

# HL7 Specification Overview

## Communication Server Cloverleaf

### IT Addendum B – Summary

#### Table of Content

|                                      |   |
|--------------------------------------|---|
| HL7-Interface Messages .....         | 2 |
| Overview .....                       | 2 |
| Events .....                         | 2 |
| Data Structure of HL7-Segments ..... | 4 |
| Content of Catalogues .....          | 4 |
| Additional Remarks: .....            | 4 |

## HL7-Interface Messages

### Overview

HCM Events generated by the Patient Administration System SAP-ISH are being distributed to clinical IT systems via the communication server Cloverleaf

Currently HL7 Versions 2.3., 2.3.1, 2.4, 2.5 and exceptionally also 2.2 are supported.

In further descriptions the Tirol Kliniken Standard concerning HL7-Fields and Catalogues used will be defined. If necessary alternatives to the existing standard can be discussed.

### Events

ADT-Messages sent from SAP-IS-H or in case of an SAP downtime from Cerner Millennium:

- *A01: Patient Admission, issued by SAP-IS-H or Cerner Millennium*
- *A02: Patient Transfer from one Unit to another, sent by SAP-IS-H*
- *A03: Discharge of an Inpatient, sent by SAP-IS-H*
- *A05: Future Plan Admission of a Patient, sent by SAP-IS-H*
- *A06: Encounter Type Change from out- to inpatient, sent by SAP-IS-H*
- *A07: Encounter Type Change from in- to outpatient, sent by SAP-IS-H*
- *A08: Patient Data Update, issued by SAP-IS-H or Cerner Millennium*
- *A11: Cancellation of an admission (out- or inpatient), sent by SAP-IS-H or Cerner Millennium*
- *A12: Cancellation of an encounter, sent by SAP-IS-H*
- *A13: Cancellation of a discharge, sent by SAP-IS-H*
- *A21: Start of pausing an inpatient encounter, sent by SAP-IS-H*
- *A22: End of pausing an inpatient encounter, sent by SAP-IS-H*
- *A23: Deleting a Patient, sent by SAP-IS-H*
- *A28: Creating a new Patient, issued by SAP-IS-H or Cerner Millennium*
- *A31: Updating / correcting Patient Data, issued by SAP-IS-H or Cerner Millennium*
- *A34: Merging two Patients, sent by SAP-IS-H*
- *A38: Cancellation of an plan (=future) patient admission, sent by SAP-IS-H*

### **DFT-Messages**

DFT Messages were used to send billing numbers from a subsystem's department specific „house catalogue“ to SAP-IS-H (Patient Administration and Central Billing System), but is not supported anymore. It is replaced by BAR Messages.

### **BAR-Messages**

BAR Messages are being used to send out- or inpatient billing information from subsystems to SAP-IS-H.

- *P01: Default for performance data transmission*
- *P02: Performance data transmission for specific subsystems*
- *P05: Performance data transmission for specific subsystems*
- *P12: Performance data transmission for specific subsystems*

## MDM-Messages

MDM ist the standard to send PDF-Documents to the Archive-System **syngo.share**.  
 ORU encapsulated PDF is also supported.

- *T02: Original document notification and content*
- *T09: Document replacement notification*
- *T10: Document replacement notification and content*
- *T11: Document cancel notification*

## ORU-Messages

Besides MDM also ORU Messages are still being use for communication medical reports / documents between systems (e.g. from a subsystem into a patients EMR).

We distinguish between two scenarios:

- **Documents being sent into an EMR or into syngo.share:**  
 FT (Formatted Text) will be converted according HL7. Lab Reports may contain FT and CE (Coded Elements = discreet values).  
  
 RTF- and PDF-Documents embedded in an OBX-Segment are also allowed.
- **Messages directed towards SAP-IS-H:**  
 e.g. for communicating the continuation of insurance coverage for a patient or to transfer specific medical reports to insurances.  
  
 R01: medical report /pointer / encapsulated PDF

## ORM/ORR-Messages:

Elektronic Ordering is being triggered from a patients EMR in the Clinical Information System (CIS). ORR Messages (Status Messages) will come back via another rout.

- *ORM\_O01: Order Message*
- *ORR\_O02: ORM-Order Response)*

## QRY-Messages:

There are 7 different variants for a HL7\_Query via Q01 □ Antwort: ADR^A19:

- *API: Query for PID → Reply = PID-Segment*
- *APA: Query for Encounter Number AZL → Reply = PID-Segment*
- *APN: Query for Name, Sex and DOB → Reply including up to 10 PID-Segments*
- *APAF: Query for Encounter Number AZL --> Reply including PID-and PV1-Segment (8 / 19 / 44 / 45).*
- *APAV/APIV: Query like above (APAV with AZL, APIV with PID) → Reply including PID-Segment and IN1-Segment (insurance information).*
- *APAB/APIB: Query like above (APAB with AZL, APIB with PID) – Reply including PID-Segment and IN1-Segment (occupation of patient).*
- *APS: Query for Social Insurance Number → Reply = PID-Segment*

**SIU-Messages:**

- S12: Schedule information – new appointment booking
- S14: Schedule information – appointment modification
- S17: Schedule information – appointment deletion

**Data Structure of HL7-Segments**

- Will be provided on request (File name „HL7-Mapping 2.3.1\_v....pdf“)

**Content of Catalogues**

- Will be provided on request (File name: „ISH-Tables.xlsx“)

**Additional Remarks:**

Implementation specifics depend on what system or what route has to be connected. Details can be found in further documents.

**Subjects which have to be defined specifically for each connection:**

- Filter for ADT-Data: Facility, Organizational Units, Encounter Type (out- / inpatient)
- ADT-Events/Fields: Which will be supported? Mapping Requirements (e.g.: A01 → A04,A34 → A40)
- Will Express Messages be needed?
- Will Future Admissions (planned admissions in the future) be needed (A05/A38 or A01/A11)?
- Will SAP-Encounter ID be needed for encounter synchronization?
- Definition of names for Application/Facility Fields
- Hostaddresses and ports: will be defined before the first tests begin.
- Firewall adjustments required?
- Are there SSL-Parameters and Certificates to be defined?