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AX

Interface Specification SIS HL7 Interface

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Table of Contents

| | |
|--|-----------|
| Table of Contents..... | 2 |
| List of Tables..... | 5 |
| 1 Introduction..... | 7 |
| 1.1 Purpose..... | 7 |
| 1.2 Scope..... | 7 |
| 1.3 Definitions, Abbreviations and Acronyms..... | 7 |
| 1.4 References..... | 7 |
| 1.5 Design Constraints..... | 7 |
| 1.6 Overview..... | 7 |
| 2 General Description..... | 8 |
| 2.1 Abstract Definition of the Subsystem/Component..... | 8 |
| 2.1.1 HL7 Message Overview..... | 8 |
| 2.1.2 HL7 Message Header and Tail..... | 9 |
| 2.1.3 HL7 Message Segment Separator..... | 9 |
| 2.1.4 Maintainability Strategy..... | 9 |
| 3 Detailed Class Description(s)..... | 10 |
| 3.1 EXPORT MESSAGE DEFINITIONS..... | 10 |
| 3.1.1 ORUR01 Unsolicited transmission of an observation..... | 10 |
| 3.1.2 DFTP03 Post detailed financial transactions..... | 10 |
| 3.2 IMPORT MESSAGE DEFINITIONS..... | 11 |
| 3.2.1 ADTA01 Admit/Visit notification..... | 11 |
| 3.2.2 ADTA03 Discharge/End visit notification..... | 12 |
| 3.2.3 ADTA04 Register a patient..... | 12 |
| 3.2.4 ADTA05 Pre-admit a patient..... | 12 |
| 3.2.5 ADTA08 Update patient information..... | 13 |
| 3.2.6 ADTA11 Cancel admit/visit notification..... | 14 |
| 3.2.7 ADTA18 Merge patient Information..... | 14 |
| 3.2.8 ADTA23 Delete a patient record..... | 15 |
| 3.2.9 ADTA39 Merge patient - Patient ID..... | 15 |
| 3.2.10 ADTA40 Merge patient - Patient Identifier List..... | 15 |
| 3.2.11 ADTA44 Move account information - patient account number..... | 16 |
| 3.2.12 ADTA46 Update Patient Identifier - Patient ID..... | 16 |
| 3.2.13 ADTA47 Update Patient Identifier - Patient Identifier List..... | 16 |

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| | | |
|----------|--|-----------|
| 3.2.14 | ADTA49 Change patient account number | 17 |
| 3.2.15 | DFTP03 Post detailed financial transactions..... | 17 |
| 3.2.16 | MFNM12 Master File Notification | 17 |
| 3.2.17 | ORMO01 General orders message | 17 |
| 3.3 | Acknowledgement Message | 18 |
| 3.3.1 | ACK General Acknowledgement..... | 18 |
| 3.3.2 | MFKM01 Mater File Application Acknowledgement..... | 19 |
| 3.4 | Segment Definitions..... | 20 |
| 3.4.1 | MSH Segment..... | 20 |
| 3.4.2 | PID Segment..... | 22 |
| | | 22 |
| 3.4.3 | PV1 Segment | 24 |
| 3.4.4 | ORC Segment | 26 |
| 3.4.5 | OBR Segment | 27 |
| 3.4.5.1 | Import..... | 27 |
| 3.4.5.2 | Export..... | 29 |
| 3.4.6 | OBX Segment..... | 31 |
| 3.4.6.1 | Import..... | 31 |
| 3.4.6.2 | Export..... | 33 |
| 3.4.7 | NTE Segment (Export ONLY)..... | 35 |
| 3.4.8 | EVN Segment | 36 |
| 3.4.9 | FT1 Segment (Export ONLY)..... | 37 |
| 3.4.10 | PD1 Segment | 40 |
| 3.4.11 | AL1 Segment..... | 40 |
| 3.4.12 | DG1 Segment (Export ONLY)..... | 41 |
| 3.4.13 | PR1 Segment (Export ONLY)..... | 42 |
| 3.4.14 | MSA Segment..... | 44 |
| 3.4.15 | MRG Segment | 44 |
| 3.4.16 | ZII Segment | 45 |
| 3.4.17 | MFI Segment | 45 |
| 3.4.18 | MFE Segment | 45 |
| 3.4.19 | MFE.1. RecordLevelEventCode..... | 45 |
| 4 | Installation / Service | 46 |
| 4.1 | Veterans Affairs VistA support..... | 46 |
| 4.1.1 | MSH Segment..... | 46 |
| 4.1.2 | ORRO02 ACK for ORM message | 46 |
| 4.1.3 | OBR Segment | 46 |

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| | | |
|-------|---|----|
| 4.2 | Modifying HL7 export functionality in Communication Manager | 48 |
| 4.2.1 | Job Parameters | 48 |
| 4.2.2 | Transfer Parameters | 49 |
| 4.3 | Setting HL7 export field values in Communication Manager | 49 |
| 4.3.1 | Job Parameters | 49 |
| 4.4 | ORUR01 message example - export | 51 |
| 4.5 | ORUR01 with free text as OBX segments – export | 56 |
| 4.6 | DFTP03 message example - export | 60 |
| 4.7 | ORMO01 message example - import..... | 62 |
| 4.8 | ADTA01 message example – import..... | 62 |

List of Tables

| | | |
|-----------|---|----|
| Table 1: | HL7 Inbound Message..... | 8 |
| Table 2: | HL7 Outbound Message..... | 9 |
| Table 3: | HL7 Header and Tail | 9 |
| Table 4: | ORUR01 Message Definition..... | 10 |
| Table 5: | DFTP03 Message Defintion (General)..... | 11 |
| Table 6: | ADTA01 Message Definition..... | 11 |
| Table 7: | ADTA03 Message Definition..... | 12 |
| Table 8: | ADTA04 Message Definition..... | 12 |
| Table 9: | ADTA05 Message Definition..... | 13 |
| Table 10: | ADTA08 Configuration..... | 13 |
| Table 11: | ADTA08 Message Definition..... | 13 |
| Table 12: | ADTA11 Message Definition..... | 14 |
| Table 13: | ADTA18 Configuration..... | 14 |
| Table 14: | ADTA18 Message Definition..... | 14 |
| Table 15: | ADTA23 Message Definition..... | 15 |
| Table 16: | ADTA39 Message Definition..... | 15 |
| Table 17: | ADTA40 Message Definition..... | 15 |
| Table 18: | ADTA44 Message Definition..... | 16 |
| Table 19: | ADTA46 Message Definition..... | 16 |
| Table 20: | ADTA47 Message Definition..... | 16 |
| Table 21: | ADTA49 Message Definition..... | 17 |
| Table 22: | ORMO01 Message Definition..... | 17 |
| Table 23: | ACK Message Definition | 18 |
| Table 24: | Acknowledgement Code (HL70008)..... | 18 |
| Table 25: | Acknowledgment Code for SIS events..... | 18 |
| Table 26: | Unknown Message Configuration | 19 |
| Table 27: | PV1 Segment Definition..... | 25 |
| Table 28: | PV1.PatientClass Code (HL7004)..... | 25 |
| Table 29: | ORC Segment Definition..... | 26 |
| Table 30: | OBR Segment Definition (Inbound)..... | 27 |
| Table 31: | OBR Segment Definition (Outbound)..... | 29 |
| Table 32: | OBX Segment Definition (Inbound) | 31 |
| Table 33: | OBX Segment Definition (Outbound)..... | 33 |
| Table 34: | NTE Segment Definition | 35 |
| Table 35: | EVN Segment Definition..... | 36 |

| | | |
|-----------|--|----|
| Table 36: | FT1 Segment Definition | 37 |
| Table 37: | FT1.TransactionType Code | 38 |
| Table 38: | PD1 Segment Definition..... | 40 |
| Table 39: | AL1 Segment Definition | 41 |
| Table 40: | DG1 Segment Definition | 41 |
| Table 41: | PR1 Segment Definition..... | 42 |
| Table 42: | MSA Segment Definition | 44 |
| Table 43: | MRG Segment Definition..... | 44 |
| Table 44: | OBR Segment Definition for Vista | 46 |

1 Introduction

This document is imported from 6656024-EDS-007. A new DIR number is obtained for Sensis VC10 release.

1.1 Purpose

This document intends to describe the HL7 interface which is used to transfer patient and study related data between the AXIOM Sensis Information System and other Information Systems

1.2 Scope

AXIOM Sensis Information System as defined in [4]

1.3 Definitions, Abbreviations and Acronyms

See [TERM] for AXIOM Sensis project wide terminology.

| | |
|------------|---|
| Inpatient | The patient is admitted and assigned a bed at the healthcare facility |
| Outpatient | The patient is admitted on a one time or recurring basis and not assigned a bed |
| REFNO | The refno is a unique number that increments for each new study. |

1.4 References

| | | |
|-----|----------------------------------|-----------------------|
| [1] | AXIOM Sensis System Admin Manual | AXA5-200.640.06.01.02 |
| [2] | AXIOM Sensis System User Manual | AXA5-200.620.06.01.02 |
| [3] | FS: Sensis - QSight Interface | 66 56 008 – EPH – 711 |

1.5 Design Constraints

N/A

1.6 Overview

N/A

2 General Description

2.1 Abstract Definition of the Subsystem/Component

2.1.1 HL7 Message Overview

The AXIOM Sensis HL7 interface is used to receive patient demographics data for patient registration and to send out financial and reporting results data. The version supported is HL7 2.4 and compatible.

The following messages are supported:

Table 1: HL7 Inbound Message

| | |
|---------|---|
| ADT A01 | Admit/Visit Notification |
| ADT A03 | Discharge/end visit notification |
| ADT A04 | Register patient |
| ADT A05 | Pre-admit patient |
| ADT A08 | Update patient information |
| ADT A11 | Cancel admin/visit notification |
| ADT A18 | Merge patient information |
| ADT A23 | Delete patient record |
| ADT A39 | Merge patient – Patient ID |
| ADT A40 | Merge patient – Patient identifier list |
| ADT A44 | Move account information – Patient account number |
| ADT A46 | Update patient identifier – Patient ID |
| ADT A47 | Update patient identifier – Patient identifier list |
| ADT A49 | Change patient account number |
| ORM O01 | General orders message |
| DFT P03 | Material usage item transaction |
| MFN M12 | Material master file transfer |

Table 2: *HL7 Outbound Message*

| | |
|---------|--|
| ORU R01 | Unsolocited transmission of an observation |
| DFT P03 | Post detailed financial transactions |

The ORUR01 message is used for sending unrequested observation information. The DFTP03 message is used to send information about financial transactions. The actual examination data to be sent with the message is to be defined for each system installation. Please see [\[6\]](#) for how this is to be configured.

2.1.2 HL7 Message Header and Tail

Each HL7 message must have attached Head and Tail segments that are used by HL7 Listener to determine the start and end of the HL7 message.

These are defined as follows:

Table 3: *HL7 Header and Tail*

| | <i>Hexadecimal</i> | <i>ASCII character code</i> |
|--------|--------------------|-----------------------------|
| Header | 0x0B | 11 |
| Tail | 0x1C 0x0D | 28 + 13 |

2.1.3 HL7 Message Segment Separator

Each segment in the message is separated by the ASCII Carriage Return character only (0x0D).

2.1.4 Maintainability Strategy

SIS HL7 profile is compsed using Orin Symphonia EDI Message Designer v3.8

3 Detailed Class Description(s)

3.1 EXPORT MESSAGE DEFINITIONS

3.1.1 ORUR01 Unsolicited transmission of an observation

This message is used to transmit observations and results of diagnostic studies, from the producing system to the ordering system.

The information is placed in the message in a structured way so that it can be understood by the receiving system. The OBR segment is used as a report header, it supplies information that applies to all the observations below it i.e. a number of OBX segments. The OBX segment provides information about a single observation, and it includes a field that identifies that single observation. Note segments (NTE) may be inserted after any of the above segments. The note segment applies to the entity that immediately precedes it.

Table 4: *ORUR01 Message Definition*

| | | |
|-----|------------------------|---|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| PV1 | Patient visit | Used to communicate information on a visit specific basis |
| OBR | Observation Report | One OBR segment is added for each condition in the study, and the data from the specified tables is sorted by Condition and added under its respective OBR segment. If the database tables that have no condition information are specified then these are placed in a separate OBR segment. |
| NTE | Notes | The default behaviour is that one NTE segment is added for each row in a Free Text table. Each line is placed in a repeat of the NTE Comment field. If the note has a time associated with it, this is placed in the first NTE Comment. Free Text can also be sent as OBX segments if specified, see [6]. |
| OBX | Observation/Result | One OBX segment is added for each exported database field. It holds information about the field and its value. |

3.1.2 DFTP03 Post detailed financial transactions

The Detailed Financial Transaction message is used to describe a financial transaction transmitted between systems.

Procedure and Diagnosis information can be transferred using either the PR1 and DG1 segments respectively or as FT1 segments. This option is set in the corresponding Communication Manager export job configuration [6].

Table 5: *DFTP03 Message Definition (General)*

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| EVN | Event Type | Necessary trigger event information |
| PID | Patient Identification | Minimal patient identification information |
| FT1 | Financial Transaction | Contains the detailed data necessary to post charges, payments, etc to patient accounting records. |
| ZII | Material Product | Contains details for product used in FT1 segment. |
| PR1 | Procedures | Contains information about the procedures performed. |
| DG1 | Diagnosis | Contains information about any diagnoses made. |

For outbound DFTP03 message to Material Management, please check Sensis – Qsight Interface document [9].

3.2 IMPORT MESSAGE DEFINITIONS

3.2.1 ADTA01 Admit/Visit notification

The Patient Administration A01 message is sent as a result of the patient undergoing the admission process and is assigned a bed i.e. is an inpatient.

If the patient is not already pre-registered in SIS, a new patient and study are created using information from the segments specified below.

If the patient is already pre-registered in SIS, the patient and study are updated. The update is done to pre-registered patient and studies only.

Table 6: *ADTA01 Message Definition*

| | | |
|-----|-------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| PD1 | Additional Demographics | Contains additional patient demographic information that is likely to change |
| PV1 | Patient Visit | Used to communicate information on a visit specific basis |
| AL1 | Allergy Information | Contains patient allergy information about a single allergy |
| OBX | Observation/Result | One OBX segment maps to data that is stored in one field of a table in the database. The mapping is done using the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields against the HL7 Import Mappings done using Configuration Manager. See [7] for details. |

3.2.2 ADTA03 Discharge/End visit notification

The Patient Administration A03 message signals the end of a patients stay in a healthcare facility. It shows that the patients status has changed to Discharged. Patient and Study are deleted from the database.

If the patient is already pre-registered in SIS, the patient and any associated studies are deleted. The deletion is only done for pre-registered patients.

If the patient is not pre-registered, no action is taken.

Table 7: ADTA03 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |

3.2.3 ADTA04 Register a patient

The Patient Administration A04 message signals that the patient has arrived or checked in as a one-time, or recurring outpatient and is not assigned a bed i.e. is an outpatient.

If the patient is not already pre-registered in SIS, a new and study are created using information from the segments specified below.

If the patient is already pre-registered in SIS, the patient and study are updated. The update is done to pre-registered patient and studies only.

Table 8: ADTA04 Message Definition

| | | |
|-----|-------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| PD1 | Additional Demographics | Contains additional patient demographic information that is likely to change |
| PV1 | Patient Visit | Used to communicate information on a visit specific basis |
| AL1 | Allergy Information | Contains patient allergy information about a single allergy |
| OBX | Observation/Result | One OBX segment maps to data that is stored in one field of a table in the database. The mapping is done using the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields against the HL7 Import Mappings done using Configuration Manager. See [7] for details. |

3.2.4 ADTA05 Pre-admit a patient

An A05 event is sent when a patient undergoes the pre-admission process. During this process, episode-related data is collected in preparation for a patient's visit or stay in a healthcare facility.

If the patient is not already pre-registered in SIS, a new patient and study are created using

information from the segments specified below. The value in the PV1:PatientClass field is used to determine if this patient should be classified as an in-patient or an out-patient.

If the patient is already pre-registered in SIS, the patient and study are updated. The update is done to pre-registered patient and studies only.

Table 9: ADTA05 Message Definition

| | | |
|-----|-------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| PD1 | Additional Demographics | Contains additional patient demographic information that is likely to change |
| PV1 | Patient Visit | Used to communicate information on a visit specific basis |
| AL1 | Allergy Information | Contains patient allergy information about a single allergy |
| OBX | Observation/Result | One OBX segment maps to data that is stored in one field of a table in the database. The mapping is done using the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields against the HL7 Import Mappings done using Configuration Manager. See [7] for details. |

3.2.5 ADTA08 Update patient information

The Patient Administration A08 message is used when any patient information has changed.

The update is performed if the patient has been previously registered by an ADTA01, ADTA04, ADTA05 or ORMO01 message.

If the patient does already exist in SIS, the patient and study information is updated.

If the patient does not exist in SIS, depends on HL7 configuration, the patient and study information is either registered as new patient or ignored as no matching patient exists.

Table 10: ADTA08 Configuration

| <i>Item</i> | <i>Value</i> | <i>Note</i> |
|-------------------|---------------|---|
| ADTA08.NewPatient | true false | If ADTA08 message can be used to register new patient. If the patient in ADTA08 doesn't exist in SIS: true – register the patient as new patient in SIS. false – ignore the message. |

Table 11: ADTA08 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |

| | | |
|-----|-------------------------|--|
| PD1 | Additional Demographics | Contains additional patient demographic information that is likely to change |
| OBX | Observation/Result | One OBX segment maps to data that is stored in one field of a table in the database. The mapping is done using the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields against the HL7 Import Mappings done using Configuration Manager. See [7] for details. |

3.2.6 ADTA11 Cancel admit/visit notification

The Patient Administration A11 message is sent when an A01 event is cancelled. This can be due to an erroneous entry of the A01 event or a decision not to admit the patient after all.

If the patient is already pre-registered in SIS, the patient and any associated studies are deleted. The deletion is only done for pre-registered patients.

If the patient is not pre-registered, no action is taken.

Table 12: ADTA11 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |

3.2.7 ADTA18 Merge patient Information

NOTICE: Event A18 has been retained for backward compatibility.

The ADTA18 message is used to merge patients by either patient identification numbers: PID-3 - Patient Identifier List (same as ADT A40), PID-2 - Patient ID (same as ADT A39). This is configurable through HL7 configuration.

Table 13: ADTA18 Configuration

| Item | Value | Note |
|--------------|------------------|---|
| ADTA18.ActAs | ADTA39 ADTA40 | If the patients are meged by PID.2 (ADTA39) or PID.3 (ADTA40) |

Table 14: ADTA18 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.8 ADTA23 Delete a patient record

The Patient Administration A23 message is used to delete visit or episode specific information from the patient record.

If the patient is already pre-registered in SIS, the patient and any associated studies are deleted. The deletion is only done for pre-registered patients.

If the patient is not pre-registered, no action is taken.

Table 15: ADTA23 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |

3.2.9 ADTA39 Merge patient - Patient ID

The Patient Administration A39 message is used to signal the merge of records for a person that was incorrectly filed under two different Patient IDs.

The MRG:Prior Patient ID (MRG:4) value is used to search for the patient that will have its studies merged with the patient ID specified in the PID:Patient ID field (PID:2)

If either of the patient records do not exist in SIS, no action is taken.

Table 16: ADTA39 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.10 ADTA40 Merge patient - Patient Identifier List

The Patient Administration A40 message is used to signal the merge of records for a person that was incorrectly filed under two different Patient IDs.

The MRG:Prior Patient Identifier List (MRG:1) value is used to search for the patient that will have its studies merged with the patient ID specified in the PID:Patient Identifier List field (PID:3)

If either of the patient records does not exist in SIS, no action is taken.

Table 17: ADTA40 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.11 ADTA44 Move account information - patient account number

The Patient Administration A44 message is used to update the Patient Account Number.

The MRG:Prior Patient Account Number (MRG:3) value is used to search for the patient that will have its Patient Account Number updated with the value specified in the PID:Patient Account Number field (PID:18)

If the patient record does not exist in SIS, no action is taken.

Table 18: ADTA44 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.12 ADTA46 Update Patient Identifier - Patient ID

The Patient Administration A46 message is used to update the Patient ID.

The MRG:Prior Patient ID (MRG:4) value is used to search for the patient that will have its Patient ID updated with the value specified in the PID:Patient ID field (PID:2)

If the patient record does not exist in SIS, no action is taken.

Table 19: ADTA46 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.13 ADTA47 Update Patient Identifier - Patient Identifier List

The Patient Administration A47 message is used to update the Patient ID.

The MRG:Prior Patient Identifier List (MRG:4) value is used to search for the patient that will have its Patient ID updated with the value specified in the PID: Patient Identifier List field (PID:3)

If the patient record does not exist in SIS, no action is taken.

Table 20: ADTA47 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.14 ADTA49 Change patient account number

The Patient Administration A49 message is used to update the patient account number.

The MRG:Prior Patient Account Number (MRG:3) value is used to search for the patient that will have its Patient Account Number updated with the value specified in the PID:Patient Account Number field (PID:18)

If the patient record does not exist in SIS, no action is taken.

Table 21: ADTA49 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |
| MRG | Merge Information | Information necessary to initiate the merging of patient data as well as groups of records |

3.2.15 DFFTP03 Post detailed financial transactions

See Sensis – QSight Interface document [9]

3.2.16 MFNM12 Master File Notification

See Sensis – QSight Interface document [9]

3.2.17 ORMO01 General orders message

The General order message O01 is used to initiate the transmission of information about an order. This includes placing new orders, cancellation of existing orders, holding, etc.

If the patient specified in the ORMO01 message does not already exist in the database then a new patient is created using the information contained in the different segments. If the patient already exists then only data from the following fields are inserted/updated:

- ORC.PlacerOrderNumber.EntityIdentifier or OBR.PlacerOrderNumber.EntityIdentifier if the first is empty
- OBR.UniversalServiceID.Text
- OBR.OrderingProvider(0) (FamilyName and GivenName)
- Any data held in the OBX segments

N.B. no information from PID, PV1 or AL1 segments is updated.

The PlacerOrderNumber from the ORM message is used in the ORUR01 export message to link the order to the results.

Table 22: ORMO01 Message Definition

| | | |
|-----|------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| PID | Patient Identification | Minimal patient identification information |

| | | |
|-----|---------------------|--|
| PV1 | Patient Visit | Used to communicate information on a visit specific basis |
| AL1 | Allergy Information | Contains patient allergy information about a single allergy |
| ORC | Common Order | Holds information specific to the order |
| OBR | Observation Report | OBR holds information about the order |
| OBX | Observation/Result | One OBX segment maps to data that is stored in one field of a table in the database. The mapping is done using the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields against the HL7 Import Mappings done using Configuration Manager. See [7] for details. |

3.3 Acknowledgement Message

3.3.1 ACK General Acknowledgement

The ACK message is sent in reply to a received ADT or DFT message.

This is sent back on the connection made by the HIS to HL7 Listener.

Table 23: ACK Message Definition

| | | |
|-----|-------------------------|--|
| MSH | Message Header | Standard HL7 message header |
| MSA | Message Acknowledgement | Contains information describing the message being acknowledged |

When a message has been received and processed an acknowledgment message, ACK, is sent back to the sending system. The ACK message has an Acknowledgment Code which shows if there was a problem with the received message. The codes come from HL7 validation table HL70008.

Table 24: Acknowledgement Code (HL70008)

| Data | Comment |
|------|-----------------------------------|
| AA | Original mode: Application Accept |
| AE | Original mode: Application Error |
| AR | Original mode: Application Reject |

Table 25: Acknowledgment Code for SIS events

| Event | Acknowledgment Code |
|-----------------------------|---------------------|
| Message processed correctly | AA |
| DB Manager is running | AE |

| | |
|--|-----------------------|
| Database is down or does not exist | AE |
| Internal HL7Listener error | AE |
| Message has syntax error or missing required data | AR |
| OBX segments with same ObservationSubID mapp to different tables | AR |
| A value from an OBX segment is the wrong type for a DB field | AR |
| Unknown message type | User configurable (*) |

(*) the acknowledgement code for unknown message can be configured in HL7 configuration.

Table 26: *Unknown Message Configuration*

| <i>Item</i> | <i>Value</i> | <i>Note</i> |
|-------------------------|----------------|-------------|
| UnknownMessage.Response | AA AR AE | |

3.3.2 MFKM01 Mater File Application Acknowledgement

See Sensis – QSight Interface document [3]

3.4 Segment Definitions

The columns Table and Field refer to the table and field names for the information in the Sensis Information System database.

The **Length** field shows the SIS database field size. **C** means that it is a character field, **SI** means that it is an integer field and **D** means that it is a Date/Time field

3.4.1 MSH Segment

This segment defines the intent, source, destination and some specifics of the syntax.

MSH Segment Definition

| Segment Type/Field Component | Description | Req. | Table | Field | Length | Comment |
|------------------------------|---------------------|------|---------|---------|--------|--|
| MSH:1/1 | Field Separator | R | NA | NA | NA | |
| MSH:2/1 | Encoding Characters | R | NA | NA | NA | ^~\& |
| MSH:3/1,2 | Sending Application | | hl7data | sendapp | 180 | Default "CATH, Sensis" when sending a message. These values can be configured in Communication Manager |
| MSH:4/1,2 | Sending Facility | | hl7data | sendfac | 180 | Default empty when sending a message. These values can be configured in Communication |

AXIOM Sensis, 2.3
Interface Specification

Detailed Class Description(s)
SIS HL7 Interface

| | | | | | | Manager |
|----------|-----------------------|---|---------|--------|-----|---|
| MSH:5/1 | Receiving Application | | hl7data | recapp | 180 | Default "Server" when sending. Copied from the received message when sending an ACK. |
| MSH:6/1 | Receiving Facility | | hl7data | recfac | 180 | Default empty when sending a message |
| MSH:7/1 | Date/Time of Message | R | NA | NA | NA | YYYYMMDDHHNNSS |
| MSH:9/1 | Message Type | R | NA | NA | 3 | The message type, the event which caused this message to be generated. |
| MSH:10 | Message Control ID | R | NA | NA | 20 | Unique identifier for this message. The message queue id is used. |
| MSH:11/1 | Processing ID | R | NA | NA | NA | "P" |
| MSH:12/1 | Version ID | R | NA | NA | NA | 2.4 This value can be configured in Communication Manager. |

3.4.2 PID Segment

This segment is used by all applications as a primary means of communicating patient identification information.

PID Segment Definition

| Segment Type/Field Component | Description | Req. | Table | Field | Length | Comment |
|------------------------------|-------------------------------|------|---------|-----------|--------|---|
| PID:2/1 | Patient ID | | Patient | patid | C 64 | Deprecated. Suggest to use PID:3 instead. See comment of PID:3 |
| PID:3/1 | Patient Identifier List | R* | Patient | patid | C 64 | <p>Only one of PatientID or Patient Identifier List is used. If no value is present in Patient Identifier List then PatientID is checked (*)</p> <p>The Patient ID is a mandatory value. The message must include a Patient ID value in the PID:3 (new) or PID:2 (old) fields. If no Patient ID value is found in either of these fields then the message is rejected. If there are multiple Patient ID in PID.3, business rule is applied to decide which Patient ID to be used (**).</p> |
| PID:5/1/1 | PatientName / FamilyName / | R | Patient | Lastname, | C 64 | |

| | | | | | | |
|----------------|---|---------|----------|------|---|--|
| | FamilyName | | | | | |
| PID:5/2 | PatientName / GivenName | Patient | Firname | C 64 | | |
| PID:5/3 | PatientName / MiddleInitialOrName | Patient | Midname | C 64 | | |
| PID:5/4 | PatientName / Suffix | Patient | Suffix | C 64 | | |
| PID:5/5 | PatientName / Prefix | Patient | Title | C 64 | | |
| PID:7/1/1,2,3 | DateTimeOfBirth. | Patient | Patbirth | D 10 | YYYYMMDD | |
| PID:8 | Sex | Patient | Patsex | SI 1 | The accepted values of this field are user configurable. Defaults are: M – Male F – Female O – Others | |
| PID:11/1,3,4,5 | Patient Address (Street Address City StateOrProvince ZipOrPostalCode) | Patient | Address | C 64 | If the patient information was imported into ASIS by HL7, then a structured address string is generated e.g. 2 Big Street, Bigtown, , 12345. In this case StateOrProvince had no data so a marker (space comma) is left in its place. In turn, when the patient information is exported, if the patient was registered via HL7 the address is broken down into its component parts. If the patient was not registered | |

| | | | | | |
|----------|------------------------|---------|----------|------|---|
| | | | | | by HL7 then the whole address is put in the Street Address field. |
| PID:18/1 | Patient Account Number | Study | Admissid | C 64 | |
| PID:19 | Social Security Number | Patient | SSNumber | C 32 | |
| PID:22/2 | Ethnic Group | Patient | Ethnic | C 16 | The Text value for Ethnic Group is used. |

(*) PID.2 is deprecated in HL7 standard version 2.4. It is used for backward compatibility only. Newly developed HL7 interface shall use PID.3 only

(**) Business rules to pick Patient ID from PID.3 [4]:

- If incoming HL7 ADT or ORM messages contains more than one patient ID, the system shall use the patient ID whose assigning authority matches with Sending facility name MSH-4 in message header if patient ID includes information about assigning authority that issued the patient ID.
- If incoming HL7 ADT or ORM messages contains more than one patient ID and either it do not include information about its assigning authority as part of the patient ID or system do not find a patient ID that matches “Sending facility name” MSH-4, the system shall assign the first patient ID from the incoming message to this patient record in database.

Example :

```
PID||8888|8888||BIX^YMIR^^II^Mr||19961010|M|||6th St, Vlaardingen, NorthShore,
35242|||||345271||||2
```

3.4.3 PV1 Segment

This segment is used to specify information for a particular patient visit.

Table 27: PVI Segment Definition

| | <i>Name</i> | <i>Data Type</i> | <i>Required</i> | <i>Length</i> | <i>Table.Field</i> |
|--------|-------------------------|---------------------|-----------------|---------------|--------------------|
| 2 | PatientClass | String | No | 0..1 | |
| 3 | AssignedPatientLocation | PL | No | 0..Infinite | |
| 3.2 | Room | String | No | 0..64 | Study.Intres |
| 8 | ReferringDoctor | XCN | No | 0..64 | Study.Refphys. |
| 15 | AmbulatoryStatus | String | No | 0..6 | Study.Pregstat |
| 19 | VisitNumber | CX | No | 0..Infinite | |
| 19.1 | IDNumber | String | No | 0..16 | Study.Accessno |
| 19.4 | AssigningAuthority | HD | No | No Max | |
| 19.4.1 | NamespaceID | String | No | No Max | |
| 50 | AlternateVisitID | CX | No | 0..250 | |
| 50.1 | IDNumber | String | No | 0..16 | CaseInfo.CaseID |
| 50.4 | AssigningAuthority | HD | No | No Max | |

PV1.2. PatientClass

The accepted value of this field is user configurable. It use values defined in HL7 Validation table HL7004. Currently supported values are E/I/O/U

Table 28: PVI.PatientClass Code (HL7004)

| <i>Data</i> | <i>Comment</i> |
|-------------|----------------|
|-------------|----------------|

| Segment Type/Field Component | Description | Req. | Table | Field | Length | Comment |
|------------------------------|-------------------|------|-------|--------|--------|---|
| ORC:1 | OrderControl | R | NA | NA | 2 | If this field contains a value of "CA" the study with the corresponding PlacerOrderNumber is deleted. |
| ORC:2/1 | PlacerOrderNumber | | Study | ordnum | C 32 | Uniquely identifies an order among all orders from a particular ordering application. |

Example :

ORC | NW | 111

3.4.5 OBR Segment

3.4.5.1 Import

This segment is used to transmit information specific to an order for a diagnostic study, observation, physical exam or assessment.

Table 30: OBR Segment Definition (Inbound)

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|-------------|-------|-------|--------|---------|
|------------------------------|-------------|-------|-------|--------|---------|

| | | | | | |
|------------|---------------------------|-------|---------|------|--|
| OBR:2/1 | PlacerOrderNumber | Study | ordnum | C 32 | Uniquely identifies an order among all orders from a particular ordering application. This value is only read from the first OBR segment if the same field in the ORC segment is empty. |
| OBR:4/2 | Universal Service ID Text | Study | studesc | C64 | The study type. This value must match one of the study descriptions configured in the Configuration Manager. If it is empty or it doesn't match, the default study type is used. See [7] for details. |
| OBR:16/2/1 | Ordering Provider | Study | Reqphys | C64 | Requesting doctor, given name and family name |
| OBR:44/2 | ProcedureCode.Text | Study | studesc | C64 | The study type. This value must match one of the study descriptions configured in the Configuration Manager. If it is empty then an attempt is made to read the study type value from the Universal Service ID field.. |

Example:

```
OBR|||^^^Pediatric\E\S\E\Pediatric Cardiac Catheterization
```

3.4.5.2 Export

This segment is used to transmit information specific to an order for a diagnostic study, observation, physical exam or assessment. In the reporting of clinical data, the OBR serves as the report header. For information that can be associated by Condition number, this is grouped under an OBR segment that represents that Condition. For other types of information that do not have an associated condition number e.g. Free Text comments or Administrative data. These are grouped under an OBR segment with SetID equal to 0 (zero). Free Text being sent as NTE segments and Administrative data being sent as OBX segments.

Table 31: OBR Segment Definition (Outbound)

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|--------------------------------------|-------|--------|--------|---|
| OBR:1 | SetID | CN | condnr | SI 6 | Condition number, or zero if message contains study data not associated with a condition. |
| OBR:2/1 | PlacerOrderNumber | Study | ordnum | C32 | Uniquely identifies an order among all orders from a particular ordering application. This is filled in for every OBR segment. |
| OBR:3/1 | FillerOrderNumber / EntityIdentifier | Study | ordnum | C32 | Uniquely identifies an order among all orders from a particular order filling application. This is filled in for every OBR segment. If the study has a Placer Order Number then this will be used as the Filler Order Number. Otherwise the studies REFNO will be used. |

Detailed Class Description(s)
SIS HL7 Interface

AXIOM Sensis, 2.3

Interface Specification

| | | | | | |
|-------------------|---|-------|-----------------------|-----------|--|
| OBR:4/2 | Universal Service ID Text | Study | studesc | C64 | The study type. |
| OBR:7/1,2,3,4,5,6 | ObservationDateTime | CN | Conddate, condtime | D10 T8 | Condition date and time. For OBR with SetID = 0, this field contains the study start time, ID.STATIME. |
| OBR:13/1 | RelevantClinicalInfo | CN | condnam | C64 | Condition name. |
| OBR:16/2/1 | Ordering Provider | Study | Reqphys | C64 | Requesting doctor, given name and family name |
| OBR:20 | Filler Field 1 | N/A | N/A | N/A | This value can be configured in Communication Manager |
| OBR:21 | Filler Field 2 | N/A | N/A | N/A | Contains the category part of the studies Study Type. |
| OBR:25 | Result Status | N/A | N/A | N/A | The value to be sent can be configured in Communication Manager |
| OBR:32/1/1 | PrincipalResultInterpreter / PersonName / IDNumber | NA | NA | NA | The value to be sent can be configured in Communication Manager |
| OBR:34/1/2 | Technician | Study | Perphys1 | C64 | If more than one technician was present a second instance of this field will be added with the information coming from the Perphys2 field of the study table |
| OBR:35/1/1 | Transcriptionist / PersonName / IDNumber | NA | NA | NA | This value can be configured in Communication Manager |

| | | | | | |
|--------------|---|----|----|----|---|
| OBR:40/1 | TransportArrangementResponsibility / Identifier | NA | NA | NA | This value can be configured in Communication Manager |
| OBR:44/1/2/3 | ProcedureCode | PR | NA | NA | See appendix 7.1 for details. |

Example:

OBR|||1^Rest|||20030909103305

3.4.6 OBX Segment

3.4.6.1 Import

The OBX segment is used to transmit a single observation or observation fragment.

Table 32: OBX Segment Definition (Inbound)

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|------------------------|-------|-------|--------|--|
| OBX:3/1,2 | Observation Identifier | NA | NA | NA | The Identifier and Text fields should hold values that map to those configured in the HL7 Mapping tab of Configuration Manager (as Import). This mapping specifies which field in the database the value from the OBX segment will be saved in. See [7] for details. |
| OBX:4 | Observation SubID | NA | NA | 20 | This is used to group OBX segments together. [1] |
| OBX:5/1 | Observation Value | NA | NA | NA | This field is either filled with the |

| | |
|--|--|
| | <p>actual value from the observation or a code which represents the value from the observation.</p> <p>The value is checked to make sure that it has a valid value for the field it is being inserted into. If it is not valid then the whole message is rejected.</p> |
|--|--|

Example:

```
OBX|||pd^height|7|66|^INCH||||
```

```
OBX|||pd^weight|7|102|^POUND||||
```

[1] All OBX segments with the same SubID are taken to contain information from the same row in a particular table. Tables that can have more than one row per study (type 3,4 and 5 e.g. Comments During Cath) have the rows for that study **deleted** when the HL7 message is received and **new** rows inserted. OBX segments that contain values for more than one field in the same row can be grouped together using the ObservationSubID field. OBX segments grouped together using the ObservationSubID must all map to the same table in the database. If the ObservationSubID is empty then it is assumed that there are no other OBX segments to group it with. If the database field mapped is associated with a dictionary, then the user must specify whether the value in the OBX segment is a code in the dictionary or a meaning that is contained in the dictionary, see Configuration Manager section of [\[7\]](#) (this does not apply to tables of type 4 and 5 as the field is free text and the associated dictionary contains predefined texts). The code or meaning must exist in the associated dictionary. If a problem occurs with a value in an OBX segment then the **whole message** is rejected.

[2] Values for height and weight get some special processing before being inserted into the database as these are stored as centimeters and kilograms respectively.

For height the UNITS->TEXT field of the OBX segment must contain either CM (for centimeters) or INCH (for inches), any other unit results in the **whole message** being rejected. If the unit is INCH then the value is first converted to centimeters before being stored in the database.

For weight the UNITS->TEXT field of the OBX segment must contain either KG (for kilograms) or POUND (for pounds), any other unit results in the **whole message** being rejected. If the unit is POUND then the value is first converted to kilograms before being stored in the database.

3.4.6.2 Export

The OBX segment is used to transmit a single observation or observation fragment. It represents the smallest indivisible unit of a report.

Table 33: OBX Segment Definition (Outbound)

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|-------------|-------|-------|--------|---|
| OBX:1 | SetID | NA | NA | 4 | The OBX segments are grouped under an OBR segment. This value is an incremental counter of the OBX segment, starting from 1. |
| OBX:2 | ValueType | NA | NA | 3 | ST for string CE for coded entry. FT for formatted text when exporting free text. Newlines are replaced with the \.br\ formatting character |

| | | | | | |
|----------------|------------------------|----|----|----|---|
| OBX :3/1,2,4,5 | Observation Identifier | NA | NA | NA | <p>The Identifier and Text fields are filled in with values which have been configured in the HL7 Mapping tab of Configuration Manager (as Export). This supplies a code and a meaning for the observation if it has been configured by the user. The AlternateIdentifier and AlternateText fields have the values of the table name and field description respectively. See [7] for details.</p> |
| OBX:4 | Observation SubID | NA | NA | 20 | <p>This is used to group OBX segments together. All OBX segments with the same SubID contain information from the same row in a particular table.</p> <p>Incremental counter that starts at 1. The same value is used for each group of data. For example pressures from the same heart location (site).</p> |

| | | | | | |
|---------|---------------------------|----|----|----|---|
| OBX:5/1 | Observation Value | NA | NA | NA | This field is either filled with the actual value from the observation or a code which represents the value from the observation. If a code is used there will be a second repeat of the Observation Value field which holds the coding system used. |
| OBX:11 | Observation Result Status | NA | NA | 1 | Export – Filled with "F" which means Final Results |

Example:

```
OBX|11|ST|^^^NIBP^Time <HH:MM>|1|13:40|||||F
OBX|12|ST|^^^NIBP^Pulse rate|1|70|||||F
OBX|13|ST|^^^NIBP^NIBPs|1|120|||||F
OBX|14|ST|^^^NIBP^NIBPd|1|80|||||F
OBX|15|ST|^^^NIBP^NIBPm|1|100|||||F
```

3.4.7 NTE Segment (Export ONLY)

This segment contains free text information associated with the study

Table 34: NTE Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|-------------|-------|-------|--------|--|
| NTE:1 | SetID | NA | NA | 4 | The index of the NTE segments under the OBR segment. Counter |

| | | | | | |
|----------|-------------------------|--------|--------|----|---|
| | | | | | that starts with value 1 |
| NTE:3/1 | Comment Text Value | NA | NA | NA | Filled with the text comment from the Free Text table. This is the third field in the table if it does not have a time associated or the fourth if it does. Each line of the text comment is added as a separate HL7 Comment field. If a time is associated with the text comment it is added as the first HL7 Comment field. |
| NTE :4/1 | Comment Type Identifier | admgrp | grpnam | 3 | Table name of the Free Text table. |
| NTE :4/2 | Comment Type Text | admgrp | grptxt | 24 | The descriptive text associated with this table. |

Free text can also be exported as OBX segments instead of NTE segments.

Example:

```
NTE|1||11:10~The patient was premedicated with Diphenhydramine 50 and Valium cap 10. The groin was prepped with Betadine and draped in the usual sterile fashion.|DC^Comments during cath
```

3.4.8 EVN Segment

This segment contains necessary trigger event information

Table 35: EVN Segment Definition

| Segment Type/Field | Description | Table | Field | Length | Comment |
|--------------------|-------------|-------|-------|--------|---------|
|--------------------|-------------|-------|-------|--------|---------|

| Component | | | | | |
|-----------|----------------------------|----|----|----|----------------|
| EVN:2/1 | RecordedDateTime / Time | NA | NA | NA | YYYYMMDDHHNNSS |

Example:

EVN | | 20030304085017

3.4.9 FT1 Segment (Export ONLY)

This segment contains the detailed data necessary to post charges, payments, etc. to patient accounting records.

Table 36: FT1 Segment Definition

| | Name | Data Type | Required | Length | Table.Field |
|-----|------------------------|--------------------|----------|-----------|---|
| 1 | SetID | 4 Byte Long | No | 0..4 | |
| 2 | TransactionID | String | No | 0..32 | _Itemtrn.Transid |
| 4 | TransactionDate | TS | Yes | 0..26 | |
| 4.1 | Time | DTTM | | 0..No Max | Study.studate For MMS: _Itemtrn.Autotime |
| 5 | TransactionPostingDate | TS | No | 0..26 | |
| 5.1 | Time | DTTM | | 0..No Max | |
| 6 | TransactionType | String | Yes | 0..8 | |
| 7 | TransactionCode | CE | Yes | 0..250 | |
| 7.1 | Identifier | String | No | 0..No Max | |
| 7.3 | NameOfCodingSystem | String | No | 0..No Max | |

| | | | | | |
|--------|-----------------------------|---------------------|----|------------|----------------|
| 7.4 | AlternateIdentifier | String | No | 0...No Max | |
| 7.6 | NameOfAlternateCodingSystem | String | No | 0...No Max | |
| 8 | TransactionDescription | String | No | 0...40 | |
| 9 | TransactionAltDescription | String | No | 0...40 | |
| 10 | TransactionQuantity | 8 Byte Double | No | 0...6 | |
| 12 | TransactionUnitAmount | CP | No | 0...12 | |
| 12.1 | Price | String | No | 0...NoMax | |
| 20 | PerformedByCode | XCN | No | 0...250 | |
| 20.2 | FamilyName | CM_FN | No | 0...No Max | |
| 20.2.1 | FamilyName | String | No | 0...64 | |
| 21 | OrderedByCode | XCN | No | 0...250 | |
| 21.2 | FamilyName | CM_FN | No | 0...No Max | Study.Perphys1 |
| 21.2.1 | FamilyName | String | No | 0...64 | Study.Reqphys |

FT1.6. TransactionType

Table 37: FT1.TransactionType Code

| Data | Comment |
|-------------|---|
| CG | Charge (used for general outbound SIS HL7 DFTP03 message) |
| Vend | Material checked out from QSight (only for messages originated from QSight) |
| Returned | A vended material is returned. (only for messages originated from QSight) |

| | |
|-------|---|
| Waste | A vended material is marked as waste. |
| Used | Material is marked as used in procedure document (only for inbound messages to QSight). |

FT1.7. TransactionCode

The Identifier and NameOfCodingSystem fields hold the code and coding system information for this item. These are the SIS dictionary code and the name of the dictionary. The dictionaries that can be used here are specified in the Communication Manager HL7 configuration as CODEs. If a field in the table has an associated dictionary that matches one of the CODEs then this is the “Codng System” used. The AlternateIdentifier and AlternateNameOfCodingSystem are used if a second coding system is specified. That two fields have associated dictionaries that match those specified as CODEs.

The Text and Alternate Text fields hold the diagnosis meaning, as specified in the output cluster.

FT1.8. TransactionDescription

Holds the “meaning” of the item. This value is the same as in the Transaction Code – Text field.

FT1.9. TransactionAltDescription

The complete text that comes from the Amount field, if it exists in the relevant database table.

FT1.10. TrnsactionQuantity

The number of the items used. This HL7 field is filled in if the database table contains a field called Amount. As the database field is of type text, the Amount field is not limited to only holding numbers. An attempt will be made to extract a number from this though with the following caveats:

- 1)The number must be first in the text e.g. 10mg will give 10
- 2) The first comma or full stop character is taken to be the decimal separator e.g. 123,456 is taken to be one hundred and twenty three point four, five, six and not one hundred thousand four hundred and fifty six.

FT1.12. TransactionUnitAmount

The cost of the item. This field is filled in if a field called Cost is specified in the table of the record this FT1 segment represents.

FT1.20. PerformedByCode

Family Name of performing doctor

FT1.21. OrderedByCode

Family Name of requesting doctor

Example:

FT1|0|||20030304085017||CG|Femoral vein left^Judkins JR 3.5^ESITE|Judkins JR 3.5

3.4.10 PD1 Segment

This segment contains demographic information that is likely to change about the patient

Table 38: PD1 Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|-------------------|---------|---------|--------|-------------------------------------|
| PD1:20 | MilitaryRankGrade | Patient | milrank | C 64 | Description of military rank if any |

3.4.11 AL1 Segment

This segment contains patient allergy information. Each AL1 segment describes a different allergy

Table 39: AL1 Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|--|-------|---------|--------|---------------------|
| AL1:3/2 | Allergy Code Mnemonic Description / Text | Study | allergy | C 64 | Allergy description |

Example :

AL1 | 1234 | | ^FA

3.4.12 DG1 Segment (Export ONLY)

This segment contains patient diagnosis information. Each DG1 segment describes one diagnosis.

Table 40: DG1 Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|-------------------------|-------|-------|--------|---|
| DG1:1 | SetID | NA | NA | 4 | The index of the DG1 segments in the message |
| DG1:2 | Diagnosis Coding Method | NA | NA | 8 | This field is used to support older HL7 implementations. It contains the name of the coding system specified for the DI table |
| DG1 :3 | Diagnosis Code | NA | NA | 250 | The Identifier and NameOfCodingSystem fields hold the user code and coding system information for this |

| | | | | | |
|----------|-----------------------|-------|-----------------------|------------|---|
| | | | | | item. The Text field holds the diagnosis meaning, as specified in the DIAGNOS field of the DI table |
| DG1 :4 | Diagnosis Description | DI | DIAGNOS | SI 4 | This field is used to support older HL7 implementations. It contains the meaning, as specified in the DIAGNOS field of the DI table |
| DG1:6 | Diagnosis Type | NA | NA | 2 | If the study has been approved this fields gets a value F (Final). If the study is in any other state it gets a value W (Working). |
| DG1:16/2 | Diagnosis Clinician | Study | Perphys1, Perphys2 | C64 C64 | An instance of this field is added for each of the fields specified if a performing physician has been specified. |

Example:

DG1|0|ICDCOD|410.91^Old MI^ICDCOD|Old MI||W|||||||^Smith, Beatrice~^Anderson, Charlie

3.4.13 PR1 Segment (Export ONLY)

This segment contains patient procedure information. Each PR1 segment describes a different procedure.

Table 41: PR1 Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|---------------------------|-------|----------|--------|--|
| PR1 :1 | SetID | NA | NA | 4 | The index of the PR1 segments in the message |
| PR1:2 | Procedure Coding Method | NA | NA | 8 | This field is used to support older HL7 implementations. It contains the name of the coding system specified for the PR table |
| PR1 :3 | Procedure Code | NA | NA | 250 | The Identifier and NameOfCodingSystem fields hold the user code and coding system information for this item. The Text field holds the diagnosis meaning, as specified in the PROCEDUR field of the PR table |
| PR1 :4 | Procedure Description | Pr | Procedur | SI 4 | This field is used to support older HL7 implementations. It contains the meaning, as specified in the PROCEDUR field of the PR table |
| PR1:5/1 | Procedure Date Time | Study | studate | D 10 | It contains the date and time the study was started. YYYYMMDDHHNNS |
| PR1:6 | Procedure Functional Type | NA | NA | 2 | Always contains the value "I" to represent an invasive procedure. |

Example :

PR1|0|BILLNR|876562^Left Heart Cath^BILLNR|Left Heart Cath|20020925132000|I

3.4.14 MSA Segment

This segment contains information sent while acknowledging another message.

Table 42: MSA Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|---------------------|-------|-------|--------|--|
| MSA:1 | Acknowledgment code | NA | NA | 2 | “AA” if the message has no errors. “AR” if the message is rejected. “AE” if an error occurs in HL7 Listener. |
| MSA:2 | Message Control ID | NA | NA | 20 | The Control ID from the received message. |

3.4.15 MRG Segment

This segment contains information used when merging or updating patient data.

Table 43: MRG Segment Definition

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|-------------------------------|-------|-------|--------|--|
| MRG:1 | Prior Patient Identifier List | NA | NA | NA | Used to identify the patient record that will have its |

| | | | | | |
|-------|------------------------------|----|----|----|--|
| | | | | | patient ID updated. |
| MRG:3 | Prior Patient Account Number | NA | NA | NA | Used to identify the patient record that will have its patient account number updated. |
| MRG:4 | Prior Patient ID | NA | NA | NA | Used to identify the patient record that will have its patient ID updated. |

3.4.16 ZII Segment

See Sensis – QSight Interface document [9]

3.4.17 MFI Segment

See Sensis – QSight Interface document [9]

3.4.18 MFE Segment

| | <i>Name</i> | <i>Data Type</i> | <i>Required</i> | <i>Length</i> | <i>Default Value</i> |
|---|----------------------|------------------|-----------------|---------------|----------------------|
| 1 | RecordLevelEventCode | String | Yes | 0..3 | MUP |

3.4.19 MFE.1. RecordLevelEventCode

See Sensis – QSight Interface document [9]

4 Installation / Service

4.1 Veterans Affairs VistA support

To support the Veterans Affairs VistA Clinical Procedure system several extra actions are performed. These are listed below. The Clinical Procedure bi-directional interface is described in [8]

4.1.1 MSH Segment

The Sending Application, Sending Facility and Receiving Application, Receiving Facility fields have their values stored and then reversed when an ORU message is exported for a study that was registered via HL7.

- Sending Application <-> Receiving Application
- Sending Facility <-> Receiving Facility

The HL7 version information in the Version ID field is set to **2.3**.

4.1.2 ORRO02 ACK for ORM message

When HL7Listener has the VistA Support option set, the ORRO02 acknowledgement message is used for ORM messages.

4.1.3 OBR Segment

Only one OBR segment is created under which all clinical data is added in the form of OBX segments. Condition information is included in the same way as all other data, as OBX segments.

Table 44: OBR Segment Definition for Vista

| Segment Type/Field Component | Description | Table | Field | Length | Comment |
|------------------------------|----------------------|-------|-------|--------|--|
| OBR :13/1 | RelevantClinicalInfo | DI | NA | NA | <p>Holds diagnosis information stored in the DI table. For multiple diagnoses, repeats of this field are added.</p> <p>The Identifier and NameOfCodingSystem fields hold the user code and coding system information for the diagnosis.</p> <p>The Text field holds the meaning for the specified code. e.g. this could be an ICD-9 code.</p> |
| OBR:44/1/2/3 | ProcedureCode | PR | NA | NA | <p>Holds procedure information stored in the PR table. For multiple procedures, repeats of this field are added.</p> <p>The Identifier and NameOfCodingSystem fields hold the user code and coding system information for this item.</p> <p>The Text field holds the meaning for the specified code. e.g. this could be CPT data.</p> |

4.2 Modifying HL7 export functionality in Communication Manager

When study data is being exported from SIS using HL7 messages it is possible to modify the structure of the exported HL7 message. The table below specifies these parameters and the effect that they have on the way the message is generated. These parameters just need to be included in the Transfer Parameters section; no value needs to be specified.

4.2.1 Job Parameters

| Job Parameter | Description |
|-----------------------|---|
| FREE_TEXT_AS_OBX | Data from free text groups e.g. DC, are included as OBX segments and not as NTE segments. The OBX.ValueType field is set to FT, formatted text, for these segments. |
| FLAT_DATA | Send all clinical data under one OBR segment instead of grouping them according to patient condition, with each condition as one new OBR segment. Condition information is sent as OBX segments |
| SHOWDATETIME | For database fields defined as T5 or T8, the full date and time are exported |
| USE_RECEIVED_MSH_DATA | Use the MSH data which was saved from the message used to register this study. See section 4.1.1 . |
| PROC_AS_FT1 | Send Procedure information as FT1 segments instead of PR1 segments. |
| DIAG_AS_FT1 | Send Diagnosis information as FT1 segments instead of DG1 segments. |
| FT1_TRANS_CODE_ONLY | Only set the TransactionCode.Identifier field, leaving the TransactionCode.NameOfCodingSystem and TransactionCode.Text fields empty for all FT1 segments |
| VA_VISTA | This needs to be set when sending HL7 messages to a Veterans Affairs VistA system. See section 4.1 |
| SHOW_WASTE=<YES NO> | For MMS DFTP03 message, add transactions labeled as “Waster” to outbound HL7 Message. Used for QSight only. |

4.2.2 Transfer Parameters

| Transfer Parameter | Description |
|--------------------|--|
| HOLD_CONNECTION | When using the Transfer Method HL7, adding this parameter means that the TCP/IP connection to the receiving HL7 system is not dropped directly after sending the message. It is instead kept alive and reused the next time a message is sent to the same destination. |

4.3 Setting HL7 export field values in Communication Manager

When study data is being exported from SIS using HL7 messages it is possible to set the values which will be included for a number of fields. The table below specifies these fields and the parameter that needs to be included in the export job configuration to set the value. These parameters require that a value is specified e.g. MSH_3_1=SENSIS.

4.3.1 Job Parameters

| Job Parameter | Segment Type/Field Component | Description | Comment |
|---------------|------------------------------|--------------------------------|---|
| MSH_3_1 | MSH :3/1 | SendingApplication.NamespaceID | Setting this value overwrites any value saved from the registering message. The combination of MSH_3_1 and MSH_3_2 should not be more than 180 characters. |
| MSH_3_2 | MSH :3/2 | SendingApplication.UniversalID | The combination of MSH_3_1 and MSH_3_2 should not be more than 180 characters. |
| MSH_4_1 | MSH :4/1 | SendingFacility.NamespaceID | Setting this value overwrites any value saved |

| | | | |
|---------|----------|--|---|
| | | | from the registering message. The combination of MSH_4_1 and MSH_4_2 should not be more than 180 characters. |
| MSH_4_2 | MSH :4/2 | SendingFacility.UniversalID | The combination of MSH_4_1 and MSH_4_2 should not be more than 180 characters. |
| MSH_12 | MSH :12 | VersionID.VersionID | Max 60 characters |
| OBR_20 | OBR :20 | OBR.FillerField1 | Max 60 characters |
| OBR_25 | OBR :25 | OBR.Result Status | Max 1 character |
| OBR_32 | OBR : 32 | OBR.PrincipalResultInterpreter | The value of this parameter could be 1. Directly assigned value with maximum 200 characters. 2. Configuration: (tableName, columnName) where the assigned value could be retrieved. |
| OBR_35 | OBR :35 | OBR.Transcriptionist | The value of this parameter could be 1. Directly assigned value with maximum 200 characters. 2. Configuration: (tableName, columnName) where the assigned value could be retrieved. |
| OBR_40 | OBR : 40 | OBR. TransportArrangementResponsibility | The value of this parameter could be 1. Directly assigned value with maximum 200 characters. 2. Configuration: (tableName, columnName) where the assigned value could be retrieved. |
| FT1_13 | FT1:13/1 | DepartmentCode.Identifier | Max 60 characters |
| FT1_16 | FT1:16/1 | AssignedPatientLocation.PointOfCare | Max 80 characters |

4.4 ORUR01 message example - export

```
MSH|^~\&|CATH^Sensis||^Server||20050207154303||ORU^R01|70021|P|2.4
PID||1928374|1928374||Gillespie^Carrick^^^Mr||19770207|M
PV1||U|||||^Ellen^Green,
OBR|0|||^Coronary\S\Diagnostic Coronary Catheterization||20050207153539
NTE|1||15:38~Pigtail catheter introduced into left ventricle, a pressure recorded. Left Ventriculography was
performed using water for 20 (cc) of contrast .|DC^Comments during cath
NTE|2||15:41~Patient placed on oxygen at 3 liters/min. via mouth.|DC^Comments during cath
OBX|1|ST|^PD^SEX|1|Male|||||F
OBX|2|ST|^PD^DOB|1|2/7/1977|||||F
OBX|3|ST|^PD^AGE|1|28|||||F
OBX|4|ST|^PD^AGEUNIT|1|Years|||||F
OBX|5|ST|^PD^AGEDAYS|1|||||F
OBX|6|ST|^PD^HEIGHT|1|||||F
OBX|7|ST|^PD^WEIGHT|1|||||F
OBX|8|ST|^PD^BSA|1|||||F
OBX|9|ST|^PD^PREHB|1|||||F
OBX|10|ST|^UN^HB|1|g/100 ml|||||F
OBX|11|ST|^UN^UNWORK|1|J|||||F
OBX|12|ST|^UN^RESIST|1|ARU|||||F
OBX|13|ST|^ID^EXAMDATE|1|2/7/2005|||||F
OBX|14|ST|^ID^STATIME|1|15:35:32|||||F
OBX|15|ST|^ID^PROCTIME|1|1|||||F
```

OBX|16|ST|^^^ID^ENDTIME|1|15:37:16|||||F
OBX|17|ST|^^^TS^SAMPNR|1|1|||||F
OBX|18|ST|^^^TS^SAMPTIME|1|15:36:04|||||F
OBX|19|ST|^^^TS^SAMPNR|2|2|||||F
OBX|20|ST|^^^TS^SAMPTIME|2|15:36:41|||||F
OBX|21|ST|^^^ME^AUTOTIME|1|15:40|||||F
OBX|22|ST|^^^ME^MEDICA|1|Bretylum|||||F
OBX|23|ST|^^^ME^AMOUNT|1|10cc|||||F
OBX|24|ST|^^^ME^ADMIN|1|IV|||||F
OBX|25|ST|^^^ME^RESGIV|1|Bradycardia|||||F
OBX|26|ST|^^^ME^GIVEBY|1|Smith, Beatrice|||||F
OBX|27|ST|^^^ME^AUTOTIME|2|15:41|||||F
OBX|28|ST|^^^ME^MEDICA|2|Cordarone|||||F
OBX|29|ST|^^^ME^AMOUNT|2|1 tablet|||||F
OBX|30|ST|^^^ME^ADMIN|2|Other|||||F
OBX|31|ST|^^^ME^RESGIV|2|Chest Pain|||||F
OBX|32|ST|^^^ME^GIVEBY|2|Johnsson, Karen|||||F
OBX|33|ST|^^^PRICESUM^COST|1|0|||||F
OBX|34|ST|^^^PRICESUM^REFCOST|1|0|||||F
OBX|35|ST|^^^PRICESUM^CHARGE|1|0|||||F
OBX|36|ST|^^^PRICESUM^REFCHARG|1|0|||||F
OBR|1|||^Coronary\S\Diagnostic Coronary Catheterization|||20050207153539|||||Rest
OBX|1|ST|^^^CN^CONDDATE|1|2/7/2005|||||F
OBX|2|ST|^^^CN^CONDTIME|1|15:35:39|||||F
OBX|3|ST|^^^CN^HR|1|60|||||F
OBX|4|ST|^^^CN^HRNR|1|1|||||F
OBX|5|ST|^^^CN^HRSITE|1|LV|||||F
OBX|6|ST|^^^CN^CONDNAME|1|Rest|||||F

OBX|7|ST|^^^PV^SITE|1|PCW|||||F
OBX|8|ST|100^pressure1^^PV^PRESS1|1|7|||||F
OBX|9|ST|^^^PV^SAMP1|1|1|||||F
OBX|10|ST|101^pressure2^^PV^PRESS2|1|28|||||F
OBX|11|ST|^^^PV^SAMP2|1|1|||||F
OBX|12|ST|102^pressure3^^PV^PRESS3|1|17|||||F
OBX|13|ST|^^^PV^SAMP3|1|1|||||F
OBX|14|ST|^^^PV^SITE|2|LV|||||F
OBX|15|ST|100^pressure1^^PV^PRESS1|2|87|||||F
OBX|16|ST|^^^PV^SAMP1|2|1|||||F
OBX|17|ST|101^pressure2^^PV^PRESS2|2|5|||||F
OBX|18|ST|^^^PV^SAMP2|2|1|||||F
OBX|19|ST|102^pressure3^^PV^PRESS3|2|13|||||F
OBX|20|ST|^^^PV^SAMP3|2|1|||||F
OBX|21|ST|^^^PV^SITE|3|AO|||||F
OBX|22|ST|100^pressure1^^PV^PRESS1|3|128|||||F
OBX|23|ST|^^^PV^SAMP1|3|1|||||F
OBX|24|ST|101^pressure2^^PV^PRESS2|3|70|||||F
OBX|25|ST|^^^PV^SAMP2|3|1|||||F
OBX|26|ST|102^pressure3^^PV^PRESS3|3|95|||||F
OBX|27|ST|^^^PV^SAMP3|3|1|||||F
OBX|28|ST|^^^VD^SITE|1|LV|||||F
OBX|29|ST|^^^VD^DPDT|1|642|||||F
OBX|30|ST|^^^VD^DPDTP|1|19|||||F
OBX|31|ST|^^^VD^MSPRE|1|84|||||F
OBX|32|ST|^^^VD^MDPRE|1|9|||||F
OBX|33|ST|^^^VD^SW|1|||||F
OBX|34|ST|^^^VD^SWI|1|||||F

OBX|35|ST|^^^VD^SP|1|||||F
OBX|36|ST|^^^VD^SPI|1|||||F
OBX|37|ST|^^^VD^LVNR|1|1|||||F
OBX|38|ST|^^^VG^VALVE|1|MITRAL|||||F
OBX|39|ST|^^^VG^GRAD|1|8|||||F
OBX|40|ST|^^^VG^VALVAREA|1|||||F
OBX|41|ST|^^^VG^PERIOD|1|27.6|||||F
OBX|42|ST|^^^VG^PREDIFF|1|4|||||F
OBX|43|ST|^^^VG^SIMPUB|1|SIM|||||F
OBX|44|ST|^^^VG^VGNR|1|1|||||F
OBX|45|ST|^^^VG^VALVE|2|AORTIC|||||F
OBX|46|ST|^^^VG^GRAD|2|0|||||F
OBX|47|ST|^^^VG^VALVAREA|2|||||F
OBX|48|ST|^^^VG^PERIOD|2|15.6|||||F
OBX|49|ST|^^^VG^PREDIFF|2|0|||||F
OBX|50|ST|^^^VG^SIMPUB|2|SIM|||||F
OBX|51|ST|^^^VG^VGNR|2|1|||||F
OBR|2|||^Coronary\S\Diagnostic Coronary Catheterization|||20050207153632|||Exercise
OBX|1|ST|^^^CN^CONDDATE|1|2/7/2005|||||F
OBX|2|ST|^^^CN^CONDTIME|1|15:36:32|||||F
OBX|3|ST|^^^CN^HR|1|60|||||F
OBX|4|ST|^^^CN^HRNR|1|2|||||F
OBX|5|ST|^^^CN^HRSITE|1|LV|||||F
OBX|6|ST|^^^CN^CONDNAME|1|Exercise|||||F
OBX|7|ST|^^^PV^SITE|1|PCW|||||F
OBX|8|ST|100^pressure1^^PV^PRESS1|1|7|||||F
OBX|9|ST|^^^PV^SAMP1|1|2|||||F
OBX|10|ST|101^pressure2^^PV^PRESS2|1|28|||||F

AXIOM Sensis, 2.3 Interface Specification

Installation / Service SIS HL7 Interface

OBX|11|ST|^^^PV^SAMP2|1|2|||||F
OBX|12|ST|102^pressure3^^PV^PRESS3|1|17|||||F
OBX|13|ST|^^^PV^SAMP3|1|2|||||F
OBX|14|ST|^^^PV^SITE|2|LV|||||F
OBX|15|ST|100^pressure1^^PV^PRESS1|2|87|||||F
OBX|16|ST|^^^PV^SAMP1|2|2|||||F
OBX|17|ST|101^pressure2^^PV^PRESS2|2|5|||||F
OBX|18|ST|^^^PV^SAMP2|2|2|||||F
OBX|19|ST|102^pressure3^^PV^PRESS3|2|13|||||F
OBX|20|ST|^^^PV^SAMP3|2|2|||||F
OBX|21|ST|^^^PV^SITE|3|AO|||||F
OBX|22|ST|100^pressure1^^PV^PRESS1|3|128|||||F
OBX|23|ST|^^^PV^SAMP1|3|2|||||F
OBX|24|ST|101^pressure2^^PV^PRESS2|3|70|||||F
OBX|25|ST|^^^PV^SAMP2|3|2|||||F
OBX|26|ST|102^pressure3^^PV^PRESS3|3|95|||||F
OBX|27|ST|^^^PV^SAMP3|3|2|||||F
OBX|28|ST|^^^VD^SITE|1|LV|||||F
OBX|29|ST|^^^VD^DPDT|1|645|||||F
OBX|30|ST|^^^VD^DPDTP|1|19|||||F
OBX|31|ST|^^^VD^MSPRE|1|84|||||F
OBX|32|ST|^^^VD^MDPRE|1|9|||||F
OBX|33|ST|^^^VD^SW|1|||||F
OBX|34|ST|^^^VD^SWI|1|||||F
OBX|35|ST|^^^VD^SP|1|||||F
OBX|36|ST|^^^VD^SPI|1|||||F
OBX|37|ST|^^^VD^LVNR|1|2|||||F
OBX|38|ST|^^^VG^VALVE|1|MITRAL|||||F

OBX|39|ST|^^^VG^GRAD|1|8|||||F
OBX|40|ST|^^^VG^VALVAREA|1|||||F
OBX|41|ST|^^^VG^PERIOD|1|27.6|||||F
OBX|42|ST|^^^VG^PREDIFF|1|4|||||F
OBX|43|ST|^^^VG^SIMPUB|1|SIM|||||F
OBX|44|ST|^^^VG^VGNR|1|2|||||F
OBX|45|ST|^^^VG^VALVE|2|AORTIC|||||F
OBX|46|ST|^^^VG^GRAD|2|0|||||F
OBX|47|ST|^^^VG^VALVAREA|2|||||F
OBX|48|ST|^^^VG^PERIOD|2|16.2|||||F
OBX|49|ST|^^^VG^PREDIFF|2|0|||||F
OBX|50|ST|^^^VG^SIMPUB|2|SIM|||||F
OBX|51|ST|^^^VG^VGNR|2|2|||||F

4.5 ORUR01 with free text as OBX segments – export

MSH|^~\&|CATH^Sensis|^Server||20050318111138|ORU^R01|99|P|2.4
PID||05.02.25-14:49:53-STD-1.3.12.2.1107.5.99.1.19222|05.02.25-14:49:53-STD-1.3.12.2.1107.5.99.1.19222|Hemo^^^^Mr||19390225|M
PV1||U
OBR|0|||^Coronary\S\Diagnostic Coronary Catheterization
OBX|1|ST|^^^PD^SEX|1|Male|||||F
OBX|2|ST|^^^PD^DOB|1|1939-02-25|||||F
OBX|3|ST|^^^PD^AGE|1|66|||||F
OBX|4|ST|^^^PD^AGEUNIT|1|Years|||||F

AXIOM Sensis, 2.3 Interface Specification

Installation / Service SIS HL7 Interface

OBX|5|ST|^^^PD^AGEDAYS|1|||||F
OBX|6|ST|^^^PD^HEIGHT|1|||||F
OBX|7|ST|^^^PD^WEIGHT|1|||||F
OBX|8|ST|^^^PD^BSA|1|||||F
OBX|9|ST|^^^PD^PREHB|1|||||F
OBX|10|ST|^^^UN^HB|1|g/100 ml|||||F
OBX|11|ST|^^^UN^UNWORK|1|J|||||F
OBX|12|ST|^^^UN^RESIST|1|ARU|||||F
OBX|13|ST|^^^ID^EXAMDATE|1|2005-02-25|||||F
OBX|14|ST|^^^ID^STATIME|1|14:49:54|||||F
OBX|15|ST|^^^ID^PROCTIME|1|1|||||F
OBX|16|ST|^^^ID^ENDTIME|1|14:51:41|||||F
OBX|17|ST|^^^TS^SAMPNR|1|1|||||F
OBX|18|ST|^^^TS^SAMPTIME|1|14:50:35|||||F
OBX|19|ST|^^^CA^ENTTIM|1|09:40|||||F
OBX|20|ST|^^^CA^REMTIM|1|09:40|||||F
OBX|21|ST|^^^CA^CATHETER|1|Judkins JL 3.5|||||F
OBX|22|ST|^^^CA^CATHSIZE|1|7|||||F
OBX|23|ST|^^^CA^CATHLEN|1|77|||||F
OBX|24|ST|^^^CA^ENTRSITE|1|Femoral artery left|||||F
OBX|25|ST|^^^CA^ENTRMETH|1|Percutaneous|||||F
OBX|26|ST|^^^CA^ENTTIM|2|09:41|||||F
OBX|27|ST|^^^CA^REMTIM|2|11:11|||||F
OBX|28|ST|^^^CA^CATHETER|2|Mansfield Triad Balloon|||||F
OBX|29|ST|^^^CA^CATHSIZE|2|66|||||F
OBX|30|ST|^^^CA^CATHLEN|2|66|||||F
OBX|31|ST|^^^CA^ENTRSITE|2|Umbilical vein|||||F
OBX|32|ST|^^^CA^ENTRMETH|2|Seldinger|||||F

OBX|33|ST|^^^CM^TIM|1|09:41|||||F
OBX|34|ST|^^^CM^RECTIM|1|09:41|||||F
OBX|35|ST|^^^CM^COMPLIC|1|Lost pulse + expl.|||||F
OBX|36|FT|dc^tim^^DC^TIM|1|09:38|||||F
OBX|37|FT|dc^comtxt^^DC^COMTXT|1|This patient had an angioplasty in \R\ and had good angiographic result. He returned this time with recurrence of angina with prolonged pain and some new ST-T changes.|||||F
OBX|38|FT|dc^tim^^DC^TIM|2|10:06|||||F
OBX|39|FT|dc^comtxt^^DC^COMTXT|2|After local infiltration with 2% Xylocaine, the Left Femoral Artery and the Left Femoral Vein were entered using the Percutaneous technique.\.br\\.br\This patient had an angioplasty in \R\ and had good angiographic result. He returned this time with recurrence of angina with prolonged pain and some new ST-T changes.|||||F
OBX|40|ST|^^^EXPPATH^EXPPATH|1|c:\E\MIS\E\test\E\this\E\works\E\5_6_Summary.doc|||||F
OBR|1|||^Coronary\S\Diagnostic Coronary Catheterization|||20050225144958|||||Rest
OBX|1|ST|^^^CN^CONDDATE|1|2005-02-25|||||F
OBX|2|ST|^^^CN^CONDTIME|1|14:49:58|||||F
OBX|3|ST|^^^CN^HR|1|61|||||F
OBX|4|ST|^^^CN^HRNR|1|1|||||F
OBX|5|ST|^^^CN^HRSITE|1|RV|||||F
OBX|6|ST|^^^CN^CONDNAME|1|Rest|||||F
OBX|7|ST|^^^PV^SITE|1|RV|||||F
OBX|8|ST|^^^PV^PRESS1|1|87|||||F
OBX|9|ST|^^^PV^SAMP1|1|1|||||F
OBX|10|ST|^^^PV^PRESS2|1|4|||||F
OBX|11|ST|^^^PV^SAMP2|1|1|||||F
OBX|12|ST|^^^PV^PRESS3|1|13|||||F
OBX|13|ST|^^^PV^SAMP3|1|1|||||F
OBX|14|ST|^^^PV^SITE|2|PCW|||||F
OBX|15|ST|^^^PV^PRESS1|2|||||F
OBX|16|ST|^^^PV^SAMP1|2|1|||||F

AXIOM Sensis, 2.3 Interface Specification

Installation / Service SIS HL7 Interface

OBX|17|ST|^^^PV^PRESS2|2|13|||F
OBX|18|ST|^^^PV^SAMP2|2|1|||F
OBX|19|ST|^^^PV^PRESS3|2|63|||F
OBX|20|ST|^^^PV^SAMP3|2|1|||F
OBX|21|ST|^^^PV^SITE|3|LV|||F
OBX|22|ST|^^^PV^PRESS1|3|31|||F
OBX|23|ST|^^^PV^SAMP1|3|1|||F
OBX|24|ST|^^^PV^PRESS2|3|7|||F
OBX|25|ST|^^^PV^SAMP2|3|1|||F
OBX|26|ST|^^^PV^PRESS3|3|10|||F
OBX|27|ST|^^^PV^SAMP3|3|1|||F
OBX|28|ST|^^^PV^SITE|4|AO|||F
OBX|29|ST|^^^PV^PRESS1|4|128|||F
OBX|30|ST|^^^PV^SAMP1|4|1|||F
OBX|31|ST|^^^PV^PRESS2|4|70|||F
OBX|32|ST|^^^PV^SAMP2|4|1|||F
OBX|33|ST|^^^PV^PRESS3|4|95|||F
OBX|34|ST|^^^PV^SAMP3|4|1|||F
OBX|35|ST|^^^VD^SITE|1|RV|||F
OBX|36|ST|^^^VD^DPDT|1|640|||F
OBX|37|ST|^^^VD^DPDTP|1|19|||F
OBX|38|ST|^^^VD^MSPRE|1|||F
OBX|39|ST|^^^VD^MDPRE|1|||F
OBX|40|ST|^^^VD^SW|1|||F
OBX|41|ST|^^^VD^SWI|1|||F
OBX|42|ST|^^^VD^SP|1|||F
OBX|43|ST|^^^VD^SPI|1|||F
OBX|44|ST|^^^VD^LVNR|1|1|||F

```
OBX|45|ST|^^^VD^SITE|2|LV|||F
OBX|46|ST|^^^VD^DPDT|2|225|||F
OBX|47|ST|^^^VD^DPDTP|2|8|||F
OBX|48|ST|^^^VD^MSPRE|2|||F
OBX|49|ST|^^^VD^MDPRE|2|11|||F
OBX|50|ST|^^^VD^SW|2|||F
OBX|51|ST|^^^VD^SWI|2|||F
OBX|52|ST|^^^VD^SP|2|||F
OBX|53|ST|^^^VD^SPI|2|||F
OBX|54|ST|^^^VD^LVNR|2|1|||F
OBX|55|ST|^^^VG^VALVE|1|MITRAL|||F
OBX|56|ST|^^^VG^GRAD|1|46|||F
OBX|57|ST|^^^VG^VALVAREA|1|||F
OBX|58|ST|^^^VG^PERIOD|1|28,06|||F
OBX|59|ST|^^^VG^PREDIFF|1|53|||F
OBX|60|ST|^^^VG^SIMPUB|1|SIM|||F
OBX|61|ST|^^^VG^VGNR|1|1|||F
OBX|62|ST|^^^EXPPATH^EXPPATH|1|\E\E\SIS\E\Reports\E\1_1_Hemodynamics_(1).pdf|||F
OBX|63|ST|^^^EXPPATH^EXPPATH|2|\E\E\SIS\E\Reports\E\1_1_Summary.pdf|||F
```

4.6 DFTP03 message example - export

```
MSH|^~\&|CATH^Sensis|^Server||20030304085017||DFT^P03|77|P|2.4
EVN||20030304085017
PID||20020904 1755|20020904 1755||Cathcor case^O'Leary||19431024|F
FT1|0|||20030304085017||CG|Femoral vein left^Judkins JR 3.5^ESITE|Judkins JR 3.5
```

AXIOM Sensis, 2.3 Interface Specification

Installation / Service SIS HL7 Interface

FT1|1|||20030304085017|CG|Umbilical artery^Judkins JL 6^ESITE|Judkins JL 6
FT1|2|||20030304085017|CG|Saphenous vein right^Swan Ganz Monitoring^ESITE|Swan Ganz Monitoring
FT1|3|||20030304085018|CG|Newton, Fred^^PNNNAME^Physician^^STAFF
FT1|4|||20030304085018|CG|Taylor, George^^PNNNAME^Nurse^^STAFF
FT1|5|||20030304085018|CG|Jensen, Henry^^PNNNAME^Circulator^^STAFF
FT1|6|||20030304085018|CG|Atropine^^MEDICA|||10
FT1|7|||20030304085018|CG|Cimetidine^^MEDICA|||22
FT1|8|||20030304085018|CG|Solu-Cortef^^MEDICA|||50
FT1|9|||20030304085019|CG|Digoxin^^MEDICA|||20
FT1|10|||20030304085019|CG|Cimetidine^^MEDICA|||10
PR1|0|PROCED|Selective Aortography^Selective Aortography^PROCED|Selective Aortography|000000001002|I
PR1|1|PROCED|Endomyocardial Biopsy^Endomyocardial Biopsy^PROCED|Endomyocardial Biopsy|000000001003|I
PR1|2|PROCED|Temporary Transcutaneous Pacing^Temporary Transcutaneous Pacing^PROCED|Temporary Transcutaneous Pacing|000000001003|I
DG1|0|DIAGNO|Acute Myocardial Infarction^Acute Myocardial Infarction^DIAGNO|Acute Myocardial Infarction||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|1|DIAGNO|Mitral Stenosis^Mitral Stenosis^DIAGNO|Mitral Stenosis||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|2|DIAGNO|Atypical Chest pain^Atypical Chest pain^DIAGNO|Atypical Chest pain||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|3|DIAGNO|Positive Stress Test^Positive Stress Test^DIAGNO|Positive Stress Test||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|4|DIAGNO|Mitral Regurgitation^Mitral Regurgitation^DIAGNO|Mitral Regurgitation||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|5|DIAGNO|Aortic Regurgitation^Aortic Regurgitation^DIAGNO|Aortic Regurgitation||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|6|DIAGNO|IHSS^IHSS^DIAGNO|IHSS||W|||||||||^Brown, Allan~^Smith, Beatrice
DG1|7|DIAGNO|Aortic Stenosis^Aortic Stenosis^DIAGNO|Aortic Stenosis||W|||||||||^Brown, Allan~^Smith, Beatrice

4.7 ORMO01 message example - import

```
MSH|^~\&||||19841125055516||ORM^O01^G|FGDFG6540RGE|D^R|D^3^6|0320||||1|8859/3~8859/6|15|ISO 2022-1994
PID|||2||ARNER^SHAKIA ^^II^Mr^Ba^L||19941030154939|M|||1st St^^New York^Borneo^35208^1|||||8^4^M10^^DL
AL1|1234|FA|19
ORC|CR|555|5|21|RP|E||||19981010171346|||||19861014115219|23|13|4
OBR|||^Pediatric\E\S\E\Pediatric Cardiac Catheterization
OBX|||pd^weight|1|50|^KG|||||
OBX|||pd^height|1|170|^CM|||||
OBX|||pn^pname|2|Moore, Roger|||||
OBX|||pn^staff|2|Circulating Person|||||
```

N.B. In the OBX segments the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields have values that are the same as the names of the fields that they are mapped to in the SIS database. This was only done to make the example more readable and *is not* a requirement of the HL7 Listener. See the Configuration Manager section of [\[6\]](#) for details of how to set up the mapping.

4.8 ADTA01 message example – import

```
MSH|^~\&||||19951010214222||ADT^A01^n|10215605xgfd|D^R|D^12^10|234513246549893||||13|ASCII~ASCII|4|ISO 2022-1994
PID|||835632^2^ISO^^VN||GUEST^MANSA ^^I^Ms^Ba^S||19691010211050|F|||19th St^^Beijing ^North China^90210^11~10th
St^^Vlaardingen^Borneo^90210^4~8th St^^Picton^Sumatra^35218^14|||||54^3^ISO^^LR
OBX|||dc^tim|1|12:34|||||X
OBX|||dc^comtxt|1|This is a comment during cath that should be more than 72 characters long. I hope it is by now!
|||||
OBX|||pm^premed|2|6|||||
```

```
OBX|||pm^amount|3|10 grams|||||
OBX|||pm^premed|3|5|||||
OBX|||pm^amount|2|2 tablets|||||
OBX|||patient^patcom|9|This is a comment about the patient which is not a good exapmle|||||
OBX|||cd^clindiag|4|Sinus rhythm|||||
OBX|||study^stucum|5|This is a study comment. The patient has a heart problem!|||||
OBX|||os^tim|6|15:34|||||
OBX|||os^item|6|interflow|||||
OBX|||pd^height|7|66|^INCH|||||
OBX|||pd^weight|7|102|^POUND|||||
OBX|||pm^premed|8|6|||||
OBX|||pm^amount|8|about a bucket|||||
OBX|||patient^occupat|||Test this change|||||
OBX|||patient^conflict|10|||||
OBX|||dcpat^tim|11|14:44|||||
OBX|||dcpat^comtxt|11|this is a second row for the patient scope|||||
```

N.B. In the OBX segments the ObservationIdentifier.Identifier and ObservationIdentifier.Text fields have values that are the same as the names of the fields that they are mapped to in the SIS database. This was only done to make the example more readable and *is not* a requirement of the HL7 Listener. See the Configuration Manager section of [\[6\]](#) for details of how to set up the mapping.

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