

**SCENARA® .connect**  
HL7 Interface Statement



**PRODUCT INFO**

**OR1™**

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## **1 Important information for use of HL7**

### **1.1 General**

This document describes the HL7 structures and processing rules, which are important for the receipt and dispatch of messages via the HL7 Server.

### **1.2 Encoding of messages**

The encoding is subject to HL7 rules. When receiving and sending messages, escape sequences are taken into account. The interpretation of ASCII codes above the value 128 ("8 bit ASCII") correlates to the configured encoding in the according receiver/provider. It's recommendable to use UTF-8.

Optionally 8 bit codes can be transmitted via escape sequences (\Xnnn\), but currently this is only possible for German mutated vowels and special characters (Ä, Ö, Ü, ä, ö, ü, ß).

### **1.3 Dependency of versions**

The HL7 Server is able to receive and send messages from HL7 versions 2.x. The present documentation uses HL7 v2.6. The data fields, which are relevant for working with the system, can basically be read from any HL7 versions.

### **1.4 Context of patients and cases**

A message always refers to a single patient's visit. Procedure related messages (orders, finding messages etc.) can refer to one or more orders.

## **2 Transport layer**

### **2.1 TCP/IP interface**

The system offers a TCP/IP server for receiving and sending HL7 messages over MLLP (Minimal Lower Layer Protocol).

MLLP guarantees In Order delivery of HL7 content. MLLP supports all single-byte character encodings (e. g. iso-8859-x, cp1252) as well as UTF- 8.

According message format characters (Begin of message, End of Message and Segment terminator) are configurable.

### **2.2 File transfer interface**

When receiving and sending, either every message can be transmitted in a separate file or several messages can be transmitted in one single file.

The file transfer can be controlled by semaphore files (\*.sem).

### 3 HL7 import

For adopting patients and case data, the following HL7 message types are usually processed:

- ADT^A01 – Admit / Visit Notification
- ADT^A03 – Discharge / End Visit
- ADT^A04 – Register a Patient
- ADT^A08 – Update Patient Information
- ADT^A40 – Merge Patient – Patient Identifier List (\*)
- ORM^O01 – General Order Message
- SIU^S12 – Notification of New Appointment Booking
- SIU^S13 – Notification of Appointment Rescheduling
- SIU^S14 – Notification of Appointment Modification
- SIU^S15 – Notification of Appointment Cancellation
- QRY^A19 – Patient Query

On request, further message types can be processed. If needed, patient data can also be transferred from different messages (e.g. ORM or SIU messages).

Apart from identifiers (patient, case), also name, first name and date of birth are transferred into system database and carried along in order to ensure a precise allocation. These values are also available for creating finding documents (pdf).

The HL7 Server reports an Accept Acknowledge directly after receiving the message. Negative Acknowledges (NAK) will not be sent, i.e. potential error tracking in the processing is localized directly in the HL7 Server, any error conditions will not be transmitted to the sending system. Application Acknowledge can be configured if required.

The most important segments, as well as its most frequently used components (within system database) are described below, based on the HL7 version 2.6.

## 4 Used segments

The following chapters contain tables for describing the segments and their fields.

Meaning of the columns in the tables:

SEQ:	Position of field in pertinent segment.
LEN:	Maximum field length.
DT:	Data type of field.
OPT:	Optionality – R=essential, X=not used.
RP/#:	Repetition allowed.
TBL#:	List of values, reference to HL7-table with vocabularies for the field.
ITEM#:	Clear ID of this field in HL7-standard.
ELEMENT NAME:	Description of field.

## 5 HL7 export

The system internally provides different events, by which the sending of one or more messages can be triggered. For example, these events are created as entries in the system database at a change in finding status or at release of benefit data.

The HL7 Server watches these triggers and, depending on the kind of trigger, it reacts with executing a script that has been provided for the according kind of trigger ("Message Group").

The scripts are freely configurable and any fields of the system database can be accessed via applicable SQL statements.

The structure of sent messages is provided as a template, database contents are adopted into the template with the help of corresponding expressions.

The tables below show the standard setting, which can be extended or changed easily by customizing the scripts, SQL statements or templates.

The message types below are used for exporting by default:

- ORU^R01 – Finding messages
- MDM^T01 – Export of documents
- BAR^P12 – Diagnosis and procedures (ICD-10, OPS)
- DFT^P03 – Catalog capacities (e.g. GOÄ)

## 5.1 MSH – message header

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	1	ST	R			00001	Field Separator
2	4	ST	R			00002	Encoding Characters
3	227	HD	O		0361	00003	Sending Application
4	227	HD	O		0362	00004	Sending Facility
5	227	HD	O		0361	00005	Receiving Application
6	227	HD	O		0362	00006	Receiving Facility
7	24	DTM	R			00007	Date/Time of Message
8	40	ST	O			00008	Security
9	15	MSG	R			00009	Message Type
10	199	ST	R			00010	Message Control ID
11	3	PT	R			00011	Processing ID
12	60	VID	R			00012	Version ID
13	15	NM	O			00013	Sequence Number
14	180	ST	O			00014	Continuation Pointer
15	2	ID	O		0155	00015	Accept Acknowledgment Type
16	2	ID	O		0155	00016	Application Acknowledgment Type
17	3	ID	O		0399	00017	Country Code
18	16	ID	O	Y	0211	00692	Character Set
19	250	CWE	O			00693	Principal Language Of Message
20	20	ID	O		0356	01317	Alternate Character Set Handling Scheme
21	427	EI	O	Y		01598	Message Profile Identifier
22	567	XON	O			01823	Sending Responsible Organization
23	567	XON	O			01824	Receiving Responsible Organization
24	227	HD	O			01825	Sending Network Address
25	227	HD	O			01826	Receiving Network Address

**Table 1: Message header segment**

Required fields in the MSH segment:

- MSH-3: Used for filtering messages on receipt
- MSH-4: Used for filtering messages on receipt
- MSH-5: Used for filtering messages on receipt
- MSH-6: Used for filtering messages on receipt
- MSH-9: Activating processing script for this type of message
- MSH-10: Is returned in ACK



## 5.2 EVN – event type

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3	ID	B		0003	00099	Event Type Code
2	24	DTM	R			00100	Recorded Date/Time
3	24	DTM	O			00101	Date/Time Planned Event
4	3	IS	O		0062	00102	Event Reason Code
5	250	XCN	O	Y	0188	00103	Operator ID
6	24	DTM	O			01278	Event Occurred
7	241	HD	O			01534	Event Facility

**Table 2: Event type segment**

EVN is assessed.

## 5.3 PID – patient identification

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00104	Set ID - PID
2	20	CX	B			00105	Patient ID
3	250	CX	R	Y		00106	Patient Identifier List
4	20	CX	B	Y		00107	Alternate Patient ID - PID
5	250	XPN	R	Y	0200	00108	Patient Name
6	250	XPN	O	Y		00109	Mother's Maiden Name
7	24	DTM	O			00110	Date/Time of Birth
8	1	IS	O		0001	00111	Administrative Sex
9	250	XPN	B	Y		00112	Patient Alias
10	705	CWE	O	Y	0005	00113	Race
11	250	XAD	O	Y		00114	Patient Address
12	4	IS	B		0289	00115	County Code
13	250	XTN	O	Y		00116	Phone Number - Home
14	250	XTN	O	Y		00117	Phone Number - Business
15	705	CWE	O		0296	00118	Primary Language
16	705	CWE	O		0002	00119	Marital Status
17	705	CWE	O		0006	00120	Religion
18	250	CX	O			00121	Patient Account Number
19	16	ST	B			00122	SSN Number - Patient
20	25	DLN	B			00123	Driver's License Number - Patient
21	250	CX	O	Y		00124	Mother's Identifier

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
22	705	CWE	O	Y	0189	00125	Ethnic Group
23	250	ST	O			00126	Birth Place
24	1	ID	O		0136	00127	Multiple Birth Indicator
25	2	NM	O			00128	Birth Order
26	705	CWE	O	Y	0171	00129	Citizenship
27	705	CWE	O		0172	00130	Veterans Military Status
28	705	CWE	B		0212	00739	Nationality
29	24	DTM	O			00740	Patient Death Date and Time
30	1	ID	O		0136	00741	Patient Death Indicator
31	1	ID	O		0136	01535	Identity Unknown Indicator
32	20	IS	O	Y	0445	01536	Identity Reliability Code
33	24	DTM	O			01537	Last Update Date/Time
34	241	HD	O			01538	Last Update Facility
35	705	CWE	C		0446	01539	Species Code
36	705	CWE	C		0447	01540	Breed Code
37	80	ST	O			01541	Strain
38	705	CWE	O	2	0429	01542	Production Class Code
39	705	CWE	O	Y	0171	01840	Tribal Citizenship

**Table 1: Patient identification segment**

Transferred into\from system database:

- PID-3: Patient-ID. Can optionally be converted in PID-2.
- PID-5: Patient name (name^first name)
- PID-7: Date of birth
- PID-8: Gender
- PID-11: Address (Street^^City^^Postal Code^^Country)
- PID-13: Telephone number

#### 5.4 PV1 – patient visit

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00131	Set ID - PV1
2	1	IS	R		0004	00132	Patient Class
3	80	PL	O			00133	Assigned Patient Location
4	2	IS	O		0007	00134	Admission Type
5	250	CX	O			00135	Preadmit Number
6	80	PL	O			00136	Prior Patient Location
7	250	XCN	O	Y	0010	00137	Attending Doctor

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
8	250	XCN	O	Y	0010	00138	Referring Doctor
9	250	XCN	B	Y	0010	00139	Consulting Doctor
10	3	IS	O		0069	00140	Hospital Service
11	80	PL	O			00141	Temporary Location
12	2	IS	O		0087	00142	Preadmit Test Indicator
13	2	IS	O		0092	00143	Re-admission Indicator
14	6	IS	O		0023	00144	Admit Source
15	2	IS	O	Y	0009	00145	Ambulatory Status
16	2	IS	O		0009	00146	VIP Indicator
17	250	XCN	O	Y	0010	00147	Admitting Doctor
18	2	IS	O		0018	00148	Patient Type
19	250	CX	O			00149	Visit Number
20	50	FC	O	Y	0064	00150	Financial Class
21	2	IS	O		0032	00151	Charge Price Indicator
22	2	IS	O		0045	00152	Courtesy Code
23	2	IS	O		0046	00153	Credit Rating
24	2	IS	O	Y	0044	00154	Contract Code
25	8	DT	O	Y		00155	Contract Effective Date
26	12	NM	O	Y		00156	Contract Amount
27	3	NM	O	Y		00157	Contract Period
28	2	IS	O		0073	00158	Interest Code
29	4	IS	O		0110	00159	Transfer to Bad Debt Code
30	8	DT	O			00160	Transfer to Bad Debt Date
31	10	IS	O		0021	00161	Bad Debt Agency Code
32	12	NM	O			00162	Bad Debt Transfer Amount
33	12	NM	O			00163	Bad Debt Recovery Amount
34	1	IS	O		0111	00164	Delete Account Indicator
35	8	DT	O			00165	Delete Account Date
36	3	IS	O		0112	00166	Discharge Disposition
37	47	DLD	O		0113	00167	Discharged to Location
38	705	CWE	O		0114	00168	Diet Type
39	2	IS	O		0115	00169	Servicing Facility
40	1	IS	B		0116	00170	Bed Status
41	2	IS	O		0117	00171	Account Status
42	80	PL	O			00172	Pending Location
43	80	PL	O			00173	Prior Temporary Location
44	24	DTM	O			00174	Admit Date/Time

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
45	24	DTM	O			00175	Discharge Date/Time
46	12	NM	O			00176	Current Patient Balance
47	12	NM	O			00177	Total Charges
48	12	NM	O			00178	Total Adjustments
49	12	NM	O			00179	Total Payments
50	250	CX	O		0203	00180	Alternate Visit ID
51	1	IS	O		0326	01226	Visit Indicator
52	250	XCN	B	Y	0010	01274	Other Healthcare Provider

**Table 2: Patient visit segment**

Transferred into\from system database:

- PV1-2: Patient classification (outpatient/inpatient/preadmission/part-residential)
- PV1-7: Attending doctor (ID^name^first name^^^^title)
- PV1-8: Referring doctor (ID^name^first name^^^^title)
- PV1-9: Additional attending doctor (ID^name^first name^^^^title)
- PV1-17: Admitting doctor (ID^name^first name^^^^title)
- PV1-19: Case number
- PV1-44: Date of admission
- PV1-45: Date of discharge

The doctor’s address is transmitted separately into master data charts by default (MFN messages). But a lot of systems use further components of PV1-8 as well as PV1-9 randomly. This has to be configured according to the project.

**5.5 IN1 – insurance**

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00426	Set ID - IN1
2	250	CWE	R		0072	00368	Insurance Plan ID
3	250	CX	R	Y		00428	Insurance Company ID
4	250	XON	O	Y		00429	Insurance Company Name
5	250	XAD	O	Y		00430	Insurance Company Address
6	250	XPN	O	Y		00431	Insurance Co Contact Person
7	250	XTN	O	Y		00432	Insurance Co Phone Number
8	12	ST	O			00433	Group Number
9	250	XON	O	Y		00434	Group Name
10	250	CX	O	Y		00435	Insured’s Group Emp ID
11	250	XON	O	Y		00436	Insured’s Group Emp Name
12	8	DT	O			00437	Plan Effective Date
13	8	DT	O			00438	Plan Expiration Date

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
14	239	AUI	O			00439	Authorization Information
15	3	IS	O		0086	00440	Plan Type
16	250	XPN	O	Y		00441	Name Of Insured
17	250	CWE	O		0063	00442	Insured's Relationship To Patient
18	24	DTM	O			00443	Insured's Date Of Birth
19	250	XAD	O	Y		00444	Insured's Address
20	2	IS	O		0135	00445	Assignment Of Benefits
21	2	IS	O		0173	00446	Coordination Of Benefits
22	2	ST	O			00447	Coord Of Ben. Priority
23	1	ID	O		0136	00448	Notice Of Admission Flag
24	8	DT	O			00449	Notice Of Admission Date
25	1	ID	O		0136	00450	Report Of Eligibility Flag
26	8	DT	O			00451	Report Of Eligibility Date
27	2	IS	O		0093	00452	Release Information Code
28	15	ST	O			00453	Pre-Admit Cert (PAC)
29	24	DTM	O			00454	Verification Date/Time
30	250	XCN	O	Y		00455	Verification By
31	2	IS	O		0098	00456	Type Of Agreement Code
32	2	IS	O		0022	00457	Billing Status
33	4	NM	O			00458	Lifetime Reserve Days
34	4	NM	O			00459	Delay Before L.R. Day
35	20	IS	O		0042	00460	Company Plan Code
36	15	ST	O			00461	Policy Number
37	12	CP	O			00462	Policy Deductible
38			W			00463	Policy Limit - Amount
39	4	NM	O			00464	Policy Limit - Days
40			W			00465	Room Rate - Semi-Private
41			W			00466	Room Rate - Private
42	250	CWE	O		0066	00467	Insured's Employment Status
43	1	IS	O		0001	00468	Insured's Administrative Sex
44	250	XAD	O	Y		00469	Insured's Employer's Address
45	2	ST	O			00470	Verification Status
46	8	IS	O		0072	00471	Prior Insurance Plan ID
47	3	IS	O		0309	01227	Coverage Type
48	2	IS	O		0295	00753	Handicap
49	250	CX	O	Y		01230	Insured's ID Number
50	1	IS	O		0535	01854	Signature Code

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
51	8	DT	O			01855	Signature Code Date
52	250	ST	O			01899	Insured's Birth Place
53	2	IS	O		0099	01852	VIP Indicator

**Table 3: Insurance segment**

Transferred into\from system database:

- IN1-3: Insurance Company ID
- IN1-4: Insurance Company Name
- IN1-36: Patient's Policy Number

## 5.6 ORC – common order

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	2	ID	R		0119	00215	Order Control
2	427	EI	C			00216	Placer Order Number
3	427	EI	C			00217	Filler Order Number
4	22	EI	O			00218	Placer Group Number
5	2	ID	O		0038	00219	Order Status
6	1	ID	O		0121	00220	Response Flag
7	705	TQ	B	Y		00221	Quantity/Timing
8	200	EIP	O			00222	Parent
9	24	DTM	O			00223	Date/Time of Transaction
10	3220	XCN	O	Y		00224	Entered By
11	250	XCN	O	Y		00225	Verified By
12	3220	XCN	O	Y		00226	Ordering Provider
13	80	PL	O			00227	Enterer's Location
14	250	XTN	O	Y/2		00228	Call Back Phone Number
15	24	DTM	O			00229	Order Effective Date/Time
16	250	CWE	O		9999	00230	Order Control Code Reason
17	250	CWE	O		9999	00231	Entering Organization
18	250	CWE	O		9999	00232	Entering Device
19	250	XCN	O	Y		00233	Action By
20	250	CWE	O		0339	01310	Advanced Beneficiary Notice Code
21	250	XON	O	Y		01311	Ordering Facility Name
22	250	XAD	O	Y		01312	Ordering Facility Address
23	250	XTN	O	Y		01313	Ordering Facility Phone Number
24	250	XAD	O	Y		01314	Ordering Provider Address

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
25	250	CWE	O		9999	01473	Order Status Modifier
26	60	CWE	C		0552	01641	Advanced Beneficiary Notice Override Reason
27	24	DTM	O			01642	Filler's Expected Availability Date/Time
28	250	CWE	O		0177	00615	Confidentiality Code
29	250	CWE	O		0482	01643	Order Type
30	250	CNE	O		0483	01644	Enterer Authorization Mode
31	250	CWE	O			02287	Parent Universal Service Identifier

**Table 4: Common order segment**

Transferred into\from system database:

- ORC-1: Order Control
- ORC-2: Order number (HIS)
- ORC-3: Procedure ID (system database)
- ORC-5: Order Status

## 5.7 OBR – observation request

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	4	SI	O			00237	Set ID – OBR
2	427	EI	C			00216	Placer Order Number
3	427	EI	C			00217	Filler Order Number
4	705	CWE	R		9999	00238	Universal Service Identifier
5	2	ID	B			00239	Priority
6	24	DTM	B			00240	Requested Date/Time
7	24	DTM	C			00241	Observation Date/Time #
8	24	DTM	O			00242	Observation End Date/Time #
9	722	CQ	O			00243	Collection Volume *
10	3220	XCN	O	Y		00244	Collector Identifier *
11	1	ID	O		0065	00245	Specimen Action Code *
12	705	CWE	O		9999	00246	Danger Code
13	300	ST	O			00247	Relevant Clinical Information
14	24	DTM	B			00248	Specimen Received Date/Time *
15	300	SPS	B			00249	Specimen Source
16	3220	XCN	O	Y		00226	Ordering Provider
17	2743	XTN	O	Y/2		00250	Order Callback Phone Number
18	199	ST	O			00251	Placer Field 1
19	199	ST	O			00252	Placer Field 2

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
20	199	ST	O			00253	Filler Field 1 +
21	199	ST	O			00254	Filler Field 2 +
22	24	DTM	C			00255	Results Rpt/Status Chng - Date/Time +
23	504	MOC	O			00256	Charge to Practice +
24	10	ID	O		0074	00257	Diagnostic Serv Sect ID
25	1	ID	C		0123	00258	Result Status +
26	977	PRL	O			00259	Parent Result +
27	705	TQ	B	Y		00221	Quantity/Timing
28	3220	XCN	O	Y		00260	Result Copies To
29	855	EIP	O			00261	Parent
30	20	ID	O		0124	00262	Transportation Mode
31	705	CWE	O	Y	9999	00263	Reason for Study
32	831	NDL	B			00264	Principal Result Interpreter +
33	831	NDL	B	Y		00265	Assistant Result Interpreter +
34	831	NDL	B	Y		00266	Technician +
35	831	NDL	B	Y		00267	Transcriptionist +
36	24	DTM	O			00268	Scheduled Date/Time +
37	16	NM	O			01028	Number of Sample Containers *
38	705	CWE	O	Y	9999	01029	Transport Logistics of Collected Sample *
39	705	CWE	O	Y	9999	01030	Collector's Comment *
40	705	CWE	O		9999	01031	Transport Arrangement Responsibility
41	30	ID	O		0224	01032	Transport Arranged
42	1	ID	O		0225	01033	Escort Required
43	705	CWE	O	Y	9999	01034	Planned Patient Transport Comment
44	705	CNE	O		0088	00393	Procedure Code
45	705	CNE	O	Y	0340	01316	Procedure Code Modifier
46	705	CWE	O	Y	0411	01474	Placer Supplemental Service Information
47	705	CWE	O	Y	0411	01475	Filler Supplemental Service Information
48	705	CWE	C		0476	01646	Medically Necessary Duplicate Procedure Reason
49	2	IS	O		0507	01647	Result Handling
50	705	CWE	O			02286	Parent Universal Service Identifier

Table 5: Observation request segment

Transferred into/from system database:

- OBR-2: Order number (HIS)
- OBR-3: Procedure ID (system database)
- OBR-4: Type of procedure (ID^Text^Codesystem)



- OBR-7: Start of procedure (date)
- OBR-8: End of procedure (date)
- OBR-20: Free text, configurable
- OBR-21: Free text, configurable

## 5.8 OBX – observation/result

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00569	Set ID – OBX
2	3	ID	C		0125	00570	Value Type
3	705	CW E	R		9999	00571	Observation Identifier
4	20	ST	C			00572	Observation Sub-ID
5	99999 <sup>1</sup>	varie s	C	Y <sup>2</sup>		00573	Observation Value
6	705	CW E	O		9999	00574	Units
7	60	ST	O			00575	References Range
8	5	IS	O	Y	0078	00576	Abnormal Flags
9	5	NM	O			00577	Probability
10	2	ID	O	Y	0080	00578	Nature of Abnormal Test
11	1	ID	R		0085	00579	Observation Result Status
12	24	DTM	O			00580	Effective Date of Reference Range
13	20	ST	O			00581	User Defined Access Checks
14	24	DTM	O			00582	Date/Time of the Observation
15	705	CW E	O		9999	00583	Producer's ID
16	3220	XCN	O	Y		00584	Responsible Observer
17	705	CW E	O	Y	9999	00936	Observation Method
18	427	EI	O	Y		01479	Equipment Instance Identifier
19	24	DTM	O			01480	Date/Time of the Analysis
20	705	CW E	O	Y	0163	02179	Observation Site
21	427	EI	O			02180	Observation Instance Identifier
22	705	CNE	C		0725	02182	Mood Code
23	570	XON	O	N		02283	Performing Organization Name
24	2915	XAD	O	N		02284	Performing Organization Address

<sup>1</sup> The length of the observation field is variable, depending upon the type of value. See *OBX-2 value type*.

<sup>2</sup> May repeat for multipart, single answer results with appropriate data types e.g. CE, TX and FT data types.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
25	3220	XCN	O	N		02285	Performing Organization Medical Director

**Table 6: observation/result segment**

Transferred into\from system database:

- OBX-1: Serial number of segment
- OBX-2: Data type of OBX-5 (FT, RP, ED) (from EXPORTMAP)
- OBX-3: Identifier of observation (ID^Text^Codesystem) (from EXPORTMAP)
- OBX-5: Value (text, file name, link or base-64 coded content)
- OBX-6: Unit (from EXPORTMAP)
- OBX-11: Status (always F)
- OBX-14: Date of observation
- OBX-16: Observer
- OBX-19: Date of analysis (can differ from OBX-14, e.g. for laboratory values)

## 5.9 TXA – transcription document header

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00914	Set ID- TXA
2	30	IS	R		0270	00915	Document Type
3	2	ID	C		0191	00916	Document Content Presentation
4	24	DTM	O			00917	Activity Date/Time
5	250	XCN	C	Y		00918	Primary Activity Provider Code/Name
6	24	DTM	O			00919	Origination Date/Time
7	24	DTM	C			00920	Transcription Date/Time
8	24	DTM	O	Y		00921	Edit Date/Time
9	250	XCN	O	Y		00922	Originator Code/Name
10	250	XCN	O	Y		00923	Assigned Document Authenticator
11	250	XCN	C	Y		00924	Transcriptionist Code/Name
12	427	EI	R			00925	Unique Document Number
13	427	EI	C			00926	Parent Document Number
14	427	EI	O	Y		00216	Placer Order Number
15	427	EI	O			00217	Filler Order Number
16	30	ST	O			00927	Unique Document File Name
17	2	ID	R		0271	00928	Document Completion Status
18	2	ID	O		0272	00929	Document Confidentiality Status
19	2	ID	O		0273	00930	Document Availability Status
20	2	ID	O		0275	00932	Document Storage Status
21	30	ST	C			00933	Document Change Reason
22	250	PPN	C	Y		00934	Authentication Person, Time Stamp (set)

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
23	250	XCN	O	Y		00935	Distributed Copies (Code and Name of Recipient(s) )

**Table 7: Transcription document header segment**

Transferred into\from system database:

- TXA-1: Serial number of segment, fix (1)
- TXA-2: Definition of document type
- TXA-3: MIME-Type of document (application/pdf)
- TXA-5: Attending Doctor (ID^Name^Firstname)
- TXA-6: Date of documentation
- TXA-7: Date of issuing findings
- TXA-8: Date of last update (can be a list of several dates)
- TXA-9: Author (ID^Name^Firstname)
- TXA-9: Signer (ID^Name^Firstname)
- TXA-12: Clear ID of document
- TXA-13: Reference document
- TXA-14: Order number (HIS)
- TXA-15: Procedure ID (system database)
- TXA-16: File name (can also be transferred as RP in OBX segments)
- TXA-17: Processing status (according to project-specific agreements)
- TXA-18: Confidentiality
- TXA-19: Status of document (standardised: UN, AV, OB, CA)
- TXA-20: Status of storage
- TXA-21: Reason for update
- TXA-22: Signer with timestamp (applicable for digital signature)

**5.10 NTE – notes and comments**

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00096	Set ID - NTE
2	8	ID	O		0105	00097	Source of Comment
3	65536	FT	O	Y		00098	Comment
4	250	CWE	O		0364	01318	Comment Type
5	3220	XCN	O			00224	Entered By
6	24	DTM	O			00661	Entered Date/Time
7	24	DTM	O			01004	Effective Start Date
8	24	DTM	O			02185	Expiration Date

**Table 8: Notes and comments segment**

Transferred into\from system database:

- NTE-1: Set ID - NTE
- NTE-2: Source of Comment

- NTE-3: Comment
- NTE-4: Comment Type
- NTE-5: Entered By

### 5.11 DG1 – diagnosis

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00375	Set ID - DG1
2			W			00376	Diagnosis Coding Method
3	250	CWE	R		0051	00377	Diagnosis Code - DG1
4			W			00378	Diagnosis Description
5	24	DTM	O			00379	Diagnosis Date/Time
6	2	IS	R		0052	00380	Diagnosis Type
7			W			00381	Major Diagnostic Category
8			W			00382	Diagnostic Related Group
9			W			00383	DRG Approval Indicator
10			W			00384	DRG Grouper Review Code
11			W			00385	Outlier Type
12			W			00386	Outlier Days
13			W			00387	Outlier Cost
14			W			00388	Grouper Version And Type
15	2	ID	O		0359	00389	Diagnosis Priority
16	250	XCN	O	Y		00390	Diagnosing Clinician
17	3	IS	O		0228	00766	Diagnosis Classification
18	1	ID	O		0136	00767	Confidential Indicator
19	24	DTM	O			00768	Attestation Date/Time
20	427	EI	C			01850	Diagnosis Identifier
21	1	ID	C		0206	01894	Diagnosis Action Code
22	427	EI	C			02152	Parent Diagnosis
23	705	CWE	O		0728	02153	DRG CCL Value Code
24	20	ID	O		0136	02154	DRG Grouping Usage
25	20	IS	O		0731	02155	DRG Diagnosis Determination Status
26	1	IS	O		0895	02288	Present On Admission (POA) Indicator

**Table 9: Diagnosis segment**

Transferred into\from system database:

- DG1-1: Serial number of segment
- DG1-3: Diagnosis (Code^Text^Codesystem)
- DG1-5: Date of diagnosis

- DG1-6: Type of diagnosis
- DG1-11: Responsible department (especially for ORBIS)
- DG1-15: Priority
- DG1-16: Attending Doctor (ID^Name^Firstname)
- DG1-20: Update mode is not supported, field is always empty
- DG1-21: Update mode is not supported, field is always empty
- DG1-22: Hierarchical diagnoses are not supported, field is always empty

### 5.12 PR1 – procedure

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00391	Set ID - PR1
2			W			00392	Procedure Coding Method
3	705	CNE	R		0088	00393	Procedure Code
4			W			00394	Procedure Description
5	24	DTM	R			00395	Procedure Date/Time
6	2	IS	O		0230	00396	Procedure Functional Type
7	4	NM	O			00397	Procedure Minutes
8			W			00398	Anesthesiologist
9	2	IS	O		0019	00399	Anesthesia Code
10	4	NM	O			00400	Anesthesia Minutes
11			W			00401	Surgeon
12			W			00402	Procedure Practitioner
13	250	CWE	O		0059	00403	Consent Code
14	2	ID	O		0418	00404	Procedure Priority
15	250	CWE	O		0051	00772	Associated Diagnosis Code
16	705	CNE	O	Y	0340	01316	Procedure Code Modifier
17	20	IS	O		0416	01501	Procedure DRG Type
18	250	CWE	O	Y	0417	01502	Tissue Type Code
19	427	EI	C			01848	Procedure Identifier
20	1	ID	C		0206	01849	Procedure Action Code
21	20	IS	O		0761	02177	DRG Procedure Determination Status
22	20	IS	O		0763	02178	DRG Procedure Relevance

**Table 10: Procedure segment**

Transferred into\from system database:

- PR1-1: Serial number of segment
- PR1-3: Procedure (Code^Text^Codesystem)
- PR1-5: Date of procedure
- PR1-8: Responsible department (especially for ORBIS)

- PR1-12: Attending Doctor
- PR1-14: Priority
- PR1-19: Update mode is not supported, field is always empty
- PR1-20: Update mode is not supported, field is always empty

### 5.13 FT1 – financial transaction

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00355	Set ID - FT1
2	12	ST	O			00356	Transaction ID
3	10	ST	O			00357	Transaction Batch ID
4	53	DR	R			00358	Transaction Date
5	24	DTM	O			00359	Transaction Posting Date
6	8	IS	R		0017	00360	Transaction Type
7	250	CWE	R		0132	00361	Transaction Code
8			W			00362	Transaction Description
9			W			00363	Transaction Description - Alt
10	6	NM	O			00364	Transaction Quantity
11	12	CP	O			00365	Transaction Amount - Extended
12	12	CP	O			00366	Transaction Amount - Unit
13	250	CWE	O		0049	00367	Department Code
14	250	CWE	O		0072	00368	Insurance Plan ID
15	12	CP	O			00369	Insurance Amount
16	80	PL	O			00133	Assigned Patient Location
17	1	IS	O		0024	00370	Fee Schedule
18	2	IS	O		0018	00148	Patient Type
19	250	CWE	O	Y	0051	00371	Diagnosis Code - FT1
20	250	XCN	O	Y	0084	00372	Performed By Code
21	250	XCN	O	Y		00373	Ordered By Code
22	12	CP	O			00374	Unit Cost
23	427	EI	O			00217	Filler Order Number
24	250	XCN	O	Y		00765	Entered By Code
25	705	CNE	O		0088	00393	Procedure Code
26	705	CNE	O	Y	0340	01316	Procedure Code Modifier
27	250	CWE	O		0339	01310	Advanced Beneficiary Notice Code
28	705	CWE	O		0476	01646	Medically Necessary Duplicate Procedure Reason
29	250	CWE	O		0549	01845	NDC Code
30	250	CX	O			01846	Payment Reference ID
31	4	SI	O	Y		01847	Transaction Reference Key

**Table 11: Financial transaction segment**

Transferred into\from system database:

- FT1-1: Serial number of segment
- FT1-3: Booking number
- FT1-4: Date of benefit
- FT1-6: *empty*
- FT1-7: Code of benefit ("pay scale")
- FT1-10: Number
- FT1-20: Responsible department
- FT1-21: Requesting department
- FT1-22: *empty*
- FT1-23: Procedure-ID in system database

#### 5.14 SCH – scheduling activity information

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	75	EI	C			00860	Placer Appointment ID
2	75	EI	C			00861	Filler Appointment ID
3	5	NM	C			00862	Occurrence Number
4	22	EI	O			00218	Placer Group Number
5	250	CWE	O			00864	Schedule ID
6	250	CWE	R			00883	Event Reason
7	250	CWE	O		0276	00866	Appointment Reason
8	250	CWE	O		0277	00867	Appointment Type
9	20	NM	B			00868	Appointment Duration
10	250	CNE	B			00869	Appointment Duration Units
11	200	TQ	B	Y		00884	Appointment Timing Quantity
12	250	XCN	O	Y		00874	Placer Contact Person
13	250	XTN	O			00875	Placer Contact Phone Number
14	250	XAD	O	Y		00876	Placer Contact Address
15	80	PL	O			00877	Placer Contact Location
16	250	XCN	R	Y		00885	Filler Contact Person
17	250	XTN	O			00886	Filler Contact Phone Number
18	250	XAD	O	Y		00887	Filler Contact Address
19	80	PL	O			00888	Filler Contact Location
20	250	XCN	R	Y		00878	Entered by Person
21	250	XTN	O	Y		00879	Entered by Phone Number
22	80	PL	O			00880	Entered by Location
23	75	EI	O			00881	Parent Placer Appointment ID
24	75	EI	C			00882	Parent Filler Appointment ID
25	250	CWE	O		0278	00889	Filler Status Code

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
26	427	EI	C	Y		00216	Placer Order Number
27	427	EI	C	Y		00217	Filler Order Number

**Table 12: Scheduling activity information segment**

Transferred into system database:

- SCH-2: Order ID (HIS)
- SCH -14: Service (ID^Name)

### 5.15 RGS – resource group

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			01203	Set ID - RGS
2	3	ID	C		0206	00763	Segment Action Code
3	250	CWE	O			01204	Resource Group ID

**Table 13: Resource group segment**

Transferred into system database:

- RGS -2: Segment Action Code

### 5.16 AIS – appointment information

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00890	Set ID - AIS
2	3	ID	C			00763	Segment Action Code
3	705	CWE	R			00238	Universal Service Identifier
4	24	DTM	C			01202	Start Date/Time
5	20	NM	C			00891	Start Date/Time Offset
6	250	CNE	C			00892	Start Date/Time Offset Units
7	20	NM	O			00893	Duration
8	250	CNE	O			00894	Duration Units
9	10	IS	C		0279	00895	Allow Substitution Code
10	250	CWE	C		0278	00889	Filler Status Code
11	705	CWE	O		0411	01474	Placer Supplemental Service Information
12	705	CWE	O		0411	01475	Filler Supplemental Service Information

**Table 14: Appointment information segment**



Transferred into system database:

- AIS.3: Universal Service Identifier (Order Name^Order Long Name)
- AIS.5: Start Date\Time (Order Date)

**5.17 AIG – appointment information – general resource**

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00896	Set ID - AIG
2	3	ID	C		0206	00763	Segment Action Code
3	250	CWE	C			00897	Resource ID
4	250	CWE	R			00898	Resource Type
5	250	CWE	O	Y		00899	Resource Group
6	5	NM	O			00900	Resource Quantity
7	250	CNE	O			00901	Resource Quantity Units
8	24	DTM	C			01202	Start Date/Time
9	20	NM	C			00891	Start Date/Time Offset
10	250	CNE	C			00892	Start Date/Time Offset Units
11	20	NM	O			00893	Duration
12	250	CNE	O			00894	Duration Units
13	10	IS	C		0279	00895	Allow Substitution Code
14	250	CWE	C		0278	00889	Filler Status Code

**Table 15: Appointment information – general resource segment**

AIG is assessed.

**5.18 AIL – appointment information – location resource**

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00902	Set ID - AIL
2	3	ID	C		0206	00763	Segment Action Code
3	80	PL	C	Y		00903	Location Resource ID
4	250	CWE	C		0305	00904	Location Type - AIL
5	250	CWE	O			00905	Location Group
6	24	DTM	C			01202	Start Date/Time
7	20	NM	C			00891	Start Date/Time Offset
8	250	CNE	C			00892	Start Date/Time Offset Units
9	20	NM	O			00893	Duration
10	250	CNE	O			00894	Duration Units
11	10	IS	C		0279	00895	Allow Substitution Code

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
12	250	CWE	C		0278	00889	Filler Status Code

**Tab. 16: Appointment information – location resource segment**

AIL is assessed.

**5.19 AIP – appointment information – personnel resource**

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00906	Set ID - AIP
2	3	ID	C		0206	00763	Segment Action code
3	250	XCN	C	Y		00913	Personnel Resource ID
4	250	CWE	C		0182	00907	Resource Type
5	250	CWE	O			00899	Resource Group
6	24	DTM	C			01202	Start Date/Time
7	20	NM	C			00891	Start Date/Time Offset
8	250	CNE	C			00892	Start Date/Time Offset Units
9	20	NM	O			00893	Duration
10	250	CNEE	O			00894	Duration Units
11	10	IS	C		0279	00895	Allow Substitution Code
12	250	CWE	C		0278	00889	Filler Status Code

**Table 17: appointment information – personnel resource segment**

Transferred into system database:

- AIP.3: Personnel Resource ID (Attending Doctor)