Phone Number - Home	O	0..1	XTN		
13.1	Telephone Number	O	0..	TN		
13.2	telecommunication use code	R	1..1	ID	HL70201	
13.3	telecommunication equipment type (ID)	R	1..1	ID	HL70202	
13.4	Email address	O	0..	ST		
14	Phone Number - Business	O	0..1	XTN		
14.1	Telephone Number	O	0..	TN		
14.2	telecommunication use code	R	1..1	ID	HL70201	
14.3	telecommunication equipment type (ID)	R	1..1	ID	HL70202	
14.4	Email address	O	0..	ST		
19	SSN Number - Patient	O	0..1	ST		
23	Birth Place	O	0..1	ST		
29	Patient Death Date and Time	C	0..1	TS		

Seq.	Name	Opt.	Card.	Type	Table	Contents
29.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
30	Patient Death Indicator	O	0..1	ID	HL70136	

3. Patient Identifier List

3.1. ID

Identification number or code for the patient.

3.4. assigning authority

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

Identifier of the Assigning Authority that issued the patient id. If not available a unique internal assigning authority will be used

3.4.2. universal ID

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

Universal Entity ID Type.

Only supported value :

-ISO

3.5. identifier type code (ID)

Supported values: :

-PI = Patient Primary Identifier

-SS = Social Security number

* If empty: PI will be used by default

5. Patient Name

5.1. family name

When "Name representation code" = alphabetic or "Name type code" indicates maiden name is specified, following rule applies:

if Surname (PID.5.1.1) is empty, Own Surname Prefix (PID.5.1.2) and Own Surname (PID.5.1.3) are concatenated as last name.

5.1.1. surname

Patient's lastname

5.2. given name

Patient's firstname

5.3. second and further given names or initials thereof

Patient Middle Name

5.4. suffix (e.g., JR or III)

Patient's suffix

5.5. prefix (e.g., DR)

Patient's prefix

5.7. name type code

M = maiden name, only support storing last name for maiden name.

5.8. Name Representation code

Supported are :

- A or empty = Alphabetic
- I = Ideographic
- P = Phonetic

7. Date/Time Of Birth

7.1. Date/Time

format YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

8. Administrative Sex

11. Patient Address

11.1. street address (SAD)

This component specifies the street or mailing address of a person or institution.

11.1.1. street or mailing address

communication_channel.Street (if PID-11.1.2 is empty)

11.1.2. street name

communication_channel.Street

11.1.3. dwelling number

communication_channel.Streetnr

11.2. other designation

communication_channel.Address_Line1

11.3. city

municipality.name (if empty: Unknown is used)

11.4. state or province

communication_channel.Address_Line3

11.5. zip or postal code

municipality.zip (if empty: code UKW is used - mapping to name = Unknown)

11.6. country

communication_channel.country (3-digit code, if empty: code UKW - mapping to name = Unknown)

11.7. address type

communication_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

communication_channel.Address_Line2

11.9. county/parish code

communication_channel.Address_Line4

13. Phone Number - Home

Segment is used for all home communication.

First one is the primary home communication channel

13.1. Telephone Number

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

Required. 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)

Required. 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

In case of Network Email Address, this needs to be filled in.

14. Phone Number - Business

First one is the primary home business channel

14.1. Telephone Number

In case of telephone number/fax number/cellular number, the phone number is put in this field
[(999)] 999-9999 [X99999][C any text]

14.2. telecommunication use code

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)

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

In case of Network Email Address, this needs to be filled in.

19. SSN Number - Patient

Social security number of the patient.

23. Birth Place

29. Patient Death Date and Time

Condition Predicate:

If Patient Death Indicator (PID.30) has value Y, this field also needs a value.

29.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ] If timezone information is present it overrules the timezone information available in MSH-7

30. Patient Death Indicator

Y or N

PD1 - patient additional demographic

- Usage: Optional

- Cardinality:0..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
4	Patient Primary Care Provider Name & ID No.	O	0..1	XCN		
4.1	ID number (ST)	R	1..1	ST		
4.2	family name	O	0..	FN		
4.2.1	surname	O	0..	ST		
4.3	given name	O	0..	ST		
4.9	assigning authority	O	0..	HD		
4.9.1	namespace ID	R	1..1	IS	HL70363	

4. Patient Primary Care Provider Name & ID No.

4.1. ID number (ST)

Primary Care Physician code.

4.2. family name

Physician Family Name

4.3. given name

Physician given name.

4.9. assigning authority

Assigning Authority of physician code.

4.9.1. namespace ID

Identifier of the Assigning Authority that issued the physicians code. If empty, the default assigning authority will be taken.

Segment group: PATIENT.PATIENT VISIT - PATIENT.PATIENT.PATIENT VISIT

- Usage: Required

- Cardinality:1..1

PV1 - Patient visit

- Usage: Optional
- Cardinality:0..1
- Implementation note: An unexisting admission will be created depending on the value of ORM inbound pipeline property "Create admission". Existing Admissions will be updated when sending ORM message depending on the value of ORM inbound property "Update admission".

Seq.	Name	Opt.	Card.	Type	Table	Contents
1	Set ID - PV1	O	0..1	SI		
2	Patient Class	R	1..1	IS	HL70004	
3	Assigned Patient Location	O	0..1	PL		
3.1	point of care	O	0..	IS	HL70302	
3.2	room	O	0..	IS	HL70303	
3.3	bed	O	0..	IS	HL70304	
3.4	facility (HD)	O	0..	HD		
3.4.1	namespace ID	R	1..1	IS	HL70300	
3.11	assigning authority for location	O	0..	HD		
3.11.1	namespace ID	R	1..1	IS	HL70300	
4	Admission Type	O	0..1	IS	HL70007	
7	Attending Doctor	O	0..1	XCN	HL70010	
7.1	ID number (ST)	R	1..1	ST		
7.2	family name	O	0..	FN		
7.2.1	surname	O	0..	ST		
7.3	given name	O	0..	ST		
7.4	second and further given names or initials thereof	O	0..	ST		
7.5	suffix (e.g., JR or III)	O	0..	ST		
7.6	prefix (e.g., DR)	O	0..	ST		
7.9	assigning authority	O	0..	HD		
7.9.1	namespace ID	R	1..1	IS	HL70363	
8	Referring Doctor	O	0..1	XCN	HL70010	
8.1	ID number (ST)	R	1..1	ST		
8.2	family name	O	0..	FN		
8.2.1	surname	O	0..	ST		
8.3	given name	O	0..	ST		
8.4	second and further given names or initials thereof	O	0..	ST		
8.5	suffix (e.g., JR or III)	O	0..	ST		
8.6	prefix (e.g., DR)	O	0..	ST		
8.9	assigning authority	O	0..	HD		

Seq.	Name	Opt.	Card.	Type	Table	Contents
8.9.1	namespace ID	R	1..1	IS	HL70363	
15	Ambulatory Status	O	0..1	IS	HL70009	
16	VIP Indicator	O	0..1	IS	HL70099	
17	Admitting Doctor	O	0..1	XCN	HL70010	
17.1	ID number (ST)	R	1..1	ST		
17.2	family name	O	0..	FN		
17.2.1	surname	O	0..	ST		
17.3	given name	O	0..	ST		
17.4	second and further given names or initials thereof	O	0..	ST		
17.5	suffix (e.g., JR or III)	O	0..	ST		
17.6	prefix (e.g., DR)	O	0..	ST		
17.9	assigning authority	O	0..	HD		
17.9.1	namespace ID	R	1..1	IS	HL70363	
18	Patient Type	O	0..1	IS	HL70018	
19	Visit Number	O	0..1	CX		
19.1	ID	R	1..1	ST		
19.4	assigning authority	O	0..	HD		
19.4.1	namespace ID	R	1..1	IS	HL70363	
44	Admit Date/Time	O	0..1	TS		
44.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
44.2	degree of precision	O	0..	ST		e.g. D
45	Discharge Date/Time	O	0..1	TS		
45.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600

1. Set ID - PV1

2. Patient Class

Patient Class

3.1. point of care

Department code of patient location.

When an unexisting department code is used, the department will be autocreated.

3.2. room

Room in the department

3.3. bed

Bed in the room

3.4. facility (HD)

Location facility.

3.4.1. namespace ID

Patients location facility code. When an unexisting facility code is used, the facility will be autocreated.

3.11. assigning authority for location

Assigning authority of the location.

3.11.1. namespace ID

Identifier of the Assigning Authority that issued the department/facility code.
If empty, the default assigning authority will be taken.

4. Admission Type

Type of admission, the circumstances under which the patient was or will be admitted.

7. Attending Doctor

Attending physician information.

7.1. ID number (ST)

physician identifier.

7.2.1. surname

Family name of the physician.

7.3. given name

Given name of the physician.

7.4. second and further given names or initials thereof

Middle name of the physician.

7.5. suffix (e.g., JR or III)

Name suffix, like SR

7.6. prefix (e.g., DR)

Name prefix, like Prof

7.9. assigning authority

Assigning Authority of attending physician code.

7.9.1. namespace ID

Identifier of the Assigning Authority that issued the attending physician code. If empty, the default assigning authority will be taken.

8. Referring Doctor

Referring physician information (see detailed component description in PV1-7)

8.9. assigning authority

Assigning Authority of referring physician code.

8.9.1. namespace ID

Identifier of the Assigning Authority that issued the referring physician code. If empty, the default assigning authority will be taken.

15. Ambulatory Status

Code indicating any permanent or transient handicapped conditions.

16. VIP Indicator

This field identifies the type of VIP.

- 1 set VIP or personnel as yes
- 0 set as no

17. Admitting Doctor

Admitting physician information (see detailed component description in PV1-7)

17.9. assigning authority

Assigning Authority of admitting physician code.

17.9.1. namespace ID

Identifier of the Assigning Authority that issued the admitting physician code. If empty, the default assigning authority will be taken.

18. Patient Type

Site-specific values that identify the patient type.

19. Visit Number**19.1. ID**

Unique number identifying the admission.

19.4.1. namespace ID

Identifier of the Assigning Authority that issued the admission number. If empty, the default assigning authority will be taken.

44. Admit Date/Time

When no admit date/time is present in the message, a fallback is done to EVN-2.

44.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

44.2. degree of precision

Retained for backward compatibility only

45. Discharge Date/Time

45.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

End of segment group PATIENT.PATIENT_VISIT

AL1 - Patient allergy information

- Usage: Optional
- Cardinality:0..*

Seq.	Name	Opt.	Card.	Type	Table	Contents
3	Allergen Code/Mnemonic/Description	R	1..1	CE		
3.1	identifier	R	1..1	ST		
4	Allergy Severity Code	O	0..1	CE	HL70128	
4.1	identifier	R	1..1	ST		
5	Allergy Reaction Code	O	0..*	ST		
6	Identification Date	O	0..1	DT		

3. Allergen Code/Mnemonic/Description

Allergy code, name

4. Allergy Severity Code

Severity code, supported values :

- SV : Severe
- MO : Moderate
- MI : Mild
- Unknown.

5. Allergy Reaction Code

Reaction code

6. Identification Date

The start date when the allergy was identified. Format: YYYYMMDD

End of segment group PATIENT

Segment group: ORDER

- Usage: Required
- Cardinality:1..1

ORC

- Usage: Required
- Cardinality:1..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
1	Order Control	R	1..1	ID	HL70119	
2	Placer Order Number	O	0..1	EI		
2.1	entity identifier	R	1..1	ST		
2.2	namespace ID	R	1..1	IS	HL70363	
3	Filler Order Number	R	1..1	EI		
3.1	entity identifier	R	1..1	ST		
3.2	namespace ID	O	0..	IS	HL70363	
5	Order Status	O	0..1	ID	HL70038	
7	Quantity/Timing	O	0..*	TQ		
7.4	start date/time	O	0..1	TS		
7.4.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
7.5	end date/time	O	0..1	TS		
7.5.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
7.6	priority	O	0..1	ST		
9	Date/Time of Transaction	O	0..1	TS		
9.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
12	Ordering Provider	O	0..1	XCN		
12.1	ID number (ST)	R	1..1	ST		
12.2	family name	R	1..1	FN		
12.2.1	surname	R	1..1	ST		
12.3	given name	O	0..	ST		
12.4	second and further given names or initials thereof	O	0..	ST		
12.5	suffix (e.g., JR or III)	O	0..	ST		
12.6	prefix (e.g., DR)	O	0..	ST		
12.9	assigning authority	O	0..	HD		
12.9.1	namespace ID	R	1..1	IS	HL70363	
15	Order Effective Date/Time	O	0..1	TS		
15.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
17	Entering Organization	O	0..1	CE		
17.1	identifier	R	1..1	ST		
17.2	text	O	0..	ST		
17.3	name of coding system	O	0..	IS	HL70396	
21	Ordering Facility Name	O	0..*	XON		
21.1	organization name	O	0..	ST		

Seq.	Name	Opt.	Card.	Type	Table	Contents
21.3	ID number (NM)	R	1..1	NM		
21.6	assigning authority	O	0..	HD		
21.6.1	namespace ID	R	1..1	IS	HL70363	
25	Order Status Modifier	O	0..*	CWE		
25.1	identifier (ST)	R	1..1	ST		

1. Order Control

Supported:

- NW (New order)
- SC/XO/XX(Change Order)
- CA (Cancel Order)
- DC (Discontinue order)

2. Placer Order Number

3. Filler Order Number

3.1. entity identifier

filler order number

3.2. namespace ID

Assigning authority issuing the fillerOrderNumber.

If empty, the default assigning authority will be taken.

5. Order Status

Supported:

- empty, when updating an existing order no status change when creating a new order 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, When an existing procedure, then keep the existing SPS status + Set the Patient Arrived flag to True. When a new procedure, then set SPS status as Ordered/Scheduled + Set the Patient Arrived flag to True.

7. Quantity/Timing

Identical to the Quantity/Timing in OBR-Segment (OBR-27).

If values provided in these fields differ, EI will consider value provided in OBR-27.

7.4.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

7.5.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

7.6. priority

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

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

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

12. Ordering Provider

If this is not filled in OBR-16 is processed instead.

12.1. ID number (ST)

Unique code of physician providing the order.

12.2.1. surname

Family name of the physician.

12.3. given name

Given name of the physician.

12.4. second and further given names or initials thereof

Middle name of the physician.

12.5. suffix (e.g., JR or III)

Name suffix, like SR

12.6. prefix (e.g., DR)

Name prefix, like Prof

12.9. assigning authority

Assigning authority

12.9.1. namespace ID

Identifier of the Assigning Authority that issued the physician code. If empty, the default assigning authority will be taken.

15. Order Effective Date/Time

Fall back for OBR.6 being empty. Used as order creation date/time. When empty, ORC.9 is taken.

15.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

17. Entering Organization

Requesting Department.

17.1. identifier

Code of the department.

17.2. text

Name of the department. If empty, the identifier will be taken as name.

17.3. name of coding system

Identifier of the Assigning Authority that issued the department id. If empty, the default system assigning authority will be taken.

21. Ordering Facility Name

Requesting Hospital.

21.1. organization name

Name of the hospital. If empty, the identifier of the requesting facility will be taken as name.

21.3. ID number (NM)

Identifier of the hospital.

21.6. assigning authority

Assigning authority

21.6.1. namespace ID

Identifier of the Assigning Authority that issued the requesting hospital id. If empty, the default assigning authority will be taken.

25. Order Status Modifier

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)

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.

Segment group: ORDER.ORDER DETAIL

- Usage: Required
- Cardinality:1..1

OBR

- Usage: Required
- Cardinality:1..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
1	Set ID - OBR	O	0..1	SI		e.g. 1
2	Placer Order Number	O	0..1	EI		
2.1	entity identifier	R	1..1	ST		
2.2	namespace ID	R	1..1	IS	HL70363	
3	Filler Order Number	R	1..1	EI		
3.1	entity identifier	R	1..1	ST		
3.2	namespace ID	O	0..	IS	HL70363	
4	Universal Service Identifier	R	1..1	CE		
4.1	identifier	R	1..1	ST		
4.2	text	O	0..	ST		
4.3	name of coding system	O	0..	IS	HL70396	
4.4	alternate identifier	O	0..	ST		
4.5	alternate text	O	0..	ST		
4.6	name of alternate coding system	O	0..	IS	HL70396	
6	Requested Date/Time	O	0..1	TS		
6.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
13	Relevant Clinical Info.	O	0..1	ST		
16	Ordering Provider	O	0..1	XCN		
16.1	ID number (ST)	R	1..1	ST		
16.2	family name	O	0..	FN		
16.2.1	surname	O	0..	ST		
16.3	given name	O	0..	ST		

Seq.	Name	Opt.	Card.	Type	Table	Contents
16.4	second and further given names or initials thereof	O	0..	ST		
16.5	suffix (e.g., JR or III)	O	0..	ST		
16.6	prefix (e.g., DR)	O	0..	ST		
16.9	assigning authority	O	0..	HD		
16.9.1	namespace ID	R	1..1	IS	HL70363	
18	Placer Field 1	C	0..1	ST		
19	Placer Field 2	R	1..1	ST		
20	Filler Field 1 +	R	1..1	ST		
24	Diagnostic Serv Sect ID	O	0..1	ID	HL70074	
27	Quantity/Timing	O	0..*	TQ		
27.4	start date/time	O	0..1	TS		
27.4.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
27.5	end date/time	O	0..1	TS		
27.5.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
27.6	priority	O	0..1	ST		
28	Result Copies To	O	0..1	XCN		
28.1	ID number (ST)	R	1..1	ST		
28.2	family name	O	0..	FN		
28.2.1	surname	O	0..	ST		
28.3	given name	O	0..	ST		
28.4	second and further given names or initials thereof	O	0..	ST		
28.5	suffix (e.g., JR or III)	O	0..	ST		
28.6	prefix (e.g., DR)	O	0..	ST		
28.9	assigning authority	O	0..	HD		
28.9.1	namespace ID	R	1..1	IS	HL70363	
31	Reason for Study	O	0..2	CE		
31.1	identifier	R	1..1	ST		
31.2	text	O	0..	ST		
32	Principal Result Interpreter +	O	0..1	CM_NDL		
32.1	name	O	0..	CN		
32.1.1	ID number (ST)	R	1..1	ST		
32.1.2	family name	O	0..	FN		
32.1.3	given name	O	0..	ST		
32.1.4	second and further given names or initials thereof	O	0..	ST		
32.1.5	suffix (e.g., JR or III)	O	0..	ST		

Seq.	Name	Opt.	Card.	Type	Table	Contents
32.1.6	prefix (e.g., DR)	O	0..	ST		
32.1.9	assigning authority	O	0..	HD		
34	Technician +	O	0..*	CM_NDL		
34.1	name	O	0..	CN		
34.1.1	ID number (ST)	R	1..1	ST		
34.1.2	family name	O	0..	FN		
34.1.3	given name	O	0..	ST		
34.1.4	second and further given names or initials thereof	O	0..	ST		
34.1.5	suffix (e.g., JR or III)	O	0..	ST		
34.1.6	prefix (e.g., DR)	O	0..	ST		
34.1.9	assigning authority	O	0..	HD		
34.5	room	O	0..	IS	HL70303	
36	Scheduled Date/Time +	O	0..1	TS		
36.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
43	Planned Patient Transport Comment	O	0..*	CE		
43.1	identifier	R	1..1	ST		
43.2	text	O	0..	ST		
43.3	name of coding system	O	0..	IS	HL70396	

1. Set ID - OBR

2. Placer Order Number

Identical to ORC-2

3. Filler Order Number

Identical to ORC-3

4. Universal Service Identifier

4.1. identifier

The code of the requested procedure definition

4.2. text

The description of the requested procedure definition

4.3. name of coding system

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 assigning authority in the lookup of the performing department.

4.4. alternate identifier

The code of the scheduled procedure step definition

4.5. alternate text

The description of the scheduled procedure step definition

4.6. name of alternate coding system

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

Used as order creation date/time.

When empty a fallback on ORC.15 and ORC.9 is done.

If both empty, creation date/time is the date/time when processing the message.

6.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

13. Relevant Clinical Info.**16. Ordering Provider**

The ordering provider should be the same as ORC-12.

If ORC-12 is filled in, this will not be processed.

16.2.1. surname

Family name of the physician.

16.3. given name

Given name of the physician.

16.4. second and further given names or initials thereof

Middle name of the physician.

16.5. suffix (e.g., JR or III)

Name suffix, like SR

16.6. prefix (e.g., DR)

Name prefix, like Prof

16.9. assigning authority

Assigning authority

16.9.1. namespace ID

Identifier of the Assigning Authority that issued the physician code.

If empty, the default assigning authority will be taken.

18. Placer Field 1

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

Requested procedure ID

20. Filler Field 1 +

Scheduled Procedure Step ID

24. Diagnostic Serv Sect ID

Modality Type (Used when Procedure Definition is created on the fly)

27. Quantity/Timing

Identical to the Quantity/Timing in ORC-Segment (ORC-7).

If values provided in these fields differ, EI will consider value provided in OBR-27.

27.4. start date/time

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

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

27.5. end date/time

Used as scheduled procedure step end date/time.

27.5.1. Date/Time

YYYYMMDD[HH[MM[SS]]][+/-ZZZZ]

If timezone information is present it overrules the timezone information if available in MSH-7

27.6. priority

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

28.1. ID number (ST)

code of the physician

28.2.1. surname

Family name of the physician.

28.3. given name

Given name of the physician.

28.4. second and further given names or initials thereof

Middle name of the physician.

28.5. suffix (e.g., JR or III)

Name suffix, like SR

28.6. prefix (e.g., DR)

Name prefix, like Prof

28.9. assigning authority

Assigning authority

28.9.1. namespace ID

Identifier of the Assigning Authority that issued the physician code.

If empty, the default assigning authority will be taken.

31. Reason for Study

31.2. text

Text containing clinical information for the study.

32. Principal Result Interpreter +

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".

32.1.1. ID number (ST)

Code identifying the physician.

32.1.2. family name

Family name of the physician.

32.1.3. given name

Given name of the physician.

32.1.4. second and further given names or initials thereof

Middle name of the physician.

32.1.5. suffix (e.g., JR or III)

Name suffix, like SR

32.1.6. prefix (e.g., DR)

Name prefix, like Prof

32.1.9. assigning authority

Identifier of the Assigning Authority that issued the principle result interpreter code.
If empty, the default assigning authority will be taken.

34. Technician +**34.1.1. ID number (ST)**

Code of the technician

34.1.2. family name

Family name of the physician.

34.1.3. given name

Given name of the physician.

34.1.4. second and further given names or initials thereof

Middle name of the physician.

34.1.5. suffix (e.g., JR or III)

Name suffix, like SR

34.1.6. prefix (e.g., DR)

Name prefix, like Prof

34.1.9. assigning authority

Identifier of the Assigning Authority that issued the technician code.
If empty, the default assigning authority will be taken.

34.5. room

Acquisition room.

36. Scheduled Date/Time +

Used for requested procedure scheduled study date/time and scheduled procedure step date/time when OBR.27.4 is empty.

36.1. Date/Time

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

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

performing department code

43.2. text

performing department name

43.3. name of coding system

issuer of performing department code

NTE - Notes and Comments

- Usage: Optional
- Cardinality:0..*

Seq.	Name	Opt.	Card.	Type	Table	Contents
3	Comment	O	0..*	FT		
4	Comment Type	O	0..1	CE	HL70364	
4.1	identifier	R	1..1	ST	HL70364	

3. Comment

4. Comment Type

This segment holds extra information on the order for this patient.

It is stored on order level and overwritten on updates.

4.1. identifier

Supported values:

- CI (clinical info)
- PC (procedure comment)

Segment group: ORDER.ORDER DETAIL.OBSERVATION - ORDER.ORDER.ORDER DETAIL.ORDER.ORDER DETAIL.OBSERVATION

- Usage: Required
- Cardinality:1..*

OBX - Observation/Result

- Usage: Optional
- Cardinality:0..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
1	Set ID - OBX	R	1..1	SI		
2	Value Type	R	1..1	ID	HL70125	
3	Observation Identifier	R	1..1	CE		
3.1	identifier	R	1..1	ST		
3.2	text	O	0..	ST		
4	Observation Sub-Id	O	0..1	ST		
5	Observation Value	R	1..1	*		
13	User Defined Access Checks	O	0..*	ST		
14	Date/Time of the Observation	O	0..1	TS		
14.1	Date/Time	R	1..1	NM		e.g. 20040328134602+0600
16	Responsible Observer	O	0..*	XCN		
16.1	ID number (ST)	R	1..1	ST		
16.2	family name	O	0..	FN		
16.2.1	surname	O	0..	ST		
16.3	given name	O	0..	ST		
16.9	assigning authority	R	1..1	HD		
16.9.1	namespace ID	R	1..1	IS	HL70363	

1. Set ID - OBX

<DataType=SQ>

2. Value Type

Supported value(s)

- 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

3.1. identifier

(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)

Remarks :

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.

3.2. text

Optional description of the Observation

4. Observation Sub-Id

5. Observation Value

(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':
 - 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

- 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

13. User Defined Access Checks

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

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

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

For message board text attachments:

The user that added the message board text attachment item (optional). When empty or the user is not known in EI, the 'System Administrator' user is used.

End of segment group ORDER.ORDER_DETAIL.OBSERVATION

End of segment group ORDER.ORDER_DETAIL

End of segment group ORDER

ZDS

- Usage: Optional
- Cardinality:0..1

Seq.	Name	Opt.	Card.	Type	Table	Contents
1	Reference Pointer	R	1..1	RP		
1.1	pointer	R	1..1			

1.1. pointer

An instance UID used by EI to identify the study.