

HL7 Conformance Profile

ORM 001 Outbound HL7Pacs

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About this Conformance Profile

HL7 ORM interface that sends order information (order updates, status updates, new orders) to a HL7PACS system

The interface uses the HL7 MLLP protocol with normal ack mode (enhanced ack is not supported).

The segments, fields, components marked as Required in this profile will always be filled (non empty) by the Agfa RIS.

Segments, fields, components marked as Optional can be present in the message if the data is available in the Agfa RIS database.

Segments, fields, components marked as Not Supported will not be populated in the message.

For more information on HL7 conformance profiles please consult HL7 ANSI standard chapter 2 and HL7 Implementation/Conformance Technical Committee documents at <http://www.hl7.org/special/committees/ictc/docs.cfm>

Conformance parameters

Message Profile

- HL7 Version: 2.3.1
- Profile Type: Constrainable
- Topics: confsig-QUADRAT N.V.-2.3.1-profile-accNE_accNE-Immediate

Encoding Method (s)

ER7, XML

Interaction 1

Dynamic Definition

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

Static Definition

- Event Description: ORM - Order message - HL7PACS
- Message Type: ORM
- Trigger Event: O01
- Message Structure: ORM_O01
- Topics: confsig-QUADRAT N.V.-2.3.1-static-ORM-O01-null-ORM_O01---Sender

Message structure

MSH [PID [PV1]] { ORC [OBR [ZDS]] }

MSH - Message Header

- Usage: Required
- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Field Separator	ST		1	R	1..1	e.g.
2	Encoding Characters	ST		4	R	1..1	e.g. ^~\&
3	Sending Application	HD		227	R	1..1	
3.1	namespace ID	IS		180	R	..	e.g. QDOC
4	Sending Facility	HD	HL70362	227	O	0..1	
4.1	namespace ID	IS		180	O	..	e.g. AGFA
5	Receiving Application	HD		227	R	1..1	
5.1	namespace ID	IS		180	R	..	e.g. XXXX
6	Receiving Facility	HD		227	O	0..1	
6.1	namespace ID	IS		180	O	..	e.g. XXXX
7	Date/Time Of Message	TS		26	R	1..1	
7.1	Date/Time	NM		14	R	..	e.g. 20051018104416
9	Message Type	CM_MSG	HL70076	15	R	1..1	
9.1	message type	ID	HL70076	3	O	..	e.g. ORM
9.2	trigger event	ID	HL70003	3	O	..	e.g. O01
9.3	message structure	ID	HL70354	7	O	..	e.g. ORM_O01
10	Message Control ID	ST		20	R	1..1	e.g. 45
11	Processing ID	PT		3	R	1..1	
11.1	processing ID	ID	HL70103	3	R	..	e.g. P
12	Version ID	VID	HL70104	973	R	1..1	
12.1	version ID	ID	HL70104	3	R	..	e.g. 2.4
18	Character Set	ID	HL70211	6	O	0..1	e.g. 8859/1

1. Field Separator

This field contains the separator between the segment ID and the first real field, MSH-2 encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message.

Recommended value and used by Agfa is |, (ASCII 124).

2. Encoding Characters

This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator.

Recommended values and used by Agfa Healthcare are ^~\&, (ASCII 94, 126, 92, and 38).

3.1. namespace ID

ID for the sending application: default value = QDOC

Parameter: MSH_SendingApplic

4.1. namespace ID

Parameter: MSH_SendingFacility

Default value: AGFA

5.1. namespace ID

Parameter: MSH_ReceivingApplic

Default value: XXXX

6.1. namespace ID

Parameter: MSH_ReceivingFacility

Default value: XXXX

7. Date/Time Of Message

Date/time the hl7 message was created by the AGFA interface.

10. Message Control ID

A unique identifier for the message.

Should be returned by the receiving application in the ACK message.

11.1. processing ID

Fixed value P

12.1. version ID

Fixed value: 2.4

18. Character Set

fixed value: "8859/1"

Segment group: PATIENT

- Usage: Required but may be empty

- Cardinality: 0..1

PID - Patient identification

- Usage: Required

- Cardinality: 1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - PID	SI		1	R	1..1	e.g. 1
2	Patient ID	CX		1913	O	0..1	
2.1	ID	ST		20	O	..	e.g. 100000019
2.2	Check digit	ST		1	O	..	
2.3	code identifying the check digit scheme	ID	HL70061	1	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
	employed						
2.4	assigning authority	HD		5	O	..	
2.4.1	namespace ID	IS	HL70363	1	O	..	
2.4.2	universal ID	ST		1	O	..	
2.4.3	universal ID type	ID	HL70301	1	O	..	
2.5	identifier type code (ID)	ID	HL70203	1	O	..	
2.6	assigning facility	HD		5	O	..	
2.6.1	namespace ID	IS	HL70363	1	O	..	
2.6.2	universal ID	ST		1	O	..	
2.6.3	universal ID type	ID	HL70301	1	O	..	
3	Patient Identifier List	CX		1913	R	1..*	
3.1	ID	ST		200	R	..	e.g. 10000019
3.2	Check digit	ST		200	O	..	
3.3	code identifying the check digit scheme employed	ID	HL70061	200	O	..	
3.4	assigning authority	HD		602	O	..	
3.4.1	namespace ID	IS		200	O	..	e.g. HIS
3.4.2	universal ID	ST		200	O	..	
3.4.3	universal ID type	ID	HL70301	200	O	..	
3.5	identifier type code (ID)	ID	HL70203	200	O	..	e.g. MR
3.6	assigning facility	HD		405	O	..	
3.6.1	namespace ID	IS		200	O	..	
3.6.2	universal ID	ST		200	O	..	
3.6.3	universal ID type	ID	HL70301	3	O	..	
3.8	expiration date	DT		18	O	..	
5	Patient Name	XPN		1103	R	1..*	
5.1	family name	FN		174	R	..	
5.1.1	surname	ST		30	R	..	e.g. Vannieuwenhuyze
5.2	given name	ST		30	O	..	e.g. Nico
5.3	second and further given names or initials thereof	ST		30	O	..	
7	Date/Time Of Birth	TS		26	R	1..1	
7.1	Date/Time	NM		14	R	..	e.g. 19740612
8	Administrative Sex	IS	HL70001	1	O	0..1	e.g. M
11	Patient Address	XAD		631	O	0..*	
11.1	street address (SAD)	SAD		328	O	..	
11.1.1	street or mailing address	ST		264	O	..	e.g. Deinsesteenweg 114
11.3	city	ST		20	O	..	e.g. Drongen
11.4	state or province	ST		40	O	..	e.g. OVL
11.5	zip or postal code	ST		20	O	..	e.g. 9830
11.6	country	ID	HL70399	40	O	..	e.g. BEL
19	SSN Number - Patient	ST		20	O	0..1	
23	Birth Place	ST		30	O	0..1	e.g. Deinze

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
28	Nationality	CE	HL70212	483	O	0..1	
28.1	identifier	ST		20	O	..	e.g. BEL

1. Set ID - PID

Fixed value: 1

2. Patient ID

Patient external ID

Please use PID-3 for patient id !

2.1. ID

Default HIS ID of the patient.

Depends on parameter PatientId

3. Patient Identifier List

List of (unique) patient identifiers known in the AGFA RIS database.

3.8. expiration date

Depending on parameter IncludeExpiredIdentifiers

5.1.1. surname

Patient name can also include the name of the partner depending on parameter UsePatientPartnerName

5.3. second and further given names or initials thereof

Used for middle name

8. Administrative Sex

M,F or U

11. Patient Address

List of patient addresses known in the AGFA RIS.

Segment group: PATIENT VISIT

- Usage: Required but may be empty

- Cardinality: 0..1

PV1 - Patient visit

- Usage: Required

- Cardinality: 1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Set ID - PV1	SI		4	O	0..1	
2	Patient Class	IS	HL70004	10	R	1..1	e.g. I
3	Assigned Patient Location	PL		1230	O	0..1	
3.1	point of care	IS		100	O	..	
3.2	room	IS		3	O	..	
3.3	bed	IS		25	O	..	
3.4	facility (HD)	HD		307	O	..	
3.4.1	namespace ID	IS		100	O	..	
3.9	Location description	ST		100	O	..	
7	Attending Doctor	XCN	HL70010	3002	O	0..*	
7.1	ID number (ST)	ST		20	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
7.2	family name	FN		244	O	..	
7.2.1	surname	ST		100	O	..	
7.3	given name	ST		30	O	..	
7.4	second and further given names or initials thereof	ST		3	O	..	
7.6	prefix (e.g., DR)	ST		30	O	..	
8	Referring Doctor	XCN	HL70010	3002	O	0..*	
8.1	ID number (ST)	ST		15	O	..	
8.2	family name	FN		244	O	..	
8.2.1	surname	ST		100	O	..	
8.3	given name	ST		30	O	..	
8.4	second and further given names or initials thereof	ST		12	O	..	
8.6	prefix (e.g., DR)	ST		30	O	..	
15	Ambulatory Status	IS	HL70009	3	O	0..1	
16	VIP Indicator	IS	HL70099	3	O	0..1	
18	Patient Type	IS		10	O	0..1	e.g. A1
19	Visit Number	CX		1913	O	0..1	
19.1	ID	ST		20	O	..	e.g. 4646464
19.4	assigning authority	HD		257	O	..	
19.4.1	namespace ID	IS		50	O	..	e.g. HIS1
44	Admit Date/Time	TS		26	O	0..1	
44.1	Date/Time	NM		14	O	..	e.g. 19990405153054

2. Patient Class

Patient Class linked to the visit (received from the HIS)

3. Assigned Patient Location

Location of the patients bed at the time of generation of the ORM message.

3.1. point of care

Care unit

Parameter: ServiceId

3.4.1. namespace ID

Hospital code

7.1. ID number (ST)

Parameter : DoctorId

8.1. ID number (ST)

Parameter : DoctorId

19.1. ID

Visit number linked to the service request

End of segment group PATIENT_VISIT

End of segment group PATIENT

Segment group: ORDER

- Usage: Required
- Cardinality:1..*

ORC - Common Order

- Usage: Required
- Cardinality:1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Order Control	ID	HL70119	2	R	1..1	e.g. SC
2	Placer Order Number	EI		427	O	0..1	
2.1	entity identifier	ST		50	O	..	e.g. 00046
2.2	namespace ID	IS		20	O	..	e.g. HIS1
2.3	universal ID	ST		1	O	..	
3	Filler Order Number	EI		427	R	1..1	
3.1	entity identifier	ST		50	R	..	e.g. 00000027
3.2	namespace ID	IS		100	R	..	e.g. RX
4	Placer Group Number	EI		427	O	0..1	
4.1	entity identifier	ST		50	O	..	
5	Order Status	ID	HL70038	2	R	1..1	e.g. IP
7	Quantity/Timing	TQ		1545	R	1..*	
7.4	start date/time	TS		16	R	..	
7.4.1	Date/Time	NM		14	R	..	e.g. 20050401141500
7.6	priority	ST		1	O	..	e.g. R
10	Entered By	XCN		3002	O	0..*	
10.1	ID number (ST)	ST		40	O	..	e.g. QUADRAT
12	Ordering Provider	XCN		3002	O	0..*	
12.1	ID number (ST)	ST		20	O	..	e.g. REQDOC1
12.2	family name	FN		244	O	..	
12.2.1	surname	ST		100	O	..	e.g. Requesting Physician
12.3	given name	ST		30	O	..	e.g. John
12.4	second and further given names or initials thereof	ST		30	O	..	
12.6	prefix (e.g., DR)	ST		30	O	..	e.g. Dr .
13	Enterer's Location	PL		1230	O	0..1	
13.1	point of care	IS		100	O	..	e.g. ORTHO
16	Order Control Code Reason	CE		483	O	0..1	
17	Entering Organization	CE		483	O	0..1	
17.1	identifier	ST		20	O	..	e.g. FAC1
17.2	text	ST		30	O	..	e.g. Facility Name
21	Ordering Facility Name	XON		567	O	0..*	
21.1	organization name	ST		100	O	..	
24	Ordering Provider Address	XAD		631	O	0..1	
24.1	street address (SAD)	SAD		572	O	..	
24.1.1	street or mailing address	ST		508	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
24.3	city	ST		30	O	..	
24.5	zip or postal code	ST		7	O	..	
25	Order Status Modifier	CWE		705	O	0..1	
25.1	identifier (ST)	ST		2	O	..	e.g. A
25.2	text	ST		30	O	..	e.g. PATIENT ARRIVED

1. Order Control

* When an order is created in RIS the field will contain "NW"

* In case of a pure status update the field will contain "SC"

* When the order was canceled in the RIS the field will contain "CA"

2. Placer Order Number

Identifier of the order in the order placer system.

Depends on parameter ORC_2_PlacerOrderNumber

3. Filler Order Number

AGFA RIS Order Identifier

3.1. entity identifier

Depends on parameter ORC_3_FillerOrderNumber

3.2. namespace ID

Performing department ID

4. Placer Group Number

If the order placer supports order procedure grouping this field will contain the group number received from the order placer.

Depends on parameter UseExamGrouping (boolean)

5. Order Status

CA=canceled

CM=completed

DC=discontinued

HD=on hold

IP=in progress

SC=in progress scheduled

Depends on parameter MapExamStatus

7.4.1. Date/Time

Date/time the exam is performed

7.6. priority

S=STAT

A=ASAP

R=ROUTINE

P=PREOP

C=CALLBACK

T=TIMING CRITICAL

PRN=AS NEEDED

Depends on parameter MapOrderPriority

10.1. ID number (ST)

User that last changed the order in RIS

12. Ordering Provider

Requesting physician

12.1. ID number (ST)

HIS Code of the physician

13. Enterer's Location

Requesting department

17. Entering Organization

Requesting hospital/facility

21. Ordering Facility Name

Requesting Department

24. Ordering Provider Address

Address of the requesting physician

25. Order Status Modifier

RIS Procedure status (codes and descriptions are configured via QManager)

Examples:

A^PATIENT ARRIVED

S^PROCEDURE STARTED

F^PROCEDURE FINISHED

Segment group: ORDER DETAIL

- Usage: Required but may be empty

- Cardinality: 0..1

OBR - Observation Request

- Usage: Required

- Cardinality: 1..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
2	Placer Order Number	EI		427	O	0..1	
2.1	entity identifier	ST		50	O	..	e.g. 00046
2.2	namespace ID	IS		20	O	..	e.g. HIS1
2.3	universal ID	ST		3	O	..	
2.4	universal ID type	ID	HL70301	3	O	..	
3	Filler Order Number	EI		427	R	1..1	
3.1	entity identifier	ST		50	O	..	e.g. 00000027
3.2	namespace ID	IS		100	O	..	e.g. RX
3.3	universal ID	ST		3	O	..	
3.4	universal ID type	ID	HL70301	3	O	..	
4	Universal Service Identifier	CE		483	O	0..1	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
4.1	identifier	ST		64	O	..	e.g. RXTORAX
4.2	text	ST		250	O	..	e.g. RX Thorax
4.3	name of coding system	IS		100	O	..	e.g. L
4.4	alternate identifier	ST		20	O	..	
4.5	alternate text	ST		100	O	..	
4.6	name of alternate coding system	IS		8	O	..	
5	Priority	ID		3	O	0..1	e.g. R
6	Requested Date/Time	TS		26	R	1..1	
6.1	Date/Time	NM		14	R	..	e.g. 20050401141500
7	Observation Date/Time #	TS		26	R	1..1	
7.1	Date/Time	NM		14	R	..	e.g. 20050401141500
13	Relevant Clinical Info.	ST		2048	O	0..1	e.g. Patient had a car accident
16	Ordering Provider	XCN		3002	O	0..*	
16.1	ID number (ST)	ST		20	O	..	e.g. REQDOC1
16.2	family name	FN		244	O	..	
16.2.1	surname	ST		100	O	..	
16.3	given name	ST		30	O	..	
16.4	second and further given names or initials thereof	ST		30	O	..	
16.6	prefix (e.g., DR)	ST		30	O	..	
18	Placer Field 1	ST		30	O	0..1	e.g. 00000027
19	Placer Field 2	ST		15	O	0..1	e.g. 00000027
20	Filler Field 1 +	ST		10	O	0..1	e.g. 458
24	Diagnostic Serv Sect ID	ID		100	O	0..1	e.g. CR
27	Quantity/Timing	TQ		1545	R	1..*	
27.4	start date/time	TS		16	R	..	
27.4.1	Date/Time	NM		14	R	..	e.g. 20050401141500
27.6	priority	ST		3	O	..	e.g. R
28	Result Copies To	XCN		3002	O	0..*	
28.1	ID number (ST)	ST		15	O	..	e.g. REQDOC2
28.2	family name	FN		163	O	..	
28.2.1	surname	ST		100	O	..	e.g. Janssens
28.2.2	own surname prefix	ST		3	O	..	
28.2.3	own surname	ST		3	O	..	
28.2.4	surname prefix from partner/spouse	ST		3	O	..	
28.3	given name	ST		30	O	..	e.g. Johny
31	Reason for Study	CE		483	O	0..1	
31.2	text	ST		1000	O	..	e.g. Heave pain in the upper arm
32	Principal Result Interpreter +	CM_NDL		835	O	0..1	
32.1	name	CN		244	O	..	
32.1.1	ID number (ST)	ST		15	O	..	e.g. 9784
32.1.2	family name	FN		112	O	..	

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
32.1.3	given name	ST		30	O	..	e.g. Sofie
32.1.4	second and further given names or initials thereof	ST		30	O	..	
34	Technician +	CM_NDL		835	O	0..*	
34.1	name	CN		149	O	..	
34.1.1	ID number (ST)	ST		20	O	..	e.g. TECH1
34.1.2	family name	FN		42	O	..	
34.5	room	IS		10	O	..	e.g. RXROOM1
35	Technician +	CM_NDL		835	O	0..1	
35.1	name	CN		127	O	..	
35.1.1	ID number (ST)	ST		20	O	..	e.g. TECH2
35.1.2	family name	FN		20	O	..	
35.5	room	IS		10	O	..	e.g. TEST
37	Scheduled Date/Time +	TS		26	R	1..1	
37.1	Date/Time	NM		14	R	..	e.g. 20050401141500
46	Procedure Code Modifier	CE		483	O	0..1	
46.1	identifier	ST		20	O	..	e.g. PP

2. Placer Order Number

Same as ORC-2

3. Filler Order Number

Same as ORC-3

4. Universal Service Identifier

Procedure Code.

Depending on parameter UseExamOrderMappings we can use the order placer procedure id or the RIS procedure id.

If you've chosen to use the RIS procedure id, depending on parameter UseAlternateIDInOBR4 the QPlanner or QDoc procedure is used.

4.4. alternate identifier

If order placer procedures are used, this field contains the order placer alternate procedure id.

4.5. alternate text

action_items.acit_description

5. Priority

Copied from ORC-7-6

6. Requested Date/Time

Date/Time the order was received by the radiology department.

7. Observation Date/Time

Date/Time the exam was performed

16. Ordering Provider

Requesting physician (copy from ORC-12)

18. Placer Field 1

Accession Number (RIS generated)

Depends on ris parameter HL7PACS.AccessionNr

19. Placer Field 2

Requested procedure ID

Depends on parameter OBR_19_PlacerField2

20. Filler Field 1 +

Scheduled Procedure Step ID OR Number of report copies that should be printed for the requesting physician

Depends on parameter OBR_20_FillerField1

24. Diagnostic Serv Sect ID

Performing department or Modality DICOM Type

Depends on parameter

OBR_24_DiagnosticServSectID (1/2)

27. Quantity/Timing

Copied from ORC-7

28. Result Copies To

Physicians that will receive a copy of the report

32. Principal Result Interpreter +

Performing physician

32.1.1. ID number (ST)

Value depends on parameter DoctorId

34. Technician +

List of technicians

34.5. room

Room where the exam is performed

37.1. Date/Time

Date/Time the exam is performed

46. Procedure Code Modifier

Comment linked to the paymode specified in the service request.

ZDS - IHE imaging custom segment

- Usage: Required but may be empty

- Cardinality: 0..1

Seq.	Name	Type	Table	Len.	Opt.	Card.	Contents
1	Study Instance UID	RP		273	R	1..1	
1.1	Reference Pointer	ST		64	R	..	e.g. 1.3.51.0.1.1.10.233.85.110.3
1.2	application ID	HD		228	O	..	
1.2.1	namespace ID	IS		20	O	..	e.g. QDOC
1.3	type of data	ID		20	R	..	e.g. Application
1.4	subtype	ID		10	R	..	e.g. DICOM

1.1. Reference Pointer

DICOM compliant Study Instance UID value

1.2. application ID

QSender script parameter ZDS_ApplicationID

1.3. type of data

Fixed value: Application

1.4. subtype

Fixed value: DICOM

End of segment group ORDER_DETAIL

End of segment group ORDER