8. Master Files

Chapter Chair	Anthony Julian Mayo Clinic/Foundation
Chapter Chair	Dave Shaver Corepoint Health
Chapter Chair	Sandra Stuart Kaiser Permanente
Contributor	Jim Kingsland McKesson Provider Technologies
Chapter Editor	Scott Robertson Kaiser Permanente
List Server:	inm@lists.hl7.org

The content of this chapter is "owned" by various Work Groups as listed below:

Steward Work Group	Message	Segment
Infrastructure and Messaging	M01, M13, M14	MFI, MFE, MFA
Patient Administration	M02, M05, M15, M16	LOC, LCH, LRL, LDP, LCH, LCC
Financial Management	M04, M17	CDM, PRC, DMI
Orders/Observations	M03, M08, M09, M10, M11, M12,	OM1, OM2, OM3 , OM4, OM5, OM6, OM7
Orders/Observations (Clinical Trials)	M06, M07	CM0, CM1, CM2

8.1 CHAPTER 8 CONTENTS

8.2 PURPOSE

In an open-architecture healthcare environment there often exists a set of common reference files used by one or more application systems. Such files are called master files. Some common examples of master files in the healthcare environment include:

a) staff and health practitioner master file
b) system user (and password) master file
c) location (census and clinic) master file
d) device type and location (e.g., workstations, terminals, printers, etc.)
e) lab test definition file
f) exam code (radiology) definition file
g) charge master file
h) patient status master
i) patient type master
j) service item master file

These common reference files need to be synchronized across the various applications at a given site. The Master Files Notification message provides a way of maintaining this synchronization by specifying a standard for the transmission of this data between applications.

In many implementations, one application system will "own" a particular master file such as the staff and practitioner master file. The changes (e.g., adds, deletes, updates) to this file are made available to various other applications on a routine basis. The Master Files Notification message supports this common case, but also supports the situation where an application not "owning" a particular master file transmits update information to other systems (usually to the "owning" system) for review and possible inclusion.

The Master Files Notification message supports the distribution of changes to various master files between systems in either online or batch modes, and allows the use of either original or enhanced acknowledgment modes. These messages use the MSH segment to pass the basic event code (master files notification or acknowledgment). The MFI (master file identification) segment identifies the master file being updated as well as the initial and requested dates for "file-level" events (such as "replace file"). For each record being changed, the MFE (Master File Entry) segment carries the record-level event code (such as add, update, etc.), the initial and requested dates for the event, and the record-level key identifying the entry in the master file. The MFA (master file acknowledgment) segment returns record-specific acknowledgment information.

Note: The MFE segment is not the master file record, but only specifies its identifier, event, and event dates. The master file record so identified is contained in either Z-segments or HL7-defined segments immediately following the MFE segment. This record may be either a flat record contained in a single segment, or a complex record needing more than a single segment to carry its data and (usually hierarchical) structure.

The master file segments commonly needed across HL7 applications as well as those specific to the various application chapters, are defined in Sections *8.7*, "*STAFF AND PRACTITIONER MASTER FILES*," through *8.11*, "*CLINICAL TRIALS MASTER FILES*" of this chapter.

A given master files message concerns only a single master file. However, the provision of a record-level event code (and requested activation date) on the MFE and the MFA segments allows a single message to contain several types of changes (events) to that file.

The Master Files Notification events do not specify whether the receiving system must support an automated change of the master file in question, nor do they specify whether the receiving system must create a file in the same form as that maintained on the sending system.

In general, the way in which the receiving system processes the change notification message will depend on both the design of the receiving system and the requirements negotiated at the site. Some systems and/or sites may specify a manual review of all changes to a particular master file. Some may specify a totally automated process. Not every system at every site will need all the fields contained in the master file segment(s) following the MFE segment for a particular master file entry.

This also means that an application acknowledgment (or a deferred application acknowledgment) from a receiving system that it changed a particular record in its version of the master file does not imply that the receiving system now has an exact copy of the information and state that is on the sending system: it means only that whatever subset of that master file's data (and state) that has been negotiated at the site is kept on the receiving system in such a manner that a new Master Files Notification transaction with the same primary key can be applied unambiguously (in the manner negotiated at the site) to that subset of information.

8.3 TRIGGER EVENTS

The Master Files Change Notification message can be used for the following message-level trigger events:

Trigger Event	Name
M01	Master File Notification - not otherwise specified [WITHDRAWN]
M02	Master File Notification – Staff/Practitioner
M03	Master File Notification – Test/Observation [WITHDRAWN]
M04	Master File Notification – Charge Description
M05	Master File Notification – Patient Location
M06	Master File Notification – Clinical Study with Phases and Schedules
M07	Master File Notification – Clinical Study without phases but with schedules
M08	Master File Notification – Test/Observation (Numeric)
M09	Master File Notification – Test/Observation (Categorical)
M10	Master File Notification – Test/Observation Batteries
M11	Master File Notification – Test/Calculated Observations
M12	Master File Notification – Test/Observation – Additional Basic
M13	Master File Notification – General
M14	Master File Notification – Site Defined
M15	Master File Notification – Inventory Item
M16	Master File Notification – Inventory Item - Enhanced
M17	Master File Notification – DRG

It is recommended that site-specific master files use event M13 or M14; alternately a code of the form Znn can be used (see also section *8.5.1*, "*MFI - Master File Identification Segment*.")

The MFN message specifies whether the master file, as a whole, has been replaced or if a record within the file has been updated. See section *8.5.13*, "*MFI-3 File Event Code*," for further details.

The MFN message transmits the specific action taken on a record. See section *8.5.2.1*, "*MFE-1 Record Event Code*," for further details.

8.4 MESSAGES

The following messages are defined for master files transactions: MFN, master files notification; MFK, master files application acknowledgment; and MFQ, master files query.

8.4.1 MFN/MFK - Master File Notification [WITHDRAWN] (Event M01)

Withdrawn in version 2.7 and later; refer to master file messages which follow.

8.4.2 MFN/MFK - Master File Notification - General (Event M13)

The MFN General master file notification transaction is used where the master file is a simple one that contains only a key and the text value of that key. Both values are carried in *MFE-4 - Primary Key Value - MFE*. The specific master file being updated is identified by *MFI-1 - Master File Identifier* and *MFI-2 - Master Files Application Identifier*.

The General master file notification is defined as follows:

MFN^M13^MFN_M13: Master File Notification - General

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{ MFE }	Master File Entry		8

MFK^M13^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

8.4.2.0 hiddentext

8.4.2.1 MFK use notes

The MFA segment carries acknowledgment information for the corresponding MFE segment (identified by MFA-*5 - Primary Key Value - MFA*). Fields *MFE-4 - Primary Key Value - MFE* and *MFA-5 - Primary Key Value - MFA* provide the link between the corresponding segments.

8.4.3 MFN/MFK - Master File Notification - Site Defined (Event M14)

The MFN Site defined master file notification transaction is used where the master file is not a simple one (as defined for MFN^M13) and is not a transaction type currently defined by HL7, but rather requires one or more HL7 and/or 'Z' segments to carry the master file information.

The Site defined master file notification is defined as follows:

MFN^M14^MFN_Znn: Master File Notification - Site Defined

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8

Segments	Description	Status	Chapter
{	--- MF_SITE_DEFINED begin		
MFE	Master File Entry		8
...	One or more HL7 and/or Z-segments carrying the data for the entry identified in the MFE segment		(varies)
}	--- MF_SITE_DEFINED end		

MFK^M14^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

8.4.3.0 hiddentext

8.4.3.1 MFN use notes

The master file record identified by the MFE segment is contained in Z-segments immediately following the MFE segment, and is denoted by "..." in the MFN abstract message definition given above. This record may be either a flat record contained in a single segment, or a complex record needing more than a single segment to carry its data and (usually hierarchical) structure.

The definition of this transaction and the associated abstract message structure code (as defined in *MSH-9 - Message Type*, denoted by MFN_Znn above) are subject to site negotiation. Refer to Chapter 2, section 2.17, "Local Extension" for additional information on 'Z' abstract message structure code definition.

8.4.3.2 MFK use notes

The MFA segment carries acknowledgment information for the corresponding MFE segment (identified by MFA-*5 - Primary Key Value - MFA*). Fields *MFE-4 - Primary Key Value - MFE* and *MFA-5 - Primary Key Value - MFA* provide the link between the corresponding segments.

8.4.4 MFQ/MFR - Master Files Query [WITHDRAWN] (Event M01-M17)

Withdrawn in version 2.7 and later; refer to Chapter 5 section 5.4 instead. Also, refer to Section 8.4.5 for an example of a master file conformance based query.

8.5 GENERAL MASTER FILE SEGMENTS

The following segments are defined for the master files messages.

8.5.1 MFI - Master File Identification Segment

The Technical Steward for the MFI segment is Infrastructure and Messaging.

The fields in the MFI segment are defined in HL7 Attribute Table - MFI.

HL7 Attribute Table - MFI - Master File Identification

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			CWE	R		0175	00658	Master File Identifier
2			HD	O	y	0361	00659	Master File Application Identifier
3	3..3		ID	R		0178	00660	File-Level Event Code
4			DTM	O			00661	Entered Date/Time
5			DTM	O			00662	Effective Date/Time
6	2..2		ID	R		0179	00663	Response Level Code

8.5.1.1 MFI-1 Master File Identifier (CWE) 00658

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field is a CWE data type that identifies a standard HL7 master file. This table may be extended by local agreement during implementation to cover site-specific master files (z-master files). HL7 recommends use of the HL7 assigned table number as the master file identifier code if one is not specified in Table 0175. For example, a master file of Marital Status codes would be identified by HL70002 as the *MFI-1 - Master file identifier*. Refer to *HL7 Table 0175 – Master File Identifier Code* in Chapter 2C, Code Tables, for valid values.

8.5.1.2 MFI-2 Master File Application Identifier (HD) 00659

```
Components:  <Namespace ID (IS)> ^ <Universal ID (ST)> ^ <Universal ID Type (ID)>
```

Definition: This field contains an optional code of up to 180 characters which (if applicable) uniquely identifies the application responsible for maintaining this file at a particular site. A group of intercommunicating applications may use more than a single instance of a master file of certain type (e.g., charge master or physician master). The particular instance of the file is identified by this field. Refer to *User-defined table 0361 - Applications*.

8.5.1.3 MFI-3 File-Level Event Code (ID) 00660

Definition: This field defines the file-level event code. Refer to *HL7 Table 0178 – File Level Event Code* in Chapter 2C, Code Tables, for valid values.

Note: If the *MFI-3 - File-Level Event Code* is "REP" (replace file), then each MFE segment must have an *MFE-1 - Record-Level Event Code* of "MAD" (add record to master file).

8.5.1.4 MFI-4 Entered Date/Time (DTM) 00661

Definition: This field contains the date/time for the file-level event on originating system.

8.5.1.5 MFI-5 Effective Date/Time (DTM) 00662

Definition: This optional field contains the effective date/time, which can be included for file-level action specified. It is the date/time the originating system expects that the event is to have been completed on the receiving system. If this field is not present, the action date/time should default to the current date/time (when the message is received).

8.5.1.6 MFI-6 Response Level Code (ID) 00663

Definition: These codes specify the application response level defined for a given Master File Message at the MFE segment level as defined in *HL7 Table 0179 – Response Level* in Chapter 2C, Code Tables. Required for MFN-Master File Notification message. Specifies additional detail (beyond *MSH-15 - Accept Acknowledgment Type* and *MSH-16 - Application Acknowledgment Type*) for application-level acknowledgment paradigms for Master Files transactions. *MSH-15 - Accept Acknowledgment Type* and *MSH-16 - Application Acknowledgment Type* operate as defined in Chapter 2.

8.5.2 MFE - Master File Entry Segment

The Technical Steward for the MFE segment is Infrastructure and Messaging.

HL7 Attribute Table - MFE - Master File Entry

SEQ	LEN		DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3..3		ID	R		0180	00664	Record-Level Event Code
2		20=	ST	C			00665	MFN Control ID
3			DTM	O			00662	Effective Date/Time
4			Varies	R	Y	9999	00667	Primary Key Value - MFE
5	2..3		ID	R	Y	0355	01319	Primary Key Value Type
6			DTM	O			00661	Entered Date/Time
7			XCN	O			00224	Entered By

8.5.2.1 MFE-1 Record-Level Event Code (ID) 00664

Definition: This field defines the record-level event for the master file record identified by the MFI segment and the primary key field in this segment. Refer to *HL7 Table 0180 - Record Level Event Code* in Chapter 2C, Code Tables, for valid values.

Note: If the *MFI-3 - File-level event code* is "REP" (replace file), then each MFE segment must have an *MFE-1 - Record-level event code* of "MAD" (add record to master file).

8.5.2.2 MFE-2 MFN Control ID (ST) 00665

Definition: A number or other identifier that uniquely identifies this change to this record from the point of view of the originating system. When returned to the originating system via the MFA segment, this field allows the target system to precisely identify which change to this record is being acknowledged. It is only required if the MFI response level code requires responses at the record level (any value other than NE).

Note: Note that this segment does not contain a Set ID field. The *MFE-2 - MFN Control ID* implements a more general concept than the Set ID. It takes the place of the SET ID in the MFE segment.

8.5.2.3 MFE-3 Effective Date/Time (DTM) 00662

Definition: An optional effective date/time can be included for the record-level action specified. It is the date/time the originating system expects that the event is to have been completed on the receiving system. If this field is not present, the effective date/time should default to the current date/time (when the message is received).

8.5.2.4 MFE-4 Primary Key Value - MFE (Varies) 00667

Definition: This field uniquely identifies the record of the master file (identified in the MFI segment) to be changed (as defined by the record-level event code). The data type of field is defined by the value of *MFE-5 - Value Type*, and may take on the format of any of the HL7 data types defined in *HL7 Table 0355 - Primary Key Value Type* in Chapter 2C, Code Tables. The PL data type is used only on Location master transactions.

The repetition of the primary key permits the identification of an individual component of a complex record as the object of the record-level event code. This feature allows the Master Files protocol to be used for modifications of single components of complex records. If this field repeats, the field *MFE-5 - Value Type* must also repeat (with the same number of repetitions), and the data type of each repetition of *MFE-4 - Primary Key Value - MFE* is specified by the corresponding repetition of *MFE-5 - Value Type*.

8.5.2.5 MFE-5 Primary Key Value Type (ID) 01319

Definition: This field contains the HL7 data type of *MFE-4 - Primary Key Value - MFE*. The valid values for the data type of a primary key are listed in *HL7 Table 0355 - Primary Key Value Type* in Chapter 2C, Code Tables.

8.5.2.6 MFE-6 Entered Date/Time (DTM) 00661

Definition: This field contains the date and time of the last change of the record.

8.5.2.7 MFE-7 Entered By (XCN) 00224

```
Components:  <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^
             <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g.,
             JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <WITHDRAWN Constituent> ^
             <DEPRECATED-Source Table (CWE)> ^ <Assigning Authority (HD)> ^ <Name Type
             Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^
             <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name
             Representation Code (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent>
             ^ <Name Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date
             (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^
             <Assigning Agency or Department (CWE)> ^ <Security Check  (ST)> ^
             <Security Check Scheme (ID)>

Subcomponents for Family Name (FN):  <Surname (ST)> & <Own Surname Prefix (ST)> & <Own
             Surname (ST)> & <Surname Prefix from Partner/Spouse (ST)> & <Surname from
             Partner/Spouse (ST)>

Subcomponents for Source Table (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
             Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
             & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
             & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
             <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
             of Second Alternate Coding System (ID)> & <Second Alternate Coding System
             Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
             <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
             OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
             & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
             & <Universal ID Type (ID)>
```

```
Subcomponents for Name Context (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
          Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
          & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
          & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
          <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
          of Second Alternate Coding System (ID)> & <Second Alternate Coding System
          Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
          <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
          <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
          Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
          Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original
          Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text
          (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate
          Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID
          (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
          & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)>
          & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE):  <Identifier (ST)> & <Text
          (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
          System Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
          <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
          Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> &
          <Second Alternate Coding System Version ID (ST)> & <Coding System OID
          (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate
          Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate
          Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> &
          <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set
          Version ID (DTM)>
```

Definition: This field contains the identity of the person who actually keyed the master file entry into the application. It provides an audit trail in case the request is entered incorrectly and the ancillary department needs to clarify the request.

8.5.3 MFA - Master File Acknowledgment Segment

The Technical Steward for the MFA segment is Infrastructure and Messaging.

The MFA segment contains the following fields as defined in HL7 Attribute Table - MFA - Master File Acknowledgment

HL7 Attribute Table - MFA - Master File Acknowledgment

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3..3		ID	R		0180	00664	Record-Level Event Code
2		20=	ST	C			00665	MFN Control ID
3			DTM	O			00668	Event Completion Date/Time
4			CWE	R		0181	00669	MFN Record Level Error Return
5			Varies	R	Y	9999	01308	Primary Key Value - MFA
6	2..3		ID	R	Y	0355	01320	Primary Key Value Type - MFA

8.5.3.1 MFA-1 Record-Level Event Code (ID) 00664

Definition: This field defines record-level event for the master file record identified by the MFI segment and the primary key in this segment. Refer to *HL7 Table 0180 - Record-level Event Code* in Chapter 2C, Code Tables, for valid values.

Note: If the *MFI-3 - File-level event code* is "REP" (replace file), then each MFA segment must have an *MFA-1 - Record-level event code* of "MAD" (add record to master file).

8.5.3.2 MFA-2 MFN Control ID (ST) 00665

Definition: This field contains a number or other identifier that uniquely identifies this change to this record from the point of view of the originating system. This field uniquely identifies the particular record (identified by the MFE segment) being acknowledged by this MFA segment. When returned to the originating system via the MFA segment, this field allows the target system to precisely identify which change to this record is being acknowledged. It is only required if *MFI-6 - Response Level Code* requires responses at the record level (any value other than NE).

8.5.3.3 MFA-3 Event Completion Date/Time (DTM) 00668

Definition: This field may be required or optional depending on the site specifications for the given master file, master file event, and receiving facility.

8.5.3.4 MFA-4 MFN Record Level Error Return (CWE) 00669

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the status of the requested update. Site-defined table, specific to each master file being updated via this transaction.

Refer to *User-defined Table 0181 - MFN Record-level Error Return* in Chapter 2C, Code Tables, for suggested values. All such tables will have at least the following two return code values: "S" for successful and "U" for unsuccessful.

8.5.3.5 MFA-5 Primary Key Value - MFA (Varies) 01308

Definition: This field uniquely identifies the record of the master file (identified in the MFI segment) for which the update status is being acknowledged (as defined by the field *MFN-4 - Record Level Error Return*). The data type of this field is defined by the value of *MFA-6 - Value Type - MFA*, and may take on the format of any of the HL7 data types defined in *HL7 Table 0355 - Primary Key Value Type* in Chapter 2C, Code Tables. The PL data type is used only on location master transactions.

The repetition of the primary key permits the identification of an individual component of a complex record as the object of the record-level event code. This feature allows the Master Files protocol to be used for modifications of single components of complex records. If this field repeats, the field *MFA-6 - Primary Key Value Type - MFA* must also repeat (with the same number of repetitions), and the data type of each repetition of *MFA-5 - Primary Key Value - MFA* is specified by the corresponding repetition of *MFA-6 - Value Type - MFA*.

8.5.3.6 MFA-6 Primary Key Value Type - MFA (ID) 01320

Definition: This field contains the HL7 data type of *MFA-5 - Primary Key Value - MFA*. The valid HL7 data types are listed in *HL7 Table 0355 - Primary Key Value Type* in Chapter 2C, Code Tables.

8.6 GENERIC MASTER FILE EXAMPLES

The following are examples of a generic method of updating a standard HL7 table, covering the following two cases:

1) The case with a site-defined "Z" segment. This message type is used when standard HL7 segments are not available to carry all of the required information on the master file. This message type can also be used in the case where standard HL7 segments are available, but the transaction type is not currently defined by HL7. Refer to Section *8.4.3*, "*MFN/MFK - Master File Notification - Site Defined (Event M14)*," for more information on this message type.

2) The case without a site-defined "Z" segment. This message type is used when standard HL7 segments are available to carry all of the required information on the master file (in the case of a 'simple' master file that contains only a key and the text value of that key). Refer to Section *8.4.2*, "*MFN/MFK - Master File Notification - General (Event M13)*," for more information on this message type.

The following examples show two records being added to *User-defined Table 0006 - Religion* (in Chapter 2C, Code Tables).

Note: A site-defined "Z" table segment ("ZL7" in this example) can be constructed by defining two fields: a table entry field (as a CWE field) and a display-sort-key field (a numeric field) as follows.

8.6.1 ZL7 Segment (Proposed Example Only)

HL7 Attribute Table – ZL7 – (proposed example only)

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			CWE	R				Primary key value - ZL7
2		3=	NM	R				Display-sort-key

8.6.1.0 ZL7 Field Definitions

8.6.1.1 ZL7-1 Primary Key Value - ZL7 (CWE)

Definition: This field contains HL7 table values for identifier and text encoded as a CWE data type.

8.6.1.2 ZL7-2 Display-Sort-Key (NM)

Definition: This field is used to specify a non-alphabetic ordering for display or print versions of a standard HL7 table.

8.6.2 MFN Message with Original Acknowledgment Mode

8.6.2.0 hiddentext

8.6.2.1 Example message

The initiating system constructs an MFN^M14 message. In this example, the message contains site-defined "Z" segments. The following message is sent to the responding system:

```
MSH|^~\&|HL7REG|UH|HL7LAB|CH|200106290544||MFN^M14^MFN_Z99|MSGID001|P|2.8
MFI|HL70006^RELIGION^HL70175||UPD|||AL
MFE|MAD|6772331|200106290500|BUD^Buddhist^HL70006|CWE
ZL7|BUD^Buddhist^HL70006|3
MFE|MAD|6772332|200106290500|BOT^Buddhist: Other^HL70006|CWE
ZL7|BOT^Buddhist: Other^HL70006|4
```

The responder receives the message and performs necessary validation on the message. In this example, it determines the message just received is acceptable for processing. The following MFK^M14 message is constructed by the responder and sent to the initiating system to indicate acknowledgment of the MFN^M14 message:

```
MSH|^~\&|HL7LAB|CH|HL7REG|UH|200106290545||MFK^M14^MFK_M01|MSGID99001|P|2.8
MSA|AA|MSGID001
MFI|HL70006^RELIGION^HL70175||UPD|||AL
MFA|MAD|6772331|200106290545|S|BUD^Buddhist^HL70006|CWE
MFA|MAD|6772332|200106290545|S|BOT^Buddhist: Other^HL70006|CWE
```

Note that *MSA-1 - Acknowledgment Code* contains 'AA' to indicate the message was received and processed successfully. This value could also have been 'AE' or 'AR' to indicate the message was received but not processed successfully. *MSA-2 - Message Control ID* contains the value from *MSH-10 - Message Control ID* in the initiating MFN^M14 message (MSGID001) to link the acknowledgment response to the initiating message.

8.6.3 MFN message with enhanced Mode Application-Level Acknowledgment

8.6.3.0 hiddentext

8.6.3.1 Example message

The initiating system constructs an MFN^M13 message. In this example, the message does not contain site-defined "Z" segments. The following message is sent to the responding system:

```
MSH|^~\&|HL7REG|UH|HL7LAB|CH|200106290544||MFN^M13^MFN_M13|MSGID004|P|2.8||AL|AL
MFI|HL70006^RELIGION^HL70175||UPD|||AL
MFE|MAD|6772333|200106290500|BUD^Buddhist^HL70006|CWE
MFE|MAD|6772334|200106290500|BOT^Buddhist: Other^HL70006|CWE
```

The responder receives the message and performs necessary validation on the message. In this example, it determines the message just received is acceptable for processing. Since *MSH-15 - Accept Acknowledgment* of the initiating message indicates an accept acknowledgment is required ('AL'), the following ACK message is constructed by the responder and sent to the initiating system to indicate acknowledgment of the MFN^M13 message:

```
MSH|^~\&|HL7LAB|CH|HL7REG|UH|200106290545||ACK^M13^ACK|MSGID99004|P|2.8
MSA|CA|MSGID004
```

Note that *MSA-1 - Acknowledgment Code* contains 'CA' to indicate the message was received and committed to safe storage. This value could also have been 'CE' or 'CR' to indicate the message was received but not processed successfully. *MSA-2 - Message Control ID* contains the value from *MSH-10 - Message Control ID* in the initiating MFN^M13 message (MSGID004) to link the acknowledgment response to the initiating message.

The initiating system indicated in this example via *MSH-16 - Application Acknowledgment Type* that it requires an application level acknowledgment ('AL'). The responder, at some point following the sending of the above ACK message to the initiating system, will process the MFN^M13 message. Once message processing is complete, the application acknowledgment is sent from the responder to the initiating system to indicate the message was processed. The responder constructs an MFK^M13 acknowledgment message, and sends it to the initiating system:

MSH|^~\&|HL7LAB|CH|HL7REG|UH|200106290550||MFK^M13^MFK_M13|MSGID99501|P|2.8||AL|

MSA|AA|MSGID004

MFI|HL70006^RELIGION^HL70175||UPD|||AL

MFA|MAD|6772333|200106290550|S|BUD^Buddhist^HL70006|CWE

MFA|MAD|6772334|200106290550|S|BOT^Buddhist: Other^HL70006|CWE

Note that *MSA-1 - Acknowledgment Code* contains 'AA' to indicate the message was received and processed successfully. This value could also have been 'AE' or 'AR' to indicate the message was received but not processed successfully. This value applies to all MFA segments which follow. *MSA-2 - Message Control ID* contains the value from *MSH-10 - Message Control ID* in the initiating MFN^M13 message (MSGID004) to link the application acknowledgment response to the initiating message.

The initiating system receives the application acknowledgment message from the responder, and forms an ACK message to acknowledge it. The following message is sent to the responder system:

MSH|^~\&|HL7REG|UH|HL7LAB|CH|200106290551||ACK^M13^ACK|MSGID445|P|2.8

MSA|CA|MSGID99501

Note that *MSA-2 - Message Control ID* contains the value from *MSH-10 - Message Control ID* in the MFK^M13 message just received (MSGID99501), and NOT from the initiating MFN^M13 message.

8.7 STAFF AND PRACTITIONER MASTER FILES

8.7.1 MFN/MFK - Staff/Practitioner Master File Message (Event M02)

The staff identification (STF), practitioner detail (PRA), practitioner organization unit segment (ORG), professional affiliation (AFF), language detail (LAN), educational detail (EDU), and certificate detail (CER) segments can be used to transmit master files information between systems. The STF segment provides general information about personnel; the PRA, ORG, AFF, LAN, EDU, CER and NTE segments provide detailed information for a staff member.

When the STF, PRA, ORG, AFF, LAN, EDU, CER and NTE segments are used in an MFN message, the abstract definition is as follows:

MFN^M02^MFN_M02: Master File Notification for Staff/Practitioner

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_STAFF begin		
MFE	Master File Entry		8
STF	Staff Identification		15
[{ PRA }]	Practitioner Detail		15
[{ ORG }]	Practitioner Organization Unit Segment		15
[{ AFF }]	Professional Affiliation		15
[{ LAN }]	Language Detail		15
[{ EDU }]	Educational Detail		15
[{ CER }]	Certificate Detail		15

Segments	Description	Status	Chapter
[{ NTE }]	Notes and Comments for the STF		2
}	--- MF_STAFF end		

MFK^M02^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: As of v2.5, the PRA and ORG segments in the MFN^M02 are repeatable. HL7 does not give semantic meaning to the first instance of either. Refer to section 2.8.2.d in Chapter 2.

8.7.2 Example: Staff and Health Practitioner Master File MFN Message

MSH|^~\&|HL7REG|UH|HL7LAB|CH|200102280700||MFN^M02^MFN_M02|MSGID002|P|2.8|||AL|NE

MFI|PRA^Practitioner Master File^HL70175||UPD|||AL

MFE|MAD|U2246|200102280700|PMF98123789182^^PLW|CWE

STF|PMF98123789182^^PLW|U2246^^^PLW~444444444^^^USSSA^SS|Hippocrates^Harold^H^JR^DR^M.D.|P|M|19511004|A|^ICU|^MED|^WPN^PH^^^555^5551003~^PRN^PH^^^955^5551003|1003 Healthcare Drive ^^Ann Arbor^MI^^^H~4444 Healthcare Dr^^Ann Arbor^MI^^^O|19890125^&Level Seven Healthcare, Inc.&L01||PMF88123453334|74160.2326@COMPUSERV.COM|B

PRA|PMF98123789182^^PLW|^Level Seven Healthcare|ST|I|OB/GYN^STATE BOARD OF OBSTETRICS AND GYNECOLOGY^C^19790123|1234887609^UPIN~1234987^CTY^MECOSTA~223987654^TAX~1234987757^DEA~12394433879^MDD^CA|ADMIT&&ADT^MED&&L2^19941231~DISCH&&ADT^MED&&L2^19941231|

AFF|1|AMERICAN MEDICAL ASSOCIATION|123 MAIN STREET^^OUR TOWN^CA^98765^USA^M |19900101|

LAN|1|ESL^SPANISH^ISO639|1^READ^HL70403|1^EXCELLENT^HL70404|

LAN|2|ESL^SPANISH^ISO639|2^WRITE^HL70403|2^GOOD^HL70404|

LAN|3|FRE^FRENCH^ISO639|3^SPEAK^HL70403|3^FAIR^HL70404|

EDU|1|BA|19810901^19850601||19850604|YALE UNIVERSITY^L|U^HL70402|456 CONNECTICUT AVENUE^^NEW HAVEN^CO^87654^USA^M|

EDU|2|MD|19850901^19890601||19890604|HARVARD MEDICAL SCHOOL^L |M^HL70402|123 MASSACHUSETTS AVENUE^^CAMBRIDGE^MA^76543^USA^M|

8.8 SERVICE/TEST/OBSERVATIONS MASTER FILES

8.8.1 General Approach of Service/Test/Observation Master Files

These segments define the format for the general information about the observations that a clinical or diagnostic service produces and sends to its "clients." This format can be used to send the producer's entire

service/test/observation definition or a few of the producer's observations, such as those with procedure, technique, or interpretation changes.

In anticipation of an object-oriented organization of segments in future releases of this Standard, the attributes of observations/batteries have been grouped into seven different segments:

OM1 contains the attributes that apply to all observations

OM2 applies to numerically-valued observations

OM3 applies to text or code-valued observations

OM4 applies to observations or batteries that require specimens

OM5 contains the attributes of batteries, or sets of observations or other batteries

OM6 contains the quantities (observations in a most general sense) that are calculated from one or more other observations

OM7 contains additional basic attributes that apply to the definition of most observations/services.

Thus, the full definition of a numerically-valued laboratory observation would require the transmission of OM1, OM2, and OM4.

In the following discussion, we use OMx to refer to any of the seven observation-defining segments. Each instance of an OMx segment contains the information about one observation or observation battery. These OMx segments are designed to be "inclusive" and accommodate the attributes of many kinds of observations. Thus, the fact that a field is listed in a particular segment should not be construed as meaning that a producer must include information about that item in its definition transmission. Many fields will apply to some terms; others will not. One observation producer may choose to populate one set of fields; another may choose to populate a different set of fields, according to the requirements of that producer's "client."

Most of the fields of data type TX in those segments are intended to include information typically contained in a diagnostic service's user manual. Such fields should describe how the data is to be interpreted or used, and are not intended for computer interpretation.

Remember that the magnitude of a treatment can also be regarded as an observation and, as such, can be represented as an observation within these segments. Many examples exist. When a blood gas is transmitted, the requesting service usually transmits the amount of inspired O2 (a treatment) on requisition. (In an electronic transmission, the service would send this as an OBX segment, along with the electronic order for the test.) When blood levels are drawn, the amount and time of the last dose are routinely included as observations on the request for service. A pharmacy system could routinely send to a medical record system the average daily dose of each outpatient medication it dispenses. In such cases, the treatment amounts would be observations to the receiving system and would be transmitted as OBX segments. When received, they would be treated like any other observation. A medical record system could then create, for example, a flowchart of lab results, or lab results mixed with relevant treatments.

8.8.2 MFN/MFK - Master File Notification - Test/Observation [WITHDRAWN] (Event M03)

Withdrawn in version 2.7 and later; refer to master file messages which follow (Events M08, M09, M10, M11 and M12).

8.8.3 MFN/MFK - Master File Notification - Test/Observation (Numeric) (Event M08)

MFN^M08^MFN_M08: Master File Notification - Test/Observation (Numeric)

Segments	Description	Status	Chapter
MSH	Message Header		2

Segments	Description	Status	Chapter
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_TEST_NUMERIC begin		
MFE	Master File Entry		8
OM1	General Segment (Fields That Apply to Most Observations)		8
[{ PRT }]	Participation		4
[OM2]	Numeric Observation Segment		8
[OM3]	Categorical Service/Test/Observation Segment		8
[{OM4}]	Observations that Require Specimens		8
}	--- MF_TEST_NUMERIC end		

MFK^M08^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

Note: *MFI-1* - Master *File Identifier* = OMA for numeric observations.

Note: A service/test/observation definition may have both an OM2 (numeric) and OM3 (categorical) segment included in case the value may be either numeric and/or categorical.

8.8.4 MFN/MFK - Master File Notification - Test/Observation (Categorical) (Event M09)

MFN^M09^MFN_M09: Master File Notification - Test/Observation (Categorical)

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8

Segments	Description	Status	Chapter
{	--- MF_TEST_CATEGORICAL begin		
MFE	Master File Entry		8
OM1	General Segment (Fields That Apply to Most Observations)		8
[{ PRT }]	Participation		4
[	--- MF_TEST_CAT_DETAIL begin		
OM3	Categorical Service/Test/Observation Segment		8
[{ OM4 }]	Observations that Require Specimens		8
]	--- MF_TEST_CAT_DETAIL end		
}	--- MF_TEST_CATEGORICAL end		

MFK^M09^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

Note: *MFI-1 - Master File Identifier* = OMB for categorical observations.

8.8.5 MFN/MFK - Master File Notification - Test/Observation Batteries (Event M10)

MFN^M10^MFN_M10: Master File Notification - Test/Observation Batteries

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_TEST_BATTERIES begin		
MFE	Master File Entry		8
OM1	General Segment (Fields That Apply to Most Observations)		8

Segments	Description	Status	Chapter
[{ PRT }]	Participation		4
[	--- MF_TEST_BATT_DETAIL begin		
OM5	Observation Batteries		8
[{ OM4 }]	Observations that Require Specimens		8
]	--- MF_TEST_BATT_DETAIL end		
}	--- MF_TEST_BATTERIES end		

MFK^M10^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

Note: *MFI-1 - Master File Identifier* = OMC for observation batteries.

8.8.6 MFN/MFK - Master File Notification - Test/Calculated Observations (Event M11)

MFN^M11^MFN_M11: Master File Notification - Test/Calculated Observations

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_TEST_CALCULATED begin		
MFE	Master File Entry		8
OM1	General Segment (Fields That Apply to Most Observations)		8
[{ PRT }]	Participation		4
[	--- MF_TEST_CALC_DETAIL begin		
OM6	Observations Calculated from Other Observations		8

Segments	Description	Status	Chapter
OM2	Numeric Observation Segment		8
]	--- MF_TEST_CALC_DETAIL end		
}	--- MF_TEST_CALCULATED end		

MFK^M11^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

Note: *MFI-1 - Master File Identifier* = OMD for calculated observations.

8.8.7 MFN/MFK - Master File Notification - Additional Basic Observation/Service Attributes (Event M12)

MFN^M12^MFN_M12: Master File Notification - Additional Basic Observation/Service Attributes

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_OBS_ATTRIBUTES begin		
MFE	Master File Entry		8
OM1	General Segment (Fields That Apply to Most Observations)		8
[{ PRT }]	Participation		4
[	--- MF_OBS_OTHER_ATTRIBUTES begin		
OM7	Other Basic Observation/Service Attributes		8
[{ PRT }]	Participation		4
]	--- MF_OBS_OTHER_ATTRIBUTES end		
}	--- MF_OBS_ATTRIBUTES end		

MFK^M12^MFK_M01: Master File Application Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Note: The MFK message is used for an application acknowledgment in either the original or enhanced acknowledgment modes.

Note: *MFI-1 - Master File Identifier* = OME for additional basic observation/service attributes.

8.8.8 OM1 - General Segment (Fields That Apply to Most Observations)

The Technical Steward for the OM1 segment is Orders and Observations.

The OM1 segment contains the attributes that apply to the definition of most observations. This segment also contains the field attributes that specify what additional segments might also be defined for this observation.

HL7 Attribute Table - OM1 - General Segment

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1		4=	NM	R			00586	Sequence Number - Test/Observation Master File
2			CWE	R		9999	00587	Producer's Service/Test/Observation ID
3	2..3		ID	O	Y	0125	00588	Permitted Data Types
4	1..1		ID	R		0136	00589	Specimen Required
5			CWE	R		9999	00590	Producer ID
6		200#	TX	O			00591	Observation Description
7			CWE	O	Y	9999	00592	Other Service/Test/Observation IDs for the Observation
8		200#	ST	B	Y		00593	Other Names
9		30#	ST	O			00594	Preferred Report Name for the Observation
10	1..8		ST	O			00595	Preferred Short Name or Mnemonic for the Observation
11		200=	ST	O			00596	Preferred Long Name for the Observation
12	1..1		ID	O		0136	00597	Orderability
13			CWE	O	Y	9999	00598	Identity of Instrument Used to Perform this Study
14			CWE	O	Y	9999	00599	Coded Representation of Method
15	1..1		ID	O		0136	00600	Portable Device Indicator
16			CWE	B	Y	9999	00601	Observation Producing Department/Section
17			XTN	B			00602	Telephone Number of Section
18	1..1		CWE	R		0174	00603	Nature of Service/Test/Observation
19			CWE	O		9999	00604	Report Subheader
20		20=	ST	O			00605	Report Display Order

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
21			DTM	O			00606	Date/Time Stamp for Any Change in Definition for the Observation
22			DTM	O			00607	Effective Date/Time of Change
23			NM	O			00608	Typical Turn-Around Time
24			NM	O			00609	Processing Time
25	1..1		ID	O	Y	0168	00610	Processing Priority
26	1..1		ID	O		0169	00611	Reporting Priority
27			CWE	B	Y	9999	00612	Outside Site(s) Where Observation May Be Performed
28			XAD	B	Y		00613	Address of Outside Site(s)
29			XTN	B			00614	Phone Number of Outside Site
30			CWE	O		0177	00615	Confidentiality Code
31			CWE	O	Y	9999	00616	Observations Required to Interpret this Observation
32			TX	O			00617	Interpretation of Observations
33			CWE	O	Y	9999	00618	Contraindications to Observations
34			CWE	O	Y	9999	00619	Reflex Tests/Observations
35			TX	O	Y		00620	Rules that Trigger Reflex Testing
36			CWE	O	Y	9999	00621	Fixed Canned Message
37		200=	TX	O	Y		00622	Patient Preparation
38			CWE	O		9999	00623	Procedure Medication
39		200=	TX	O			00624	Factors that may Affect the Observation
40		60=	ST	O	Y		00625	Service/Test/Observation Performance Schedule
41			TX	O			00626	Description of Test Methods
42			CWE	O		0254	00937	Kind of Quantity Observed
43			CWE	O		0255	00938	Point Versus Interval
44		200=	TX	O		0256/ 0257	00939	Challenge Information
45			CWE	O		0258	00940	Relationship Modifier
46			CWE	O		9999	00941	Target Anatomic Site Of Test
47			CWE	O		0910	00942	Modality of Imaging Measurement
48	1..1		ID	O		0919	03310	Exclusive Test
49	2..3		ID	O		0074	00257	Diagnostic Serv Sect ID
50			CWE	O		0446	01539	Taxonomic Classification Code
51	200		ST	O	Y		03399	Other Names

8.8.8.1 OM1-1 Sequence Number - Test/Observation Master File (NM) 00586

Definition: This field contains the first OM1 segment in a message and is described as 1, the second as 2, and so on.

8.8.8.2 OM1-2 Producer's Service/Test/Observation ID (CWE) 00587

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the producer's usual or preferred identification of the test or observation. Only three components should be included: `<ID code>^<service text name/description>^<source list of code>`. All components should be non-null.

8.8.8.3 OM1-3 Permitted Data Types (ID) 00588

Definition: This field contains the allowed data type(s) for this observation. The codes are the same as those listed for OBX (a given observation may, under different circumstances, take on different data types). Indeed, under limited circumstances, an observation can consist of one or more fragments of different data types. When an observation may have more than one data type, e.g., coded (CWE) and numeric (NM) the allowable data types should be separated by repeat delimiters. Refer to *HL7 Table 0125 – Value Type* in Chapter 2C, Code Tables, for valid values.

8.8.8.4 OM1-4 Specimen Required (ID) 00589

Definition: This field contains a flag indicating whether or not at least one specimen is required for the service/test/observation. Refer to *HL7 Table 0136 - Yes/no Indicator* as defined in Chapter 2C, Code Tables.

Y one or more specimens are required to obtain this observation

N a specimen is not required

When a specimen is required, segment OM4 will usually be included (one per specimen is required).

8.8.8.5 OM1-5 Producer ID (CWE) 00590

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field uniquely identifies the service producing the observation described in this segment. Three components should be included: an identifying code, the name of the producer, and the identity of the coding system (e.g., 323-5678^Acme Special Lab^MC). The identity of the coding system will usually be MC (Medicare provider number or HIBCC site codes) in the United States. Each country may want to specify its preferred coding system and define a coding system ID to identify it.

Remember that the magnitude of a treatment or the setting on a machine, such as a ventilator, can be regarded as an observation. Thus, pharmacy, respiratory care, and nursing may be producers of such observations.

8.8.8.6 OM1-6 Observation Description (TX) 00591

Definition: This field contains a text description of this observation.

8.8.8.7 OM1-7 Other Service/Test/Observation IDs for the Observation (CWE) 00592

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains all alias codes/identifiers for this observation. If more than one alias code needs to be specified, multiple three-component, CWE-format entries (<code 1>^<name 1>^<code system 1>) may be given, separated by repeat delimiters. An observation may have as many names/codes as are applicable (e.g., ICD9, ACR-NEMA, SNOMED, and READ). We encourage the inclusion of as many different codes as may apply to assist cross-system mapping of terminology. All components of each triplet should be non-null (that is, names and coding system IDs within the CWE data type are required in addition to codes).

Because the size (dose) of a treatment can also be an observation, codes that identify treatments (e.g., NDC, ICCS) may also be included in this field.

Note: In this field, the names within the CWE data type are required.

8.8.8.8 OM1-8 Other Names (recognized by the producer for the observation) (ST) 00593

Note: This field is deprecated and retained for backward compatibility as of v 2.8. See OM1-51.

Definition: This field contains any test aliases or synonyms for the name in the context of the ordering service. These are alternative names, not associated with a particular coding system, by which the battery, test, or observation (e.g., measurement, test, diagnostic study, treatment, etc.) is known to users of the system. Multiple names in this list are separated by repeat delimiters.

8.8.8.9 OM1-9 Preferred Report Name for the Observation (ST) 00594

Definition: This field contains the preferred name for reporting the observation or battery. The name can contain up to 30 characters (including blanks). It is the preferred name for columnar reports that require a maximum name size.

8.8.8.10 OM1-10 Preferred Short Name or Mnemonic for the Observation (ST) 00595

Definition: This field contains the name that can be used in space-limited reports (e.g., specimen labels) to identify the observation for the convenience of human readers. The name can contain up to eight characters.

8.8.8.11 OM1-11 Preferred Long Name for the Observation (ST) 00596

Definition: This field contains the fully-specified name for the observation or battery. It may include the full (unabbreviated) multiple-word names and contain up to 200 characters. It should be as scientifically precise as possible.

8.8.8.12 OM1-12 Orderability (ID) 00597

Definition: This field indicates whether or not a service/test/observation is an orderable code. Refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values.

Y the service/test/observation is an orderable code

N the service/test/observation is not orderable

For example, blood differential count is usually an orderable "test," MCV, contained within the differential count, is usually not independently orderable.

8.8.8.13 OM1-13 Identity of Instrument Used to Perform This Study (CWE) 00598

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: When applicable, this field identifies the instrument or device that is used to generate this observation or battery. Examples are the automated instrument in the laboratory, the imaging device and model number in radiology, and the automatic blood pressure machine on the ward. The instrument is specified as a coded entry in anticipation that these identifiers could be specified as codes. Initially, we expect that most of the information about devices will be transmitted as text in the second component of the CWE identifier. If more than one kind of instrument is used, all of them can be listed, separated by repeat delimiters.

8.8.8.14 OM1-14 Coded Representation of Method (CWE) 00599

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the method(s) used to produce the observation and should be recorded in a computer-understandable (coded) form here. This field should report the same method(s) reported in narrative in the following field. More than one method may be listed, but only if they produce results that are clinically indistinguishable. Multiple methods must be separated by repeat delimiters.

8.8.8.15 OM1-15 Portable Device Indicator (ID) 00600

Definition: This field indicates whether or not a portable device may be used for the service/test/observation. Refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values.

Y the observation can be obtained with a portable device brought to the patient

N the patient or specimen must be transported to the device

8.8.8.16 OM1-16 Observation Producing Department/Section (CWE) 00601

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field permits the sorting of observation orders and values by the providing service's department/section. It provides "source oriented" reporting when required. Free text may be used instead of these codes, but in that case, they should be recorded as the second "component" of the field to distinguish them from the standard codes. Multiple codes in this field are separated by repeat delimiters.

8.8.8.17 OM1-17 Telephone Number of Section (XTN) 00602

```
Components:  <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^
           <Telecommunication Equipment Type (ID)> ^ <Communication Address (ST)> ^
           <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local Number (SNM)> ^
           <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension Prefix (ST)> ^ <Speed
           Dial Code (ST)> ^ <Unformatted Telephone number  (ST)> ^ <Effective Start
           Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
           <Protection Code (CWE)> ^ <Shared Telecommunication Identifier (EI)> ^
           <Preference Order (NM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
           Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
           & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
           & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
           <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
           of Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
           Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
           & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
           & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
           <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
           of Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI):  <Entity Identifier (ST)>
           & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field contains the telephone number for calling responsible parties in this section to ask results or advice about the use of this test.

8.8.8.18 OM1-18 Nature of Service/Test/Observation (CWE) 00603

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates whether the definition entry identifies a test battery, an entire functional procedure or study, a single test value (observation), multiple test batteries or functional procedures as an orderable unit (profile), or a single test value (observation) calculated from other independent observations. Refer to *User-defined Table 0174 - Nature of Service/Test/Observation* in Chapter 2C, Code Tables, for suggested values.

8.8.8.19 OM1-19 Report Subheader (CWE) 00604

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains an optional string that defines the preferred header under which this observation should be listed on a standard display. For example, if the test is hemoglobin, this string might be "Complete blood count." It is represented as a coded data type so that a battery can be a header. Only the description part of the string may be included in case the subheader does not have an associated code. When a series of observations is displayed according to the sort order given below, the subheader that groups those observations is presented whenever the subheader changes.

8.8.8.20 OM1-20 Report Display Order (ST) 00605

Definition: This field contains an optional string that defines the sort order in which this observation is presented in a standard report or display that contains the many observations.

8.8.8.21 OM1-21 Date/Time Stamp for Any Change in Definition for the Observation (DTM) 00606

Definition: This field contains the date and time that the last of any field change was made and in the host's record corresponding to the OM1 segment.

8.8.8.22 OM1-22 Effective Date/Time of Change (DTM) 00607

Definition: This field contains the date and time of the last change in the test procedure that would make previous results incompatible with new results, e.g., the last time that normal reference range or units changed for a numeric test/observation.

We strongly suggest that observation producers never use the same observation ID when the measurement procedures change in such a way that results produced under the new procedure are clinically different from those produced with the old procedure. Rather, the producer should try to adjust the new procedure so that its values are clinically indistinguishable from the old. Failing that, one should create a new observation ID for the observation produced under the new procedure.

In the rare circumstances when a procedure change occurs and neither of the above two options is viable, this field shall be used to transmit the effective date/time of the new procedure. The receiving system shall assume that any values that come across under this observation ID are under the new procedure after this date and take appropriate steps to distinguish the old from the new observations.

This number is included to provide a means of communicating with the observation producing service when they have questions about particular observations or results.

8.8.8.23 OM1-23 Typical Turn-Around Time (NM) 00608

Definition: This field contains the typical processing time for single test/observation. This field indicates the time from the delivery of a specimen or transport of a patient to a diagnostic service and the completion of the study. It includes the usual waiting time. The units are measured in minutes.

8.8.8.24 OM1-24 Processing Time (NM) 00609

Definition: This field contains the usual length of time (in minutes) between the start of a test process and its completion.

8.8.8.25 OM1-25 Processing Priority (ID) 00610

Definition: This field contains one or more available priorities for performing the observation or test. This is the priority that can be placed in *TQ1-9 - Priority*. Multiple priorities may be given, separated by repeat delimiters. For example, S~A~R~P~T indicates that the test may be ordered using codes S, A, R, P, or T. Refer to *HL7 Table 0168 - Processing Priority* in Chapter 2C, Code Tables, for valid values.

For tests requiring a specimen, the priority for obtaining the specimen is included in *OM4-13 - Specimen Priorities*.

8.8.8.26 OM1-26 Reporting Priority (ID) 00611

Definition: This field contains the available priorities reporting the test results when the user is asked to specify the reporting priority independent of the processing priority. Refer to *HL7 Table 0169 - Reporting Priority* in Chapter 2C, Code Tables, for valid values.

8.8.8.27 OM1-27 Outside Site(s) Where Observation May Be Performed (CWE) 00612

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field contains the identification(s) of the outside service(s) that produce(s) the observation. The format of this CWE field uses the producer ID (as defined in *OM1-5 - Producer ID*) and the name of the service separated by component delimiters. An example is ...|39221^ACME lab^MC|... If multiple services are used, they should be separated by repeat delimiter(s).

8.8.8.28 OM1-28 Address of Outside Site(s) (XAD) 00613

Components: <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^ <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^ <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^ <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^ <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^ <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> & <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Census Tract (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field contains the address of the outside services listed in *OM1-28 - Address of Outside Site(s)* where observation may be performed. If multiple services are recorded in that field, their addresses should be separated by repeat delimiters, and the addresses should appear in the same order in which the services appear in the preceding field.

8.8.8.29 OM1-29 Phone Number of Outside Site (XTN) 00614

Components: <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^ <Telecommunication Equipment Type (ID)> ^ <Communication Address (ST)> ^ <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local Number (SNM)> ^ <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension Prefix (ST)> ^ <Speed Dial Code (ST)> ^ <Unformatted Telephone number (ST)> ^ <Effective Start Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^ <Protection Code (CWE)> ^ <Shared Telecommunication Identifier (EI)> ^ <Preference Order (NM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI): <Entity Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field contains the telephone number of the outside site.

8.8.8.30 OM1-30 Confidentiality Code (CWE) 00615

Components: <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^ <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second Alternate Value Set Version ID (DTM)>

Definition: This field contains the degree to which special confidentiality protection should be applied to the observation. For example, a tighter control may be applied to an HIV test than to a CBC. Refer to *User-defined Table 0177 - Confidentiality Code* in Chapter 2C, Code Tables, for suggested values.

8.8.8.31 OM1-31 Observations Required to Interpret this Observation (CWE) 00616

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the list of variables that the diagnostic service needs to interpret the results of an ordered study. The observations specified here should be sent to the diagnostic service as OBX segments along with the order (OBR) segment. Separate multiple items by repeat delimiters.

8.8.8.32 OM1-32 Interpretation of Observations (TX) 00617

Definition: This field contains the clinical information about interpreting test results. Examples are the conditions (drugs) that may cause false abnormals, and the information about the sensitivity and specificity of the test for diagnoses.

8.8.8.33 OM1-33 Contraindications to Observations (CWE) 00618

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the diagnosis or problem for which the test is a contraindication or of possible danger (e.g., pacemaker, pregnancy, diabetes). For example, if the test identified in OM1 was an intravenous pyelogram, this field would include warnings about the use of contrast media in diabetes. The contraindication diagnoses should be separated by repeat delimiters.

Most contraindication rules will be transmitted as free text. In such cases, the contents serve only as information for human reading. However, an alternative for machine readable contraindication rules also exists. The rule may be defined formally in the Arden Syntax (ASTM 1460-1992) which has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Reflex rules that are written in Arden Syntax should begin and end with a double semi-colon (;;), the Arden slot delimiter.

8.8.8.34 OM1-34 Reflex Tests/Observations (CWE) 00619

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the test names as type CWE (i.e., <code>^<text name>^<coding system>) that may be ordered automatically by the diagnostic service, depending on the results obtained from the ordered battery. A screening CBC might trigger a reticulocyte count if the Hgb is less than 12. Multiple reflex tests are separated by repeat delimiters.

8.8.8.35 OM1-35 Rules that Trigger Reflex Testing (TX) 00620

Definition: This field contains the rules that trigger the reflex tests listed above. If multiple reflex tests are listed in *OM1-34 - Reflex Text/Observations* separated by repeat delimiters, a set of corresponding rules will be included in this section. The first rule will apply to the first test, the second to the second test, and so on.

Most reflex rules will usually be transmitted as free text. In such cases, the contents serve only as information for human reading. However, an alternative for machine readable rules also exists. The rule may be defined formally in the Arden Syntax (ASTM 1460-1992) which has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Reflex rules that are written in Arden Syntax should begin and end with a double semi-colon (;;), the Arden slot delimiter.

8.8.8.36 OM1-36 Fixed Canned Message (CWE) 00621

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the codes and a fixed text message that is always associated with an abbreviation. The field may include multiple messages separated by repeat delimiters.

Most rules about patient testing will be transmitted as free text. In such cases, the contents serve only as information for human reading. However, an alternative for machine readable rules also exists. The rule may be defined formally in the Arden Syntax (ASTM 1460-1992) which has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Rules about patient preparation are written in Arden Syntax should begin and end with a double semi-colon (;;), the Arden slot delimiter.

8.8.8.37 OM1-37 Patient Preparation (TX) 00622

Definition: This field contains the tests or observations that require special patient preparation, diet, or medications. For GI contrast studies, this field would contain the pretest diet, e.g., low residue for two days, NPO before study, and the preferred purgatives. Each separate med, diet, or preparation should be delimited by a repeat delimiter. Separate each requirement by a repeat delimiter. Example for a sigmoidectomy:

...|clear liquid diet full day before procedure~take 8 oz mag citrate 6pm day before procedure~take 2 ducat tabs (5m) at 4pm day before procedure~NPO past midnight.|...

8.8.8.38 OM1-38 Procedure Medication (CWE) 00623

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the treatments that may be needed as part of the procedure. Examples are radioactive iodine for a thyroid screen, and methacholine for a methacholine spirometry challenge. This field should be identified as a CWE data type.

8.8.8.39 OM1-39 Factors That May Affect the Observation (TX) 00624

Definition: This field contains the text description of the foods, diagnoses, drugs, or other conditions that may influence the interpretation of the observation. Information about the direction of the effect, and any recommendation about altering the diet, conditions, or drug before initiating the test observation.

Most rules about factors that effect the test interpretation will be transmitted as free text. In such cases, the contents serve only as information for human reading. However, an alternative for machine readable rules also exists. The rule may be defined formally in the Arden Syntax (ASTM 1460-1992) which has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Rules about patient preparation are written in Arden Syntax and should begin and end with a double semi-colon (;;), the Arden slot delimiter.

8.8.8.40 OM1-40 Service/Test/Observation Performance Schedule (ST) 00625

Definition: This field contains the diagnostic studies/tests that are performed only at certain times during the course of a work day or work week. This field indicates the maximum interval between successive test performances (the test may actually be performed more frequently). The format given in Chapter 4, Section 4.3.2.1, "Repeat Pattern," should be used. If necessary, multiple codes may be given, separated by repeat delimiters. The use of multiple codes indicates that the test is performed at multiple concurrent intervals. For example, Q6H indicates that the test is performed at least once every 6 hours around the clock. QJ1 indicates that the test is performed at least every week on Mondays. QAM~QPM indicates that the test is performed at least once every morning and every evening. QJ1~QJ3~QJ5 indicates that the test is performed at least every week on Mondays, Wednesdays, and Fridays. C indicates that the test is performed continuously, 7 days per week.

8.8.8.41 OM1-41 Description of Test Methods (TX) 00626

Definition: This field contains the text description of the methods used to perform the text and generate the observations. Bibliographic citations may be included.

8.8.8.42 OM1-42 Kind of Quantity Observed (CWE) 00937

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definitions: This optional attribute describes the underlying kind of property represented by this observation. This attribute distinguishes concentrations from total amounts, molar concentrations from mass concentrations, partial pressures from colors, and so forth. These are discussed more fully in the LOINC Users' Manual.[1] They are derived from the approach described in 1995 edition of the IUPAC Silver Book.[2] These distinctions are used in IUPAC and LOINC standard codes. Defined categories are listed in *HL7 Table 0254 - Kind of Quantity* in Chapter 2C, Code Tables.

The distinctions of true quantities in this table are based primarily on dimensional analyses. The table contains a number of "families," those related to simple counts (number, number concentration, etc.), to mass (mass, mass concentration, etc.), to enzyme activity (catalytic content, catalytic concentration, etc.), and molar or equivalents (substance content, substance concentration).

By this classification, a glucose (in the US) would be classed as a mass concentration. A sodium would be classed as a substance concentration. Within the family, a total amount should be described as the unadorned variant; e.g., the property of measure for a patient's weight would be mass, not mass content. Most chemical measures produce concentrations, as exemplified by sodium and glucose. However, a 24-hour urine protein is not a mass concentration, but a mass rate (mass per unit time). The content variants (e.g., mass content, substance content) are used to reflect an amount per mass (usually) of tissue.

This attribute would be valued in a master file only if the service sending the master file classified observations by their principle of measurement.

8.8.8.43 OM1-43 Point Versus Interval (CWE) 00938

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This optional attribute allows master files to classify observations as measuring the patient's state at a point in time (e.g., spot urines, random urines, serum potassium), or averaged over an interval of time (e.g., concentration, total amount, or clearance over a 24-hour collection). Interval measures most often apply to urine and stool specimens (e.g., 24-hour urines, 3-day stool fats). They also apply to clinical measurements such as urine outputs, which are reported as shift totals and 24-hour totals, and event counts on physiologic monitors such as the number of PVCs on a 24-hour Holter monitor.

This field would only be valued in a transaction if the service sending this master file message classified its observation by point versus time interval. This field is **not** used to record the time collection interval for a particular sample. It is used to specify a characteristic of an observation which has a defined normal range and to distinguish observations of the same kind but observed over varying periods of time. A spot urine sodium would have PT stored in this field. A 24-hour urine sodium and a 24-hour Holter monitor would have 24H stored here. This attribute would only be valued if the filling service classified its observations by timing. Refer to *User-defined Table 0255 - Duration Categories* in Chapter 2C, Code Tables, for suggested values.

---

1 LOINC Committee. Logical Observation identifier Names and Codes. Indianapolis: Regenstrief Institute and LOINC Committee, 1995.

2 International Union of Pure and Applied Chemistry/International Federation of Clinical Chemistry. The Silver Book: Compendium of terminology and nomenclature of properties in clinical laboratory sciences. Oxford: Blackwell Scientific Publishers, 1995.

8.8.8.44 OM1-44 Challenge Information (TX) 00939

Definition: This optional attribute provides information for classifying observations by the challenge component of the test, if a challenge does speciate the observation. For example, distinguishing tests that have a challenge component in database. There co-ascribes the physiologic or drug challenge that is intrinsic to the measurement. To identify, for example, tests that include a glucose challenge.

To construct this text string, use the following template. (Note: This field is not constructed of formally defined components; it is a free text field. Component delimiters are not used and it is not necessary to supply placeholders if some "components" are not used.)

The time delay follows the syntax: n<S|M|H|D|W> where n is a number (possibly a decimal); S denotes seconds; M denotes minutes; H denotes hours; D denotes days; and W denotes weeks. The time delay can be preceded by a 'greater than' (>) sign, e.g. >4H.

HL7 Table 0256 - Time Delay Post Challenge in Chapter 2C, Code Tables, lists possible values for time delay.

Examples:

PRE 100 GM GLUCOSE PO

PRE 100 GM GLUCOSE PO

30M POST 100 GM GLUCOSE PO

2H POST 100 GM GLUCOSE PO

TROUGH

For drug peak and trough measures the nature of the substance challenged is the same as the analyte name, and need not be included.

We denote the route of the challenge via abbreviations for medication routes (see Chapter 4A, section 4A.4.2.1, "Route," which references *HL7 Table 0162 - Route of Administration* in Chapter 2C, Code Tables). An oral route of administration would be denoted by "PO," an intravenous route by "IV."

Details of the drug dose, time the dose was given, route of administration, etc., would be noted in separate OBX, and would have corresponding master observation definitions stored in the observation master file map to different records stored in the master file segments contained in the drug level message.

The nature of a physiologic (non-drug) challenge may also be specified, using the terms in *HL7 Table 0257 - Nature of challenge* in Chapter 2C, Code Tables.

8.8.8.45 OM1-45 Relationship Modifier (CWE) 00940

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This optional attribute provides a mechanism for classifying observations according to the subject, in relation to the patient whose results might be stored with as "patient" data. It is standard practice, for example, to report values for controls, donors, and blood product units as well as the patient's own values, and store them in the patient's record. (This may not be the best way to model such information, but it is the way it is usually reported.) This should be valued when two values (e.g., one for patient and one for a blood product unit) could otherwise be confused.

The default value is "Patient," and if not specified, this value is assumed. The persons sub-component can refer to *HL7 Table 0258 - Relationship Modifier* in Chapter 2C, Code Tables, for valid values.

8.8.8.46 OM1-46 Target Anatomic Site of Test (CWE) 00941

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This optional attribute formally indicates the site of the observation (to make it easy for a system to find all tests related to one anatomic site). It can be used to classify the observation by target site of the examination. For example, "heart" might be recorded as the target of the electrocardiogram, cardiac echo, and thallium exercise test. This attribute would be applicable to most imaging and electro-physiologic examinations. The SNOMED topology axis is an example of a coding system for anatomic sites. User-defined tables may also apply here.

8.8.8.47 OM1-47 Modality of Imaging Measurement (CWE) 00942

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This optional attribute describes the modality used to acquire the observation data, e.g., radiograph, ultrasound, CT scan, MR, etc. This attribute is especially important for imaging studies. Refer to *External Table 0910 – Acquisition Modality* in Chapter 2C, Code Tables, for the defined value set, which may be repalce or extended with local codes. If the DICOM codes are used, the coding system ID is DCM.

Note: ***The use of User-defined Table 0259 - Modality for this field is deprecated and retained for backward compatibility as of v 2.7.***

8.8.8.48 OM1-48 Exclusive Test (ID) 03310

Definition: This field defines if this test should be a specific event with no other tests to be performed with this test. Refer to *HL7 Table 0919 – Exclusive Test* in Chapter 2C, Code Tables, for valid values.

If not populated, the default value of "N" is assumed and that this test can be included with any number of other tests.

When D is specified for this field, using field OM1-49 determines how tests must be grouped together. Tests within the same Diagnostic Service Sector may be on the same requisition, and therefore in the same message.

8.8.8.49 OM1-49 Diagnostic Serv Sect ID (ID) 00257

Definition: This field is the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here. Refer to *HL7 Table 0074 – Diagnostic Service Section ID* in Chapter 2C, Code Tables, for valid entries. Same as OBR-24.

8.8.8.50 OM1-50 Taxonomic Classification Code (CWE) 01539

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: The species of living organism. This may include the common or scientific name, based on the coding system(s) used. SNOMED is the recommended coding system. If this field is not valued, a human is assumed. Refer to *User-defined Table 0446 - Species Code* in Chapter 2C, Code Tables, for suggested values.

For example:

...|L-80700^Canine, NOS^SNM3|...

...|L-80100^Bovine^SNM3|...

...|L-80A00^Feline^SNM3|....

This field is a list of species or other taxonomic classification(s) to which the indicated specimen type may appropriately be applied for the indicated observation or test. If this field is omitted the default meaning is that the test or observation is applicable to humans. In a veterinary context if the test is applicable to any species, an appropriate code such as "Kingdom Animalia (organism)" should be used to avoid confusion with the meaning of human only.

8.8.8.51 OM1-51 Other Names (recognized by the producer for the observation) (ST) 03399

Definition: This field contains any test aliases or synonyms for the name in the context of the ordering service. These are alternative names, not associated with a particular coding system, by which the battery, test, or observation (e.g., measurement, test, diagnostic study, treatment, etc.) is known to users of the system. Multiple names in this list are separated by repeat delimiters.

8.8.9 OM2 - Numeric Observation Segment

The Technical Steward for the OM2 segment is Orders and Observations.

This segment contains the attributes of observations with continuous values (including those with data types of numeric, date, or time stamp). It can be applied to observation batteries of type A and C (see *OM1-18 - Nature of Service/Test/Observation*).

HL7 Attribute Table - OM2 - Numeric Observation

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1		4=	NM	O			00586	Sequence Number - Test/Observation Master File
2			CWE	O		9999	00627	Units of Measure
3		10=	NM	O	Y		00628	Range of Decimal Precision
4			CWE	O		9999	00629	Corresponding SI Units of Measure
5		60=	TX	O			00630	SI Conversion Factor
6			RFR	O	Y		00631	Reference (Normal) Range for Ordinal and Continuous Observations
7			RFR	O	Y		00632	Critical Range for Ordinal and Continuous Observations
8			RFR	O			00633	Absolute Range for Ordinal and Continuous Observations

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
9			DLT	O	Y		00634	Delta Check Criteria
10			NM	O			00635	Minimum Meaningful Increments

8.8.9.1 OM2-1 Sequence Number - Test/Observation Master File (NM) 00586

Definition: This field contains the same value as the sequence number of the associated OM1 segment.

8.8.9.2 OM2-2 Units of Measure (CWE) 00627

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the single tests/observations (those with a nature code of A or C, as described in *OM1-18 - Nature of Service/Test/Observation*) that have numeric values. This field contains their customary units of measure.

8.8.9.3 OM2-3 Range of Decimal Precision (NM) 00628

Definition: This field contains the numerically valued single observations (code A or C as described in *OM1-18 - Nature of Service/Test/Observation*), specifies the total length in characters of the field needed to display the observation, and the number of digits displayed to the right of the decimal point. This is coded as a single number in the format <length>.<decimal-digits>. For example, a value of 6.2 implies 6 characters total (including the sign and decimal point) with 2 digits after the decimal point. For integer values, the period and <decimal-digits> portion may be omitted (that is, 5.0 and 5 are equivalent). More than one such mask may be transmitted (separated by repeat delimiters) when it is necessary to define multiple display formats that are possible.

8.8.9.4 OM2-4 Corresponding SI Units of Measure (CWE) 00629

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the single tests/observations - the corresponding SI units of measure in the format, when these differ from the customary units of measure given in the previous field.

8.8.9.5 OM2-5 SI Conversion Factor (TX) 00630

Definition: This field contains the continuous, numerically valued tests/observations, with a nature code of A or C (see *OM1-18 - Nature of Service/Test/Observation*). This is a factor for converting the customary units to SI units.

In the case that the observation units are not SI units, this field provides the formula needed to convert from the reported units to SI units, this shall include the equation needed to convert from the reporting to the SI units.

In the case that the relation is simply multiplicative, this field shall include only the conversion factor. For example, if (results SI units) = c * (results reporting units), then only c would be stored in this field. In the case of any other functional relationship, the entire equation would be stored as a test.

8.8.9.6 OM2-6 Reference (Normal) Range for Ordinal and Continuous Observations (RFR) 00631

```
Components:  <Numeric Range (NR)> ^ <Administrative Sex (CWE)> ^ <Age Range (NR)> ^
           <Gestational Age Range (NR)> ^ <Species (ST)> ^ <Race/subspecies (ST)> ^
           <Conditions (TX)>

Subcomponents for Numeric Range (NR):  <Low Value (NM)> & <High Value (NM)>

Subcomponents for Administrative Sex (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
           of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
           (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID
           (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
           <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
           of Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Age Range (NR):  <Low Value (NM)> & <High Value (NM)>

Subcomponents for Gestational Age Range (NR):  <Low Value (NM)> & <High Value (NM)>
```

Definition: This field contains the reference (normal) ranges for "numeric" observations/tests with a nature code of A or C (see *OM1-18 - Nature of Service/Test/Observation*). It can identify different reference (normal) ranges for different categories of patients according to age, sex, race, and other conditions.

In the first component of this field (Normal Range (NR)), the units are assumed to be identical to the reporting units given in *OM2-2 - Units of Measure*.

When two different methods result in two different reference ranges, two different observations and corresponding OMx segments should be defined.

8.8.9.7 OM2-7 Critical Range for Ordinal and Continuous Observations (RFR) 00632

```
Components:  <Numeric Range (NR)> ^ <Administrative Sex (CWE)> ^ <Age Range (NR)> ^
           <Gestational Age Range (NR)> ^ <Species (ST)> ^ <Race/subspecies (ST)> ^
           <Conditions (TX)>

Subcomponents for Numeric Range (NR):  <Low Value (NM)> & <High Value (NM)>

Subcomponents for Administrative Sex (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
           of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
           (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID
           (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
           <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
           of Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Age Range (NR):  <Low Value (NM)> & <High Value (NM)>

Subcomponents for Gestational Age Range (NR):  <Low Value (NM)> & <High Value (NM)>
```

Definition: This field applies only to single tests/observations (i.e., a nature code of A or C, as described in *OM1-18 - Nature of Service/Test/Observation*) with numeric results). When a critical range is defined for such observations, it should be recorded here in the same format as the normal range (see *OM2-6 - Reference (Normal) Range - Ordinal and Continuous Observations*).

8.8.9.8 OM2-8 Absolute Range for Ordinal and Continuous Observations (RFR) 00633

```
Components:  <Numeric Range (NR)> ^ <Administrative Sex (CWE)> ^ <Age Range (NR)> ^
             <Gestational Age Range (NR)> ^ <Species (ST)> ^ <Race/subspecies (ST)> ^
             <Conditions (TX)>

Subcomponents for Numeric Range (NR):  <Low Value (NM)> & <High Value (NM)>

Subcomponents for Administrative Sex (CWE):  <Identifier (ST)> & <Text (ST)> & <Name
             of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text
             (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID
             (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
             <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
             of Second Alternate Coding System (ID)> & <Second Alternate Coding System
             Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
             <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
             OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Age Range (NR):  <Low Value (NM)> & <High Value (NM)>

Subcomponents for Gestational Age Range (NR):  <Low Value (NM)> & <High Value (NM)>
```

Definition: This field applies only to single tests/observations with a nature code of A or C (see *OM1-18 - Nature of Service/Test/Observation*). It defines the range of possible results. Results outside this range are not possible. The field should be recorded in the same format as the normal and critical ranges.

8.8.9.9 OM2-9 Delta Check Criteria (DLT) 00634

```
Components:  <Normal Range (NR)> ^ <Numeric Threshold (NM)> ^ <Change Computation
             (ID)> ^ <Days Retained (NM)>

Subcomponents for Normal Range (NR):  <Low Value (NM)> & <High Value (NM)>
```

Definition: This field applies to numeric tests/observations with a nature code of A or C (see *OM1-18 - Nature of Service/Test/Observation*). The field describes the information that controls delta check warnings and includes four components.

1) The range to which the following applies: <low & high>.
   All the ranges are defined in terms of the customary reporting units given in *OM2-2 - Units of Measure*.
   If no value range is given, the check applies to all values.

2) The numeric threshold of the change that is detected, e.g., 10.

3) Whether the change is computed as a percent change or an absolute change. This component can have two possible values:

   % indicates a percent change
   a absolute change

4) The length of time that the service retains a value for computing delta checks. This is recorded in number of days.

   More than one delta check rule can apply. 13&16^10^%^100~16.1&20^2^a^100 implies that the delta check will trigger on a 10% change when the value of the observation is between 13 and 16. The check will trigger on an absolute change of 2 when the value is between 16.1 and 20. In both cases, the system will keep the last result for 100 days. In this example, beyond 100 days, the computer will not compute a delta check because it will not have a comparison value.

8.8.9.10 OM2-10 Minimum Meaningful Increments (NM) 00635

Definition: This field contains the numerically valued single observations (a nature code of A or C, as described in *OM1-18 - Nature of Service/Test/Observation*) and specifies the smallest meaningful difference between reported values (the effective resolution of the measuring instrument or technique for continuous data, or the smallest discrete interval that can occur for discrete data).

8.8.10 OM3 - Categorical Service/Test/Observation Segment

The Technical Steward for the OM3 segment is Orders and Observations.

This segment applies to free text and other non-numeric data types.

HL7 Attribute Table - OM3 - Categorical Service/Test/Observation

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1		4=	NM	O			00586	Sequence Number - Test/Observation Master File
2			CWE	O		9999	00636	Preferred Coding System
3			CWE	O	Y	9999	00637	Valid Coded "Answers"
4			CWE	O	Y	9999	00638	Normal Text/Codes for Categorical Observations
5			CWE	O	Y	9999	00639	Abnormal Text/Codes for Categorical Observations
6			CWE	O	Y	9999	00640	Critical Text/Codes for Categorical Observations
7	2..3		ID	O		0125	00570	Value Type

8.8.10.1 OM3-1 Sequence Number - Test/Observation Master File (NM) 00586

Definition: This field contains the same value as the sequence number of the associated OM1 segment.

8.8.10.2 OM3-2 Preferred Coding System (CWE) 00636

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the observations whose categorical responses are taken from a specified table of codes (e.g., CWE data types). Record the preferred coding system for this observation (e.g., ICD9, SNOMED III).

8.8.10.3 OM3-3 Valid Coded "Answers" (CWE) 00637

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains a list of valid coded answers. In the case that the list of coded answers is easily enumerated, list the valid coded answers for this observation here using the preferred coding system given in *OM3-2 - Preferred Coding System*. If, for example, the given observation was VDRL, the valid answers might be "non-reactive", "86^ intermediate", and "87^ reactive".

8.8.10.4 OM3-4 Normal Text/Codes for Categorical Observations (CWE) 00638

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: Certain observations/tests with a nature code of A or C (see *OM1-18 - Nature of Service/Test/Observation*) have text (alpha) results (e.g., reactive, nonreactive). Alpha normals for those tests should be entered in this field (e.g., "nonreactive").

The format of this field is:

The first component is a code taken from a standard code source list. The second component is the text associated with the code. The third component is the identification of the code table source. When only a text description of a possible answer is available, it is recorded as ^<text>.

Care should be taken to transmit only those results that are considered normal for that test. A drug screen may have possible results of "negative" and "positive." However, only a result of "negative" is considered to be normal. When an observation has more than one "normal" result, multiple values in this field should be separated with a repeat delimiter.

8.8.10.5 OM3-5 Abnormal Text/Codes for Categorical Observations (CWE) 00639

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the list of the text answers that are abnormal for the test.

8.8.10.6 OM3-6 Critical Text/Codes for Categorical Observations (CWE) 00640

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the list of coded results that are critically abnormal for this observation.

8.8.10.7 OM3-7 Value Type (ID) 00570

Definition: This field contains the allowed data type for a single categorical observation (code A or C in *OM1-18 - Nature of Observation*). Refer to *HL7 Table 0125 – Value Type* in Chapter 2C, Code Tables, for valid values.

8.8.11 OM4 - Observations That Require Specimens Segment

The Technical Steward for the OM4 segment is Orders and Observations.

This segment applies to observations/batteries that require a specimen for their performance. When an observation or battery requires multiple specimens for their performance (e.g., creatinine clearance requires a 24-hour urine specimen and a serum specimen), multiple segments may be included, one for each specimen type.

OM4 is a repeating segment. It allows multiple specimens per Order Code and accommodates for multiple alternate specimen for each preferred specimen. In some cases an Order Code can require multiple specimens. In many cases there are preferred specimens and for each preferred it is possible to have one or more alternative specimens. The alternative specimen will carry in OM4-17 the Sequence Number – Test/Observation Master File (OM4-1) of the preferred specimen.

HL7 Attribute Table - OM4 - Observations that Require Specimens

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1		4=	NM	O			00586	Sequence Number - Test/Observation Master File
2	1..1		ID	O		0170	00642	Derived Specimen
3	1..60	60=	TX	O	Y		00643	Container Description
4			NM	O	Y		00644	Container Volume
5			CWE	O	Y	9999	00645	Container Units
6			CWE	O		9999	00646	Specimen
7			CWE	O		0371	00647	Additive
8			TX	O			00648	Preparation
9			TX	O			00649	Special Handling Requirements
10			CQ	O			00650	Normal Collection Volume
11			CQ	O			00651	Minimum Collection Volume
12			TX	O			00652	Specimen Requirements
13	1..1		ID	O	Y	0027	00653	Specimen Priorities
14			CQ	O			00654	Specimen Retention Time
15			CWE	O	Y	0376	01908	Specimen Handling Code
16			ID	O		0920	03311	Specimen Preference
17			NM	O			03312	Preferred Specimen/Attribture Sequence ID
18			CWE	O	Y	9999	01539	Taxonomic Classification Code

8.8.11.1 OM4-1 Sequence Number - Test/Observation Master File (NM) 00586

Definition: This field contains the same value as the sequence number of the associated OM1 segment.

8.8.11.2 OM4-2 Derived Specimen (ID) 00642

Definition: This field contains the codes that identify the parents and children for diagnostic studies—especially in microbiology—where the initial specimen (e.g., blood) is processed to produce results (e.g., the identity of the bacteria grown out of the culture). The process also produces new "specimens" (e.g.,

pure culture of staphylococcus, and E. coli), and these are studied by a second order process (bacterial sensitivities). The parents (e.g., blood culture) and children (e.g., penicillin MIC) are identified in such cases. Refer to *HL7 Table 0170 - Derived Specimen* in Chapter 2C, Code Tables, for valid values:

8.8.11.3 OM4-3 Container Description (TX) 00643

Definition: This field contains the physical appearance, including color of tube tops, shape, and material composition (e.g., red-top glass tube). Note that the color is not necessarily a unique identifier of the additive and/or use of the tube. This is especially true for black and some blue tube tops, as can be seen above. Color is included here for user convenience. This field repeats to accommodate all the possible specimen that will be allowed. If a container is preferred, only that container should be messaged here with the alternate containers messaged in a repeat OM4 segment.

8.8.11.4 OM4-4 Container Volume (NM) 00644

Definition: This field indicates the capacity of the container. This field repeats to accommodate all the possible specimen that will be allowed. If a container is preferred, only that container should be messaged here with the alternate containers messaged in a repeat OM4 segment

8.8.11.5 OM4-5 Container Units (CWE) 00645

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the units of measure of the container volume. If the units are ISO+ units, they should be recorded as single case abbreviations. If the units are ANS+ or L (local), the units and the source code table must be recorded, except that in this case, component delimiters should be replaced by subcomponent delimiters. For example, 1 indicates liters, whereas pt&&ANS+ indicates pints (ANSI units). The default unit is milliliters (ml), which should be assumed if no units are reported. This field repeats to accommodate all the possible specimen that will be allowed. If a container is preferred, only that container units should be messaged here with the alternate containers messaged in a repeat OM4 segment

8.8.11.6 OM4-6 Specimen (CWE) 00646

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: Describes the specimen from an appropriate controlled vocabulary. If multiple kinds of specimen are associated with this observation (as in the case for a creatinine clearance), multiple segments may be included, one for each specimen type.

8.8.11.7 OM4-7 Additive (CWE) 00647

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the codes that should be those provided by NCCLS[3]. Refer to *HL7 Table 0371 - Additive/Preservative* in Chapter 2C, Code Tables, for valid values. The table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.

This table was not specified in previous versions and thus sites may choose to use other site-specific tables.

8.8.11.8 OM4-8 Preparation (TX) 00648

Definition: This field contains the special processing that should be applied to the container, e.g., add acidifying tablets before sending.

8.8.11.9 OM4-9 Special Handling Requirements (TX) 00649

Definition: This field contains the special handling requirements here (e.g., ice specimen, deliver within two hours of obtaining).

8.8.11.10 OM4-10 Normal Collection Volume (CQ) 00650

```
Components:  <Quantity (NM)> ^ <Units (CWE)>

Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of Coding
           System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name
           of Alternate Coding System (ID)> & <Coding System Version ID (ST)> &
           <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second
           Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of
           Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the normal specimen volume required by the lab. This is the amount used by the normal methods and provides enough specimens to repeat the procedure at least once if needed. The default unit is milliliters (ml).

8.8.11.11 OM4-11 Minimum Collection Volume (CQ) 00651

```
Components:  <Quantity (NM)> ^ <Units (CWE)>

Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of Coding
           System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name
           of Alternate Coding System (ID)> & <Coding System Version ID (ST)> &
           <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second
           Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of
           Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

[3] NCCLS Document H1-A3: Evacuated tubes for blood specimen collection -- Third Edition, Volume 11, Number 9, Approved standard. July 1991.

Definition: This field contains the amount of specimen needed by the most specimen sparing method (e.g., using micro techniques). The minimum amount allows for only one determination. The default unit is milliliters (ml).

8.8.11.12 OM4-12 Specimen Requirements (TX) 00652

Definition: This field contains the other requirements for specimen delivery and special handling (e.g., delivery within one hour, iced).

8.8.11.13 OM4-13 Specimen Priorities (ID) 00653

Definition: This field contains the allowed priorities for obtaining the specimen. Note that they may be different from the processing priorities given in *OM1-25 - Processing Priority*. When a test is requested, the specimen priority given in *TQ1-9 - Priority* should be one of the priorities listed here. Multiple priorities are separated by repeat delimiters. Refer to *HL7 Table 0027 - Priority* in Chapter 2C, Code Tables, for valid values.

8.8.11.14 OM4-14 Specimen Retention Time (CQ) 00654

```
Components:  <Quantity (NM)> ^ <Units (CWE)>

Subcomponents for Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of Coding
           System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name
           of Alternate Coding System (ID)> & <Coding System Version ID (ST)> &
           <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second
           Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of
           Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the usual time that a specimen for this observation is retained after the observation is completed, for the purpose of additional testing. The first component is the duration, and the second component is an ISO time unit.

8.8.11.15 OM4-15 Specimen Handling Code (CWE) 01908

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This describes how the specimen and/or container need to be handled from the time of collection through the initiation of testing. As this field is not required, no assumptions can be made as to meaning when this field is not populated.

Refer to *User-defined Table 0376 – Special Handling Code* in Chapter 2C, Code Tables, for suggested values.

8.8.11.16 OM4-16 Specimen Preference (ID) 03311

Definition: This field indicates whether the Specimen/Attribute is Preferred or alternate for collection of the specimen. There can only be one occurrence of a Preferred or Alternate Specimen/Attribute for the code referenced in *OM4-6 Specimen*. For example, if two OM4 segments are received for specimen type of Serum, only one can be marked as Preferred. Refer to *HL7 Table 0920 – Preferred Specimen/Attribute Status* in Chapter 2C, Code Tables, for suggested values.

8.8.11.17 OM4-17 Preferred Specimen/Attribute Sequence (NM) 03312

Definition: This field contains the value of the sequence number of the Preferred Specimen that these specimens are the alternative for. Note: For the preferred specimen (i.e., OM4-16 = "P"), this field is not populated. This field is used by the Alternate Specimen (i.e., OM4-16 = "A") to point to the preferred specimen that it is to replace or be used as an alternative.

Example:

Preferred specimen

OM4|0001||Tiger Top|... to field16|Y||

OM4|0002||Plastic Screw Top|0.5|mL|Urine|without 6N HCl| ... to field16|Y||

Alternate specimen

OM4|0003||Red Top|... to field16|A|0001|

8.8.11.18 OM4-18 Taxonomic Classification Code (CWE) 01539

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: The species of living organism. This may include the common or scientific name, based on the coding system(s) used. SNOMED is the recommended coding system. If this field is not valued, a human is assumed. Refer to User-defined Table 0446 - Species Code for suggested values.

For example:

...|L-80700^Canine, NOS^SNM3|...

...|L-80100^Bovine^SNM3|...

...|L-80A00^Feline^SNM3|....

This field is a list of species or other taxonomic classification(s) to which the indicated specimen type may appropriately be applied for the indicated observation or test. If this field is omitted the default meaning is that the test or observation is applicable to humans. In a veterinary context, if the test is applicable to any species, an appropriate code such as "Kingdom Animalia (organism)" should be used to avoid confusion with the meaning of human only.

8.8.12 OM5 - Observation Batteries (Sets) Segment

The Technical Steward for the OM5 segment is Orders and Observations.

This segment contains the information about batteries and supersets (a nature code of F, P or S, as described in *OM1-18 - Nature of Service/Test/Observation*).

HL7 Attribute Table - OM5 - Observation Batteries (Sets)

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1		4=	NM	O			00586	Sequence Number - Test/Observation Master File
2			CWE	O	Y	9999	00655	Test/Observations Included Within an Ordered Test Battery
3			ST	O			00656	Observation ID Suffixes

8.8.12.1 OM5-1 Sequence Number - Test/Observation Master File (NM)

00586

Definition: This field contains the same value as the sequence number of the associated OM1 segment.

8.8.12.2 OM5-2 Tests/Observations Included Within an Ordered Test Battery (CWE) 00655

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the codes and names of all tests/observations included within a single battery (nature code P, as described in *OM1-18 - Nature of Service/Test/Observation*), a single functional procedure (nature code F), or a given superset (nature code S). When a segment includes a list of component elements, the sending system should be sure that the segments defining all of the components are sent before the segment that references them. An entry in this list can itself be a battery.

The individual service/test/observation IDs should be recorded as type CWE, i.e., in the standard format for coded observation identifiers. Multiple observations should be separated by repeat delimiters.

If the definition segment defined serum electrolytes, this field might look like the following:

2951-2^SODIUM^LN~

2823-3^POTASSIUM^LN~

2075-0^CHLORIDE^LN~

2028-9^CARBON DIOXIDE^LN

For S (superset) parameters, this field contains the batteries that are included within the "super" battery. For example, ROUTINES might be defined as:

402^Electrolytes~352^Urinalysis~432^CBC~520^SMA12

8.8.12.3 OM5-3 Observation ID Suffixes (ST) 00656

Definition: This field contains the tests or procedures that produce a type which uses observation ID suffixes following the service/test/observation ID code. This field lists the possible options. For example, a chest X-ray may use the suffixes IMP, REC, DEV, or others. Each of the expected suffixes should be listed here.

8.8.13 OM6 - Observations that are Calculated from Other Observations Segments

The Technical Steward for the OM6 segment is Orders and Observations.

This segment contains the information about quantities that are derived from one or more other quantities or direct observations by mathematical or logical means.

HL7 Attribute Table - OM6 - Observations that are Calculated from Other Observations

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1		4=	NM	O			00586	Sequence Number - Test/Observation Master File
2			TX	O			00657	Derivation Rule

8.8.13.1 OM6-1 Sequence Number -Test/Observation Master File (NM)

00586

Definition: This field contains the same value as the sequence number of the associated OM1 segment.

8.8.13.2 OM6-2 Derivation Rule (TX) 00657

Definition: This field is used when there are patient variables that are derived from one or more other patient variables (e.g., creatinine clearance, ideal weight, maximum daily temperature, average glucose, framingham risk). This field contains the rules for deriving the value of this variable (i.e., nature code C, as given in *OM1-18 - Nature of Service/Test/Observation*). These can be described in terms of humanly understandable formulas or descriptions.

When possible, however, they should be defined in terms of the Arden Syntax for specifying selection and transcendative functions and algebraic operations, ASTM E1460-92. Derivation rules that are represented in Arden Syntax should begin and end with an Arden slot delimiter (;;). Within this syntax, variables should be identified by *OM1-2 - Producer's Service/Test/Observation ID*. We recommend the use of the Arden Syntax because it permits the unambiguous specification of most such derived values and is a published standard for medical logic modules.

8.8.14 OM7 - Additional Basic Attributes (Fields That Apply to Most Observations/Services)

The Technical Steward for the OM7 segment is Orders and Observations.

The OM7 segment contains additional basic attributes that apply to the definition of most observations/services.

HL7 Attribute Table - OM7 - Additional Basic Attributes

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1		4=	NM	R			00586	Sequence Number - Test/Observation Master File
2			CWE	R			00238	Universal Service Identifier
3			CWE	O	Y	0412	01481	Category Identifier
4		200=	TX	O			01482	Category Description
5		200#	ST	O	Y		01483	Category Synonym
6			DTM	O			01484	Effective Test/Service Start Date/Time
7			DTM	O			01485	Effective Test/Service End Date/Time
8		5#	NM	O			01486	Test/Service Default Duration Quantity
9			CWE	O		9999	01487	Test/Service Default Duration Units
10		60=	CWE	O			01488	Test/Service Default Frequency
11	1..1		ID	O		0136	01489	Consent Indicator
12			CWE	O		0413	01490	Consent Identifier
13			DTM	O			01491	Consent Effective Start Date/Time
14			DTM	O			01492	Consent Effective End Date/Time
15		5#	NM	O			01493	Consent Interval Quantity
16			CWE	C		0414	01494	Consent Interval Units
17		5#	NM	O			01495	Consent Waiting Period Quantity
18			CWE	C		0414	01496	Consent Waiting Period Units
19			DTM	O			00607	Effective Date/Time of Change
20			XCN	B			00224	Entered By
21			PL	B	Y		01497	Orderable-at Location

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
22		1=	CWE	O		0473	01498	Formulary Status
23	1..1		ID	O		0136	01499	Special Order Indicator
24			CWE	O	Y		01306	Primary Key Value - CDM

8.8.14.0 OM7 Field Definitions

8.8.14.1 OM7-1 Sequence Number -Test/Observation Master File (NM) 00586

Definition: This field contains the value as the sequence number.

8.8.14.2 OM7-2 Universal Service Identifier (CWE) 00238

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the producer's usual or preferred identification of the test or service.

8.8.14.3 OM7-3 Category Identifier (CWE) 01481

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the category name (term given to a group of service items for the purpose of classification). Examples: Laboratory, Pharmacy, Diagnostic Imaging, etc. Refer to *User-defined Table 0412 - Category Identifier* in Chapter 2C, Code Tables, for suggested values.

8.8.14.4 OM7-4 Category Description (TX) 01482

Definition: This field contains a text description for the category of the test/service item.

Example: The category "Pathology" may be described as a specialty practice concerned with all aspects of disease, with special reference to the essential natural cause and development of abnormal conditions, as well as the structural and functional changes that result from the disease process.

8.8.14.5 OM7-5 Category Synonym (ST) 01483

Definition: This field contains an alternate name(s) for the category of the test/service. Example: The category "Radiology" is a synonym name for the category "Diagnostic Imaging".

8.8.14.6 OM7-6 Effective Test/Service Start Date/Time (DTM) 01484

Definition: This field contains the date and time that the service item is available to be ordered, performed, etc.

8.8.14.7 OM7-7 Effective Test/Service End Date/Time (DTM) 01485

Definition: This field contains the date and time that the service item is no longer authorized to be ordered, performed, etc.

8.8.14.8 OM7-8 Test/Service Default Duration Quantity (NM) 01486

Definition: This field indicates the default duration quantity for the service.

8.8.14.9 OM7-9 Test/Service Default Duration Units (CWE) 01487

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates the default duration units for the service.

8.8.14.10 OM7-10 Test/Service Default Frequency (CWE) 01488

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates the default frequency (how often) the service would be ordered for or performed on.

8.8.14.11 OM7-11 Consent Indicator (ID) 01489

Definition: This field indicates if a consent is needed for the service item. Refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables.

Y A consent is required for service item to be ordered/performed.

N No consent is needed for service item to be ordered/performed

8.8.14.12 OM7-12 Consent Identifier (CWE) 01490

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the identifier for the consent specified for the service item. Refer to *User-defined Table 0413 - Consent Identifier* in Chapter 2C, Code Tables, for suggested values.

8.8.14.13 OM7-13 Consent Effective Start Date/Time (DTM) 01491

Definition: This field contains the date and time the consent is valid for the service item.

8.8.14.14 OM7-14 Consent Effective End Date/Time (DTM) 01492

Definition: This field contains the date and time the consent is no longer valid for the test/service.

8.8.14.15 OM7-15 Consent Interval Quantity (NM) 01493

Definition: This field specifies the period of time for which a consent is valid for a specific service item.

8.8.14.16 OM7-16 Consent Interval Units (CWE) 01494

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field specifies the unit of time for *OM7-15 - Consent Interval Quantity*. Refer to *User-defined Table 0414 - Units of Time* in Chapter 2C, Code Tables, for suggested values.

Note: If Consent Interval Quantity is specified, then Consent Interval Unit is required.

8.8.14.17 OM7-17 Consent Waiting Period Quantity (NM) 01495

Definition: This field contains the time period between the time the consent is signed and the procedure can be performed.

8.8.14.18 OM7-18 Consent Waiting Period Units (CWE) 01496

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field specifies the unit of time for *OM7-17 - Consent Waiting Period Quantity*. Refer to *User-defined Table 0414 - Units of time* in Chapter 2C, Code Tables, for suggested values.

Note: If Consent Waiting Period Quantity is specified, then Consent Waiting Period Unit is required.

8.8.14.19 OM7-19 Effective Date/Time of Change (DTM) 00607

Definition: This field contains the date and time of the last change in the test procedure that would make previous results incompatible with new results.

8.8.14.20 OM7-20 Entered By (XCN) 00224

Components: <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^ <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^ <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN): <Surname (ST)> & <Own Surname Prefix (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field contains the identity of the person who actually keyed the service item into the application. It provides an audit trail in case the request is entered incorrectly and the ancillary department needs to clarify the request.

8.8.14.21 OM7-21 Orderable-at Location (PL) 01497

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
             <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
             <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
             Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
             Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
             <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
             <Universal ID (ST)> & <Universal ID Type (ID)>
```

Note: This field is deprecated and retained for backward compatibility as of v 2.8.

Definition: This field contains the location(s) where the test/service can be ordered.

8.8.14.22 OM7-22 Formulary Status (CWE) 01498

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates whether or not the service (pharmaceutical) is in the formulary. Refer to *User-defined Table 0473 - Formulary Status* in Chapter 2C, Code Tables, for valid values.

8.8.14.23 OM7-23 Special Order Indicator (ID) 01499

Definition: This field indicates whether or not the service (pharmaceutical) is a special order. Refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values.

Y This is a special order.

N This is not a special order

8.8.14.24 OM7-24 Primary Key Value - CDM (CWE) 01306

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: Allows the ability to associate a Service/Test/Observation item with a CIM (charge item master). This field contains the corresponding value of CDM-1 for the CIM being linked to. It is possible to allow multiple charge items to a single Service/Test/Observation item.

8.9 LOCATION MASTER FILES

8.9.1 MFN/MFK - Patient Location Master File Message (event M05)

This section is specifically concerned with describing a master file message that should be used to transmit information which identifies the inventory of healthcare patient locations, such as nursing units, rooms, beds, clinics, exam rooms, etc. In a network environment, this segment can be used to define patient locations to other applications. The segment also includes the readiness states and support locations for the patient locations.

The LOC, LCH, LRL, LDP, and LCC segments must be preceded by the MFI and MFE segments, as described in Section *8.5*, "*GENERAL MASTER FILE SEGMENTS*." In the following message, the *MFI-1 - Master File Identifier* field should equal "LOC"

MFN^M05^MFN_M05: Master File Notification - Patient Location

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_LOCATION begin		
MFE	Master File Entry		8
LOC	Patient Location Master		8
[{ LCH }]	Location Characteristic		8
[{ LRL }]	Location Relationship		8
{	--- MF_LOC_DEPT begin		
LDP	Location Department		8
[{ LCH }]	Location Characteristic		8
[{ LCC }]	Location Charge Code		8
}	--- MF_LOC_DEPT end		
}	--- MF_LOCATION end		

When the LCH segment appears immediately following the LOC segment, it communicates characteristics which are the same across multiple departments that may use the same room. When the LCH segment appears immediately following the LDP segment, it communicates characteristics which differ for different departments that may use the same room.

MFK^M05^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK		8

8.9.2 LOC - Location Identification Segment

The Technical Steward for the LOC segment is Patient Administration.

The LOC segment can identify any patient location referenced by information systems. This segment gives physical set up information about the location. This is not intended to include any current occupant or current use information. There should be one LOC segment for each patient location. If desired, there can also be one LOC segment for each nursing unit and room.

HL7 Attribute Table - LOC - Location Identification

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			PL	R			01307	Primary Key Value - LOC
2		48#	ST	O			00944	Location Description
3		1=	CWE	R	Y	0260	00945	Location Type - LOC
4			XON	O	Y		00947	Organization Name - LOC
5			XAD	O	Y		00948	Location Address
6			XTN	O	Y		00949	Location Phone
7			CWE	O	Y	0461	00951	License Number
8		3=	CWE	O	Y	0261	00953	Location Equipment
9		1=	CWE	O		0442	01583	Location Service Code

8.9.2.1 LOC-1 Primary Key Value - LOC (PL) 01307

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
             <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
             <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
             Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
             Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>
```

```
Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
          ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
          <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
          <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the institution's identification code for the location. The identifying key value. Must match *MFE-4 -Primary Key Value - MFE*. This field has the same components as the patient location fields in the PV1 segment (except that bed status is not included here).

At least the first component of this field is required. The first component can be an identifying code for the nursing station for inpatient locations, or clinic, department or home for patient locations other than inpatient ones.

8.9.2.2 LOC-2 Location Description (ST) 00944

Definition: This field contains the optional free text description of the location, to elaborate upon LOC primary key value.

8.9.2.3 LOC-3 Location Type - LOC (CWE) 00945

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
          <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
          Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
          System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
          Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
          Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
          (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
          Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
          Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
          Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
          Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the code identifying what type of location this is. Refer to *User-defined Table 0260 - Patient Location Type* in Chapter 2C, Code Tables, for suggested values.

8.9.2.4 LOC-4 Organization Name - LOC (XON) 00947

```
Components:  <Organization Name (ST)> ^ <Organization Name Type Code (CWE)> ^
          <WITHDRAWN Constituent> ^ <WITHDRAWN Constituent> ^ <WITHDRAWN
          Constituent> ^ <Assigning Authority (HD)> ^ <Identifier Type Code (ID)> ^
          <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^
          <Organization Identifier (ST)>

Subcomponents for Organization Name Type Code (CWE):  <Identifier (ST)> & <Text (ST)>
          & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
          Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
          Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original
          Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text
          (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate
          Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID
          (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
          & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)>
          & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
          & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
          & <Universal ID Type (ID)>
```

Definition: This field contains the organization(s) of which this location is a part. For inpatient locations, this can be the hospital or institution name. For outpatient locations, this can be the clinic or office name.

8.9.2.5 LOC-5 Location Address (XAD) 00948

Components: <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^ <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^ <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^ <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^ <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^ <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> & <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Census Tract (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Definition: This field contains the address of the patient location, especially for use for outpatient clinic or office locations.

8.9.2.6 LOC-6 Location Phone (XTN) 00949

```
Components:  <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^
          <Telecommunication Equipment Type (ID)> ^ <Communication Address (ST)> ^
          <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local Number (SNM)> ^
          <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension Prefix (ST)> ^ <Speed
          Dial Code (ST)> ^ <Unformatted Telephone number  (ST)> ^ <Effective Start
          Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
          <Protection Code (CWE)> ^ <Shared Telecommunication Identifier (EI)> ^
          <Preference Order (NM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
          Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
          & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
          & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
          <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
          of Second Alternate Coding System (ID)> & <Second Alternate Coding System
          Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
          <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
          <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
          Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
          & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
          & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
          <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
          of Second Alternate Coding System (ID)> & <Second Alternate Coding System
          Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
          <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
          <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI):  <Entity Identifier (ST)>
          & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the phone number within the patient location, if any. For example, the room or bed phone for use by the patient.

8.9.2.7 LOC-7 License Number (CWE) 00951

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
          <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
          Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
          System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
          Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
          Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
          (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
          Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
          Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
          Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
          Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the multiple license numbers for the facility. Refer to *User-defined Table 0461 - License Number* in Chapter 2C, Code Tables, for suggested values.

8.9.2.8 LOC-8 Location Equipment (CWE) 00953

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
          <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
          Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
          System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
          Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
          Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
          (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
          Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
          Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
          Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
          Alternate Value Set Version ID (DTM)>
```

Definition: This repeating field indicates what types of equipment are built in. Applies only to room or bed locations. If *LOC-3 - Location Type* indicates that this is a room, this will be the equipment in the room which can be used by more than one bed. If *LOC-3 - Location Type* indicates this is a bed, this will be the bedside devices available to this bed. Refer to *User-defined Table 0261 - Location Equipment* in Chapter 2C, Code Tables, for suggested values.

8.9.2.9 LOC-9 Location Service Code (CWE) 01583

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field categorizes the types of services provided by the location. Refer to *User-defined Table 0442 - Location Service Code* in Chapter 2C, Code Tables, for suggested values.

8.9.3 LCH - Location Characteristic Segment

The Technical Steward for the LCH segment is Patient Administration.

The LCH segment is used to identify location characteristics which determine which patients will be assigned to the room or bed. It contains the location characteristics of the room or bed identified in the preceding LOC segment. There should be one LCH segment for each attribute.

When the LCH segment appears immediately following the LOC segment, it communicates characteristics which are the same across multiple departments that may use the same room. When the LCH segment appears immediately following the LDP segment, it communicates characteristics which differ for different departments that may use the same room. For example, the following characteristics are more likely to vary by which department is using the room: teaching, gender, staffed, set up, overflow, whereas the other characteristics are likely to remain the same.

HL7 Attribute Table - LCH - Location Characteristic

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			PL	R			01305	Primary Key Value - LCH
2	1..1		ID	O		0206	00763	Segment Action Code
3			EI	O			00764	Segment Unique Key
4			CWE	R		0324	01295	Location Characteristic ID
5			CWE	R		0136/ 0262/ 0263	01294	Location Characteristic Value - LCH

8.9.3.1 LCH-1 Primary Key Value - LCH (PL) 01305

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
             <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
             <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
             Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>
```

```
Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
          Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
          ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
          <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
          <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the institution's identification code for the location. The identifying key value. This field has the same components as the patient location fields in the PV1 segment (except that bed status is not included here). At least the first component of this field is required. The contents of this field must exactly match the content of its preceding MFE (MFE-4 - Primary Key Value - MFE), its preceding LOC (*LOC-1 - Primary Key Value - LOC*), and its preceding LDP (*LDP-1 - Primary Key Value - LDP*).

8.9.3.2 LCH-2 Segment Action Code (ID) 00763

Definition: This field indicates whether this repetition of the segment is being added, changed or deleted. The action code adds a validation check to indicate, from the point of view of the sending system, whether this repetition of a segment is being added, changed or deleted. This and the following field are used to implement the "unique key" mode of updating repeating segments. (See Chapter 2, section 2.10.4.2, "Action code/unique identifier mode update definition.") Refer to *HL7 Table 0206 - Segment Action Code* in Chapter 2C, Code Tables, for valid values.

8.9.3.3 LCH-3 Segment Unique Key (EI) 00764

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID (ST)> ^
          <Universal ID Type (ID)>
```

Definition: This field contains a unique identifier for one of the multiple repetitions of this segment, to be used in conjunction with the preceding field. Each of the repetitions of the segment will be uniquely identified by this unique key field for the purposes of updates.

8.9.3.4 LCH-4 Location Characteristic ID (CWE) 01295

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
          <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
          Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
          System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
          Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
          Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
          (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
          Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
          Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
          Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
          Alternate Value Set Version ID (DTM)>
```

Definition: This field contains an identifier code to show WHICH characteristic is being communicated with this segment. Refer to *User-defined Table 0324 - Location Characteristic ID* in Chapter 2C, Code Tables, for suggested values.

8.9.3.5 LCH-5 Location Characteristic Value - LCH (CWE) 01294

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the value of the above field's characteristic. The expected coded values for this field will depend upon the previous field. For example, if the previous field is SMK, IMP, INF, the values would be "Y" or "N".

When LCH-4-location characteristic ID contains "SHA"- Shadow, refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values for *LRL-5 - Organizational Location Relationship Value*.

Y not a real bed, but a temporary holding location that does not physically exist in the census

N this is a real bed

When *LCH-4 - Location Characteristic ID* contains "PRL"- Privacy level (CWE), then *LRL-5 - Organizational Location Relationship Value* indicates how the room is set up and intended to be used, disregarding different uses under special circumstances. Refer to *User-defined Table 0262 - Privacy Level* in Chapter 2C, Code Tables, for suggested values.

When *LCH-4 - Location Characteristic ID* contains "LCR"- Level of care, then *LRL-5 - Organizational Location Relationship Value* contains the code which indicates what severity of the patient's medical condition which this location is designed to handle. This indicates how the room is set up and intended to be used, disregarding different uses under special circumstances. Refer to *User-defined Table 0263 - Level of Care* in Chapter 2C, Code Tables, for suggested values.

When *LCH-4 - Location Characteristic ID* contains "IFD"- Infectious disease, refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values for *LRL-5 - Organizational Location Relationship Value*.

Y patients with infectious diseases can be admitted to this location, that is, this location can be used for isolation

N this location cannot be used for isolation

When *LCH-4 - Location Characteristic ID* contains "SMO"- Smoking, refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values for *LRL-5 - Organizational Location Relationship Value*.

Y this is a smoking location

N this is a non-smoking location

When *LCH-4 - Location Characteristic ID* contains "IMP"- Implant, refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values for *LRL-5 - Organizational Location Relationship Value*.

Y this location can be used by radiation implant patients

N this location can not be used by radiation implant patients

When *LCH-4 - Location Characteristic ID* contains "LIC"- Licensed, refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values for *LRL-5 - Organizational Location Relationship Value*.

Y this location is licensed

N this location is not licensed

8.9.4 LRL - Location Relationship Segment

The Technical Steward for the LRL segment is Patient Administration.

The LRL segment is used to identify one location's relationship to another location, the nearest lab, pharmacy, etc.

HL7 Attribute Table - LRL - Location Relationship

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			PL	R			00943	Primary Key Value - LRL
2	1..1		ID	O		0206	00763	Segment Action Code
3			EI	O			00764	Segment Unique Key
4			CWE	R		0325	01277	Location Relationship ID
5			XON	C	Y		01301	Organizational Location Relationship Value
6			PL	C			01292	Patient Location Relationship Value

8.9.4.1 LRL-1 Primary Key Value - LRL (PL) 00943

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
             <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
             <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
             Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
             Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
             <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
             <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the institution's identification code for the location. The identifying key value. This field has the same components as the patient location fields in the PV1 segment (except that bed status is not included here). At least the first component of this field is required. The contents of this field must exactly match the content of its preceding MFE (*MFE-4 - Primary Key Value - MFE*), its preceding LOC (*LOC-1 - Primary Key Value - LOC*), and its preceding LDP (*LDP-1 - Primary Key Value - LDP*).

8.9.4.2 LRL-2 Segment Action Code (ID) 00763

Definition: This field indicates whether this repetition of the segment is being added, changed or deleted. The action code adds a validation check to indicate, from the point of view of the sending system, whether this repetition of a segment is being added, changed or deleted. This and the following field are used to implement the "unique key" mode of updating repeating segments. (See Chapter 2, section 2.10.4.2,

"Action code/unique identifier mode update definition.") Refer to *HL7 Table 0206 - Segment Action Code* in Chapter 2C, Code Tables, for valid values.

8.9.4.3 LRL-3 Segment Unique Key (EI) 00764

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID (ST)> ^
             <Universal ID Type (ID)>
```

Definition: This field contains a unique identifier for one of the multiple repetitions of this segment, to be used in conjunction with the preceding field. Each of the repetitions of the segment will be uniquely identified by this unique key field for the purposes of updates.

8.9.4.4 LRL-4 Location Relationship ID (CWE) 01277

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains an identifier code to show WHICH relationship is being communicated with this segment. Refer to *User-defined Table 0325 - Location Relationship ID* for suggested values.

8.9.4.5 LRL-5 Organizational Location Relationship Value (XON) 01301

```
Components:  <Organization Name (ST)> ^ <Organization Name Type Code (CWE)> ^
             <WITHDRAWN Constituent> ^ <WITHDRAWN Constituent> ^ <WITHDRAWN
             Constituent> ^ <Assigning Authority (HD)> ^ <Identifier Type Code (ID)> ^
             <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^
             <Organization Identifier (ST)>

Subcomponents for Organization Name Type Code (CWE):  <Identifier (ST)> & <Text (ST)>
             & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
             Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
             Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original
             Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text
             (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate
             Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID
             (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
             & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)>
             & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
             OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
             & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
             & <Universal ID Type (ID)>
```

Definition: This field is conditional on the value of *LRL-4 - Location Relationship ID*. When *LRL-4 - Location Relationship ID* contains "RX"- Nearest Pharmacy, "RX2"- Other Pharmacy, "LAB"- Nearest Lab, "LB2"- Other Lab, or "DTY"- Dietary, this field holds that organization's extended name, i.e., the value of this field is conditional on the value of *LRL-4 - Location Relationship ID*. For example, for an inpatient location, this could be an in-house department ID code using only the third component of this data type. For an outpatient location, this could be the nearest external pharmacy.

8.9.4.6 LRL-6 Patient Location Relationship Value (PL) 01292

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
             <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
             <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
             Identifier (EI)> ^ <Assigning Authority for Location (HD)>
```

```
Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
          ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
          Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
          <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
          ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
          <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
          <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field is conditional on the value of *LRL-4 - Location Relationship ID*. When *LRL-4 - Location Relationship ID* contains "ALI"- Location aliases or "PAR"- Parent location this field holds the value of the associated patient location.

When *LRL-4 - Location Relationship ID* contains "PAR"- Parent, this field holds the value of the parent location to allow for nested entries. For example, a bed entry can point to its containing room or nurse unit. The value for the parent location should match the *LOC-1 - Primary Key Value - LOC* of the parent entry. Not intended to be used for multiple designations of the same physical location, but for identifying the larger physical locations (supersets) which include this physical location as a subset.

8.9.5 LDP - Location Department Segment

The Technical Steward for the LDP segment is Patient Administration.

The LDP segment identifies how a patient location room is being used by a certain department. Multiple departments can use the same patient location, so there can be multiple LDP segments following an LOC segment. There must be at least one LDP segment for each LOC segment. This is not intended to include any current occupant information.

HL7 Attribute Table - LDP - Location Department

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			PL	R			00963	Primary Key Value - LDP
2			CWE	R		0264	00964	Location Department
3		3=	CWE	O	Y	0069	00965	Location Service
4			CWE	O	Y	0265	00966	Specialty Type
5		1=	CWE	O	Y	0004	00967	Valid Patient Classes
6	1..1		ID	O		0183	00675	Active/Inactive Flag
7			DTM	O			00969	Activation Date - LDP
8			DTM	O			00970	Inactivation Date - LDP
9		80=	ST	O			00971	Inactivated Reason
10			VH	O	Y	0267	00976	Visiting Hours
11			XTN	O			00978	Contact Phone
12			CWE	O		0462	01584	Location Cost Center

8.9.5.1 LDP-1 Primary Key Value - LDP (PL) 00963

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
           <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
           <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
           Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
           ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
           Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
           <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
           ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
           <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
           <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the institution's identification code for the location. The identifying key value. This field has the same components as the patient location fields in the PV1 segment (except that bed status is not included here). At least the first component of this field is required. The contents of this field must exactly match the content of its preceding MFE (*MFE-4 - Primary Key Value - MFE)* and its preceding LOC (*LOC-1 - Primary Key Value - LOC)*.

8.9.5.2 LDP-2 Location Department (CWE) 00964

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the institution's department to which this location belongs, or its cost center. Refer to *User-defined Table 0264 - Location Department* in Chapter 2C, Code Tables, for suggested values.

8.9.5.3 LDP-3 Location Service (CWE) 00965

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the hospital or ancillary service with which this location is associated. Depends on institution use. Repeats for rooms that can be used, for example, by different services on different days. These values should match the values used for *PV1-10 - Hospital Service*, which is site

defined. Refer to *User-defined Table 0069 - Hospital Service* in Chapter 2C, Code Tables, for suggested values.

8.9.5.4 LDP-4 Specialty Type (CWE) 00966

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the specialty type (if any) of the department or clinic. This may also be considered a bed type. Specialty type is a physical accommodation type, whereas 'accommodation type' (*LCC-3 - Accommodation Type*) is a financial accommodation type. Refer to *User-defined Table 0265 – Specialty Type* in Chapter 2C, Code Tables, for suggested values. See also *LCH-4 - Location Characteristic ID* and *LHC-5 - Location Characteristic Value*.

8.9.5.5 LDP-5 Valid Patient Classes (CWE) 00967

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the patient types that are allowed to be assigned to this bed. For example, Inpatient, Outpatient, Series, Clinic, ER, Ambulatory, Observation, etc. These values should be the same set of values as those used for *PV1-2 - Patient Class*. Refer to *User-defined Table 0004 – Patient Class* in Chapter 2C, Code Tables, for suggested values.

8.9.5.6 LDP-6 Active/inactive Flag (ID) 00675

Definition: This field indicates whether the entry for this location is currently an active, that is, valid, usable entry (disregarding whether it's waiting to be maintained by housekeeping). Refer to *HL7 Table 0183 - Active/Inactive* in Chapter 2C, Code Tables, for valid values.

8.9.5.7 LDP-7 Activation Date - LDP (DTM) 00969

Definition: This field contains the date and time when the location became active or "in service" for a department (disregarding whether it is waiting to be maintained by housekeeping).

8.9.5.8 LDP-8 Inactivation Date - LDP (DTM) 00970

Definition: This field contains the date when the location became inactive or "out of service" for this department (disregarding whether it is waiting to be maintained by housekeeping).

8.9.5.9 LDP-9 Inactivated Reason (ST) 00971

Definition: This field contains the reason the location was put out of service. It is used when *LDP-8 - Inactivation Date-LDP* is sent.

8.9.5.10 LDP-10 Visiting Hours (VH) 00976

```
Components:  <Start Day Range (ID)> ^ <End Day Range (ID)> ^ <Start Hour Range (TM)> ^
             <End Hour Range (TM)>
```

Definition: This field contains the hours when this location is open for visiting. Refer to *HL7 Table 0267 - Days of the Week* in Chapter 2C, Code Tables, for valid values for the first two components.

8.9.5.11 LDP-11 Contact Phone (XTN) 00978

```
Components:  <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^
             <Telecommunication Equipment Type (ID)> ^ <Communication Address (ST)> ^
             <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local Number (SNM)> ^
             <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension Prefix (ST)> ^ <Speed
             Dial Code (ST)> ^ <Unformatted Telephone number  (ST)> ^ <Effective Start
             Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^
             <Protection Code (CWE)> ^ <Shared Telecommunication Identifier (EI)> ^
             <Preference Order (NM)>

Subcomponents for Expiration Reason (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
             Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
             & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
             & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
             <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
             of Second Alternate Coding System (ID)> & <Second Alternate Coding System
             Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
             <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
             OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
             Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
             & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
             & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
             <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
             of Second Alternate Coding System (ID)> & <Second Alternate Coding System
             Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
             <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
             <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
             <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
             OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI):  <Entity Identifier (ST)>
             & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the phone number to use to contact facility personnel about the patient location, in case of inquiries about the location. This phone is not necessarily within the named patient location.

8.9.5.12 LDP-12 Location Cost Center (CWE) 01584

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the cost center to which this location belongs. Refer to *User-defined Table 0462 - Location Cost Center* in Chapter 2C, Code Tables, for suggested values.

8.9.6 LCC - Location Charge Code Segment

The Technical Steward for the LCC segment is PA.

The optional LCC segment identifies how a patient location room can be billed by a certain department. A department can use different charge codes for the same room or bed, so there can be multiple LCC segments following an LDP segment.

HL7 Attribute Table - LCC - Location Charge Code

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			PL	R			00979	Primary Key Value - LCC
2			CWE	R		0264	00964	Location Department
3			CWE	O	Y	0129	00980	Accommodation Type
4			CWE	R	Y	0132	00981	Charge Code

8.9.6.1 LCC-1 Primary Key Value - LCC (PL) 00979

```
Components:  <Point of Care (HD)> ^ <Room (HD)> ^ <Bed (HD)> ^ <Facility (HD)> ^
             <Location Status (IS)> ^ <Person Location Type (IS)> ^ <Building (HD)> ^
             <Floor (HD)> ^ <Location Description (ST)> ^ <Comprehensive Location
             Identifier (EI)> ^ <Assigning Authority for Location (HD)>

Subcomponents for Point of Care (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Room (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Bed (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID
             Type (ID)>

Subcomponents for Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Building (HD):  <Namespace ID (IS)> & <Universal ID (ST)> &
             <Universal ID Type (ID)>

Subcomponents for Floor (HD):  <Namespace ID (IS)> & <Universal ID (ST)> & <Universal
             ID Type (ID)>

Subcomponents for Comprehensive Location Identifier (EI):  <Entity Identifier (ST)> &
             <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Authority for Location (HD):  <Namespace ID (IS)> &
             <Universal ID (ST)> & <Universal ID Type (ID)>
```

Definition: This field contains the institution's identification code for the location. The identifying key value. This field has the same components as the patient location fields in the PV1 segment (except that bed status is not included here). At least the first component of this field is required. The content of this field must exactly match the content of its preceding MFE (*MFE-4 - Primary Key Value - MFE*), its preceding LOC (*LOC-1 - Primary Key Value - LOC*), and its preceding LDP (*LDP-1 - Primary Key Value - LDP*).

8.9.6.2 LCC-2 Location Department (CWE) 00964

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the institution's department to which this location belongs, or its cost center. It may match the value in its preceding LDP (*LDP-2 - Location Department* or *LDP-12 - Location Cost*

Center. Refer to *User-defined Table 0264 - Location Department* in Chapter 2C, Code Tables, for suggested values.

8.9.6.3 LCC-3 Accommodation Type (CWE) 00980

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the financial accommodation type of the bed or room which implies the rate to be used when occupied by a patient under specific medical conditions, which determines how it is billed. Not the same as specialty type. Used for general ledger categories. Specialty type is a physical accommodation type, whereas this field is a financial accommodation type. Repeating coded value. Refer to *User-defined Table 0129 - Accommodation Code* in Chapter 2C, Code Tables, for suggested values.

8.9.6.4 LCC-4 Charge Code (CWE) 00981

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the repeating coded entry for codes identifying how the use of this location is to be charged. For cross-referencing beds master files with the charge master files, or for generating charges when a patient is assigned to a bed. These should be the same set of values used in *FT1-7 - Transaction Code*. Refer to *User-defined Table 0132 - Transaction Code* in Chapter 2C, Code Tables, for suggested values.

8.9.7 Example: MFN Location Master File Message

MSH|^~\&|HL7REG|UH|HL7LAB|CH|19910918060544||MFN^M05^MFN_M05|MSGID002|P|2.8||AL|NE<cr>

MFI|LOC||UPD|||AL<cr>

MFE|MAD|PMF98123789182|199110011230|3A^RM17^17-2^FAC1|PL<cr>

LOC|3A^RM17^17-2^FAC1|BEST BED IN UNIT|B|UNIVERSITY HOSPITAL|54326 SAND P0INT WAY^^SEATTLE^WA^98199|(206)689-1329|92837465998|OXY<cr>

LCH|3A^RM17^17-2^FAC1|||IMP|Y<cr>

LRL|3A^RM17^17-2^FAC1|||LAB|3WEST PATH LAB<cr>

LDP|3A^RM17^17-2^FAC1|PED|MED|PIN|I|A|19941004||||(206)689-1363<cr>

LCC|3A^RM17^17-2^FAC1|PED|PIC|R38746<cr>

8.10 CHARGE DESCRIPTION MASTER FILES

8.10.1 MFN/MFK - Charge Description Master File Message (Event M04)

The charge description (CDM) master file segment should be used in conjunction with the general master file segments in Section *8.5*, "*GENERAL MASTER FILE SEGMENTS*." Interfacing systems often need not only to communicate data about a patient's detailed charges, but also to communicate the charge identification entries by which an application knows how to handle a particular charge code. The charge description master is a master file. The CDM segment below is a specially designed master file segment for interfacing charge description masters. In the following message, the MFI-master file identifier should equal "CDM." When the CDM segment is used in an MFN message, the abstract definition is as follows:

MFN^M04^MFN_M04: Master File Notification – Charge Description

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_CDM begin		
MFE	Master File Entry		8
CDM	Charge Description Master		8
[{ PRC }]	Price Segment		8
}	--- MF_CDM end		

MFK^M04^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2

Segments	Description	Status	Chapter
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

8.10.2 CDM - Charge Description Master Segment

The Technical Steward for the CDM segment is Financial Management.

The CDM segment contains the fields for identifying anything which is charged to patient accounts, including procedures, services, supplies. It is intended to be used to maintain a list of valid chargeable utilization items. Its purpose is to keep billing codes synchronized between HIS, Patient Accounting, and other departmental systems. It is not intended to completely support materials management, inventory, or complex pricing structures for which additional complex fields would be required. Given an identifying charge code, the associated fields in the charge description master file will provide basic pricing and billing data. All the additional information necessary for patient accounting systems to do billing and claims is not intended to be included in this segment; those should be part of insurance or billing profile tables.

The CDM segment contains the fields which, for one chargeable item, remain the same across facilities, departments, and patient types. The following PRC segment contains the fields which, for the same chargeable item, vary depending upon facility or department or patient type.

HL7 Attribute Table - CDM - Charge Description Master

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			CWE	R		0132	01306	Primary Key Value - CDM
2			CWE	O	Y	0132	00983	Charge Code Alias
3		20#	ST	R			00984	Charge Description Short
4		250#	ST	O			00985	Charge Description Long
5		1=	CWE	O		0268	00986	Description Override Indicator
6			CWE	O	Y	0132	00987	Exploding Charges
7			CNE	O	Y	0088	00393	Procedure Code
8	1..1		ID	O		0183	00675	Active/Inactive Flag
9			CWE	O	Y	0463	00990	Inventory Number
10		12=	NM	O			00991	Resource Load
11			CX	O	Y		00992	Contract Number
12			XON	O	Y		00993	Contract Organization
13	1..1		ID	O		0136	00994	Room Fee Indicator

8.10.2.1 CDM-1 Primary Key Value - CDM (CWE) 01306

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: The key field of the entry. Must match *MFE-4 - Primary Key Value - MFE*. This field contains the code assigned by the institution for the purpose of uniquely identifying the thing that can be charged.

For example, this field would be used to uniquely identify a procedure, item, or test for charging purposes. Probably the same set of values as used in *FT1-7- Transaction Code* in financial messages (refer to *User-defined Table 0132 - Transaction Code* in Chapter 2C, Code Tables, for suggested values). See Chapter 7 for discussion of the universal service ID.

8.10.2.2 CDM-2 Charge Code Alias (CWE) 00983

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains an alternative charge code. For example, points to another charge description master entry in cases where one code supersedes or overrides another code. Repeating field allows for different codes used by different systems which should be handled as if they were the same; for example, the general ledger code may differ from the billing code. Or, in a multi-facility environment which does facility-specific pricing, there may be more than one of these master file entries for one charge description, each with a different facility. Refer to *User-defined Table 0132 - Transaction Code* in Chapter 2C, Code Tables, for suggested values.

8.10.2.3 CDM-3 Charge Description Short (ST) 00984

Definition: This field contains the text abbreviations or code that is associated with this CDM entry.

8.10.2.4 CDM-4 Charge Description Long (ST) 00985

Definition: This field contains the full text description of this CDM entry.

8.10.2.5 CDM-5 Description Override Indicator (CWE) 00986

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates whether this CDM entry's description can be overridden. Refer to *User-defined Table 0268 - Override* in Chapter 2C, Code Tables, for suggested values.

8.10.2.6 CDM-6 Exploding Charges (CWE) 00987

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the repeating occurrences for a list of other CDM entry charge codes identifying the other charges which should be generated from this CDM entry. Refer to User-defined Table 0132 - Transaction Code in Chapter 2C, Code Tables, for suggested values. If non-null, posting a charge to this CDM entry should result in posting the charges identified here. These are sometimes called "linked items."

In the case of "chained" charges where the "lead" charge must be included in the exploded charges, the "lead" charge should be included in the list of exploding charges. If the price of this parent charge is included in the message, then it overrides the sum of the exploded charges prices.

8.10.2.7 CDM-7 Procedure Code (CNE) 00393

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the procedure code for procedure, if any, associated with this charge description. Repeating field allows for different procedure coding systems such as CPT4, ICD9. Coded entry made up of code plus coding schema. Refer to *Externally-defined Table 0088 - Procedure Code* in Chapter 2C, Code Tables, for suggested values.

8.10.2.8 CDM-8 Active/inactive Flag (ID) 00675

Definition: This field indicates whether this is a usable CDM entry. Refer to *HL7 Table 0183 - Active/Inactive* in Chapter 2C, Code Tables, for valid values.

8.10.2.9 CDM-9 Inventory Number (CWE) 00990

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This optional field contains an identifying stock number, if any, which might be used, for example, as a cross reference for materials management. Refer to *User-defined Table 0463 - Inventory number* in Chapter 2C, Code Tables, for suggested values.

8.10.2.10 CDM-10 Resource Load (NM) 00991

Definition: This field contains the Relative Value Unit (RVU) minutes and ATS, a factor related to CPT4 coding and to pricing structure for physical billing.

8.10.2.11 CDM-11 Contract Number (CX) 00992

```
Components:  <ID Number (ST)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme
             (ID)> ^ <Assigning Authority (HD)> ^ <Identifier Type Code (ID)> ^
             <Assigning Facility (HD)> ^ <Effective Date (DT)> ^ <Expiration Date (DT)>
             ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)>
             ^ <Security Check (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
             & <Universal ID Type (ID)>
```

```
Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
          & <Universal ID Type (ID)>

Subcomponents for Assigning Jurisdiction (CWE):  <Identifier (ST)> & <Text (ST)> &
          <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
          Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
          Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original
          Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text
          (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate
          Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID
          (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
          & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)>
          & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE):  <Identifier (ST)> & <Text
          (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> &
          <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding
          System Version ID (ST)> & <Alternate Coding System Version ID (ST)> &
          <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second
          Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> &
          <Second Alternate Coding System Version ID (ST)> & <Coding System OID
          (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate
          Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate
          Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> &
          <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set
          Version ID (DTM)>
```

Definition: This field contains any contract number pertaining to this chargeable item; for example, supplier contract or service contract.

8.10.2.12 CDM-12 Contract Organization (XON) 00993

```
Components:  <Organization Name (ST)> ^ <Organization Name Type Code (CWE)> ^
          <WITHDRAWN Constituent> ^ <WITHDRAWN Constituent> ^ <WITHDRAWN
          Constituent> ^ <Assigning Authority (HD)> ^ <Identifier Type Code (ID)> ^
          <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^
          <Organization Identifier (ST)>

Subcomponents for Organization Name Type Code (CWE):  <Identifier (ST)> & <Text (ST)>
          & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate
          Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System
          Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original
          Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text
          (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate
          Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID
          (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)>
          & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)>
          & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
          & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
          & <Universal ID Type (ID)>
```

Definition: This field contains the organization with which there is a contractual arrangement for providing the service or material used for this chargeable item.

8.10.2.13 CDM-13 Room Fee Indicator (ID) 00994

Definition: This field contains a room fee indicator. Refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values.

Y this is a component of the room fees

N this is any other chargeable item other than room fees

8.10.3 PRC - Pricing Segment

The Technical Steward for the PRC segment is Financial Management.

The PRC segment contains the pricing information for the preceding CDM segment's chargeable item. It contains the fields which, for the same chargeable item, might vary depending upon facility or department or patient type. The preceding CDM segment contains the fields which, for one chargeable item, remain the same across facilities, departments, and patient types.

HL7 Attribute Table - PRC - Pricing

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			CWE	R		0132	00982	Primary Key Value - PRC
2			CWE	O	Y	0464	00995	Facility ID - PRC
3			CWE	O	Y	0184	00676	Department
4		1=	CWE	O	Y	0004	00967	Valid Patient Classes
5			CP	C	Y		00998	Price
6		200=	ST	O	Y		00999	Formula
7		4=	NM	O			01000	Minimum Quantity
8		4=	NM	O			01001	Maximum Quantity
9			MO	O			01002	Minimum Price
10			MO	O			01003	Maximum Price
11			DTM	O			01004	Effective Start Date
12			DTM	O			01005	Effective End Date
13		1=	CWE	O		0268	01006	Price Override Flag
14			CWE	O	Y	0293	01007	Billing Category
15	1..1		ID	O		0136	01008	Chargeable Flag
16	1..1		ID	O		0183	00675	Active/Inactive Flag
17			MO	O			00989	Cost
18		1=	CWE	O		0269	01009	Charge on Indicator

8.10.3.1 PRC-1 Primary Key Value - PRC (CWE) 00982

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the code assigned by the institution for the purpose of uniquely identifying the thing that can be charged. The key field of the entry. For example, this field would be used to uniquely identify a procedure, item, or test for charging purposes. Probably the same set of values as used in *FT1-7 - Transaction Code* in financial messages. Must match *MFE-4 - Primary Key - MFE* and *CDM-1 - Primary Key - CDM*. Refer to *User-defined Table 0132 - Transaction code* in Chapter 2C, Code Tables, for suggested values. See Chapter 7 for discussion of the universal service ID.

8.10.3.2 PRC-2 Facility ID - PRC (CWE) 00995

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the facility of the institution for which this price (for the preceding CDM entry) is valid. For use when needing multi-facility pricing. If null, assume all facilities. In a multi-facility environment, the facility associated with this chargeable item may not be the same as the sending or receiving facility identified in the MSH segment. Use only when the price is not the same for all facilities, that is, a null value indicates that this pricing is valid for all facilities.

When two PRC segments are sent with the same key values but different facility identifiers, the second is sent in addition to the first, not to replace the first. The effective unique identifier is the charge code (*PRC-1 - Primary Key Value - PRC*) plus the facility ID (*PRC-2 - Facility ID*). Multiple facility identifiers can be sent in the same segment to indicate that those facilities use the same pricing. Refer to *User-defined Table 0464 - Facility ID* in Chapter 2C, Code Tables, for suggested values.

8.10.3.3 PRC-3 Department (CWE) 00676

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the department of the facility which accrues revenue/cost for this type of charge. When pricing is different for different departments within the same facility, this will indicate for which department the following pricing information is valid. Use only when the price is not the same for all departments, that is, a null value indicates that this pricing is valid for all departments.

When two PRC segments are sent the same key values but with different departments, the second is sent in addition to the first, not to replace the first. The effective unique identifier is the charge code *(PRC-1 - Primary Key - PRC*) plus the facility ID (*PRC-2 - Facility ID*) plus the department (*PRC-3 - Department*). Multiple departments can be sent in the same segment to indicate that those departments use the same pricing. Refer to *User-defined Table 0184 - Department* in Chapter 2C, Code Tables, for suggested values.

8.10.3.4 PRC-4 Valid Patient Classes (CWE) 00967

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the patient types for which this charge description is valid. For example, Inpatient, Outpatient, Series, Clinic, ER, Ambulatory, Observation, etc. These values should be the same set of values as those used for *PV1-3 - Patient Class*, which is site defined. Use only when the price is not valid for all patient types, that is, a null value indicates that this pricing is valid for all patient classes. Refer to *User-defined Table 0004 - Patient Class* in Chapter 2C, Code Tables, for suggested values.

When two PRC segments are sent the same key values but with different valid patient classes, the second is sent in addition to the first, not to replace the first. The effective unique identifier is the charge code (*PRC-1 - PRC Primary Key*) plus the facility ID (*PRC-2 - Facility ID*) plus the department (*PRC-3 - Department*) plus the patient class (*PRC-4 - Valid Patient Classes*). Multiple patient classes can be sent in the same segment to indicate that those patient classes use the same pricing.

8.10.3.5 PRC-5 Price (CP) 00998

```
Components:  <Price (MO)> ^ <Price Type (ID)> ^ <From Value (NM)> ^ <To Value (NM)> ^
          <Range Units (CWE)> ^ <Range Type (ID)>

Subcomponents for Price (MO):  <Quantity (NM)> & <Denomination (ID)>

Subcomponents for Range Units (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
          Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
          & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
          & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
          <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
          of Second Alternate Coding System (ID)> & <Second Alternate Coding System
          Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
          <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
          <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
          <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
          OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the price to be charged for service, item, or procedure. If CDM price will always be overridden when charges are posted, then this field is optional. Otherwise, price would be a required field. The formula or calculation that is to be used to get total price from these price components is left to implementation negotiations agreed upon by the participating institutions. See Chapter 2, section 2.8.8, "CP - composite price," for a description of the use of the composite price (CP) data type.

8.10.3.6 PRC-6 Formula (ST) 00999

Definition: This field contains the mathematical formula to apply to *PRC-5 - Price* in order to compute total price. The syntax of this formula must conform to Arden Syntax rules.

8.10.3.7 PRC-7 Minimum Quantity (NM) 01000

Definition: This field contains the minimum number of identical charges allowed on one patient account for this CDM entry.

8.10.3.8 PRC-8 Maximum Quantity (NM) 01001

Definition: This field contains the maximum number of identical charges allowed on one patient account for this CDM entry.

8.10.3.9 PRC-9 Minimum Price (MO) 01002

```
Components:  <Quantity (NM)> ^ <Denomination (ID)>
```

Definition: This field contains the minimum total price (after computation of components of price) that can be charged for this item.

8.10.3.10 PRC-10 Maximum Price (MO) 01003

```
Components:  <Quantity (NM)> ^ <Denomination (ID)>
```

Definition: This field contains the maximum total price (after computation of components of price) that can be charged for this item.

8.10.3.11 PRC-11 Effective Start Date (DTM) 01004

Definition: This field contains the date/time when this CDM entry becomes effective.

8.10.3.12 PRC-12 Effective End Date (DTM) 01005

Definition: This field contains the date/time when this CDM entry is no longer effective.

8.10.3.13 PRC-13 Price Override Flag (CWE) 01006

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates whether this CDM entry's price can be overridden. Refer to *User-defined Table 0268 - Override* in Chapter 2C, Code Tables, for suggested values.

8.10.3.14 PRC-14 Billing Category (CWE) 01007

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the billing category codes for any classification systems needed, for example, general ledger codes and UB92 categories. Repeating field with coded entry made up of category code plus category system. Refer to *User-defined Table 0293 - Billing category* in Chapter 2C, Code Tables, for suggested values.

8.10.3.15 PRC-15 Chargeable Flag (ID) 01008

Definition: This field contains a chargeable indicator. Refer to *HL7 Table 0136 - Yes/no Indicator* in Chapter 2C, Code Tables, for valid values.

N charge is not billable, that is, do not create charges for this CDM entry; this is zero price item

Y item is billable (this is also the default when NULL)

8.10.3.16 PRC-16 Active/Inactive Flag (ID) 00675

Definition: This indicates whether this is a usable CDM entry. Refer to *HL7 Table 0183 - Active/Inactive* in Chapter 2C, Code Tables, for valid values.

8.10.3.17 PRC-17 Cost (MO) 00989

```
Components:  <Quantity (NM)> ^ <Denomination (ID)>
```

Definition: This field contains the institution's calculation of how much it costs to provide this item, that is, what the institution had to pay for the material plus any specified payment expenditure, effort or loss due to performing or providing the chargeable item.

8.10.3.18 PRC-18 Charge on Indicator (CWE) 01009

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the user-defined table of values which indicates when a charge for services or procedures should be accrued. Refer to *User-defined Table 0269 - Charge On Indicator* in Chapter 2C, Code Tables, for suggested values.

8.10.4 Example: MFN Message Charge Description Master File

MSH|^~\&|HL7REG|UH|HL7LAB|CH|19910918060544||MFN^M04^MFN_M04|MSGID002|P|2.8||AL|NE<cr>

MFI|CDM||UPD|||AL<cr>

MFE|MAD|CDM98123789182|199110011230|P2246^^PLW|CWE<cr>

CDM|P2246^^PLW |2445|APPENDECTOMY|APPENDECTOMY|X||244.34|A|2321||||N<cr>

PRC|P2246^^PLW |FAC3|SURG|O~A|100.00^UP |formula |1|1
|100.00^USD|1000.00^USD|19941031||Y|GL545|Y|A|<cr>

8.11 CLINICAL TRIALS MASTER FILES

8.11.1 MFN/MFK - Clinical Trials Master File Message (Event M06-M07)

The CM0 (Clinical Study Master), CM1 (Clinical Study Phase), and CM2 (Clinical Study Schedule) segments can be used to transmit master files information between systems. The CM0 segment contains the information about the study itself; the CM1 contains the information about one phase of the study identified in the preceding CM0; and the CM2 contains the information about the scheduled time points for the preceding study or phase-related treatment or evaluation events. When these segments are used in an MFN message, the abstract definition is described below.

Case 1: MFN message for Clinical Study with phases and schedules

MFI-1 - Master File Identifier Code = CMA

MFN^M06^MFN_M06: Master File Notification – Clinical Study with Phases and Schedules

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_CLIN_STUDY begin		
MFE	Master File Entry		8
CM0	Clinical Study Master		8
[{	--- MF_PHASE_SCHED_DETAIL begin		
CM1	Clinical Study Phase		8

Segments	Description	Status	Chapter
[{ CM2 }]	Clinical Study Schedule		8
}]	--- MF_PHASE_SCHED_DETAIL end		
}	--- MF_CLIN_STUDY end		

MFK^M06^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK		8

Case 2: MFN message for Clinical Study without phases but with schedules

MFI-1 - Master File Identifier Code = CMB

MFN^M07^MFN_M07: Master File Notification – Clinical Study without Phases but with Schedules

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_CLIN_STUDY_SCHED begin		
MFE	Master File Entry		8
CM0	Clinical Study Master		8
[{ CM2 }]	Clinical Study Schedule		8
}	--- MF_CLIN_STUDY_SCHED end		

MFK^M07^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2

Segments	Description	Status	Chapter
MFI	Master File Identification		8
[{ MFA }]	Master File ACK		8

8.11.2 CM0 - Clinical Study Master Segment

The Technical Steward for the CM0 segment is Orders and Observations.

The Clinical Study Master (CM0) segment contains the information about the study itself. The sending application study number for each patient is sent in the CSR segment. The optional CM0 enables information about the study at the sending application that may be useful to the receiving systems. All of the fields in the segment describe the study status at the sending facility unless otherwise agreed upon.

HL7 Attribute Table - CM0 - Clinical Study Master

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	1..4		SI	O			01010	Set ID - CM0
2			EI	R			01011	Sponsor Study ID
3			EI	O	Y/3		01036	Alternate Study ID
4		300#	ST	R			01013	Title of Study
5			XCN	O	Y		01014	Chairman of Study
6			DT	O			01015	Last IRB Approval Date
7		8=	NM	O			01016	Total Accrual to Date
8			DT	O			01017	Last Accrual Date
9			XCN	O	Y		01018	Contact for Study
10			XTN	O			01019	Contact's Telephone Number
11			XAD	O	Y		01020	Contact's Address

8.11.2.1 CM0-1 Set ID - CM0 (SI) 01010

Definition: This field contains a number that uniquely identifies this transaction for the purpose of adding, changing, or deleting the transaction. For those messages that permit segments to repeat, the Set ID field is used to identify the repetitions.

8.11.2.2 CM0-2 Sponsor Study ID (EI) 01011

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID (ST)> ^
             <Universal ID Type (ID)>
```

Definition: This field contains the study number established by the study sponsor. Please see discussion in Chapter 7, section 7.7.1.1, "Sponsor study ID."

8.11.2.3 CM0-3 Alternate Study ID (EI) 01036

```
Components:  <Entity Identifier (ST)> ^ <Namespace ID (IS)> ^ <Universal ID (ST)> ^
             <Universal ID Type (ID)>
```

Definition: This field contains the local or collaborators' cross-referenced study numbers.

8.11.2.4 CM0-4 Title of Study (ST) 01013

Definition: This field contains the sending institution's title for the clinical trial. It gives recipients further identification of the study.

8.11.2.5 CM0-5 Chairman of Study (XCN) 01014

Components: <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^ <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g., JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <WITHDRAWN Constituent> ^ <DEPRECATED-Source Table (CWE)> ^ <Assigning Authority (HD)> ^ <Name Type Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^ <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name Representation Code (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent> ^ <Name Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^ <Assigning Agency or Department (CWE)> ^ <Security Check (ST)> ^ <Security Check Scheme (ID)>

Subcomponents for Family Name (FN): <Surname (ST)> & <Own Surname Prefix (ST)> & <Own Surname (ST)> & <Surname Prefix from Partner/Spouse (ST)> & <Surname from Partner/Spouse (ST)>

Subcomponents for Source Table (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD): <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Jurisdiction (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Definition: This field contains the sending institution's chairman. It further identifies the study. The chairman's name may be needed for communication purposes.

8.11.2.6 CM0-6 Last IRB Approval Date (DT) 01015

Definition: This field contains an institution's Internal Review Board approval dates which are required annually to continue participation in a clinical trial.

8.11.2.7 CM0-7 Total Accrual to Date (NM) 01016

Definition: This field is a quality control field to enable checks that patient data have been transmitted on all registered patients.

8.11.2.8 CM0-8 Last Accrual Date (DT) 01017

Definition: This field contains the status information on the patient registration activity for quality control and operations purposes.

8.11.2.9 CM0-9 Contact for Study (XCN) 01018

```
Components:  <Person Identifier (ST)> ^ <Family Name (FN)> ^ <Given Name (ST)> ^
           <Second and Further Given Names or Initials Thereof (ST)> ^ <Suffix (e.g.,
           JR or III) (ST)> ^ <Prefix (e.g., DR) (ST)> ^ <WITHDRAWN Constituent> ^
           <DEPRECATED-Source Table (CWE)> ^ <Assigning Authority (HD)> ^ <Name Type
           Code (ID)> ^ <Identifier Check Digit (ST)> ^ <Check Digit Scheme (ID)> ^
           <Identifier Type Code (ID)> ^ <Assigning Facility (HD)> ^ <Name
           Representation Code (ID)> ^ <Name Context (CWE)> ^ <WITHDRAWN Constituent>
           ^ <Name Assembly Order (ID)> ^ <Effective Date (DTM)> ^ <Expiration Date
           (DTM)> ^ <Professional Suffix (ST)> ^ <Assigning Jurisdiction (CWE)> ^
           <Assigning Agency or Department (CWE)> ^ <Security Check  (ST)> ^
           <Security Check Scheme (ID)>

Subcomponents for Family Name (FN):  <Surname (ST)> & <Own Surname Prefix (ST)> & <Own
           Surname (ST)> & <Surname Prefix from Partner/Spouse (ST)> & <Surname from
           Partner/Spouse (ST)>

Subcomponents for Source Table (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
           Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
           & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
           & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
           <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
           of Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Authority (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
           & <Universal ID Type (ID)>

Subcomponents for Assigning Facility (HD):  <Namespace ID (IS)> & <Universal ID (ST)>
           & <Universal ID Type (ID)>

Subcomponents for Name Context (CWE):  <Identifier (ST)> & <Text (ST)> & <Name of
           Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)>
           & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)>
           & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> &
           <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name
           of Second Alternate Coding System (ID)> & <Second Alternate Coding System
           Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> &
           <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> &
           <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> &
           <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set
           OID (ST)> & <Second Alternate Value Set Version ID (DTM)>
```

Subcomponents for Assigning Jurisdiction (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Assigning Agency or Department (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Definition: This field contains the name of the individual who should be contacted for inquiries about data transmitted for this study.

8.11.2.10 CM0-10 Contact's Telephone Number (XTN) 01019

Components: <WITHDRAWN Constituent> ^ <Telecommunication Use Code (ID)> ^ <Telecommunication Equipment Type (ID)> ^ <Communication Address (ST)> ^ <Country Code (SNM)> ^ <Area/City Code (SNM)> ^ <Local Number (SNM)> ^ <Extension (SNM)> ^ <Any Text (ST)> ^ <Extension Prefix (ST)> ^ <Speed Dial Code (ST)> ^ <Unformatted Telephone number (ST)> ^ <Effective Start Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^ <Protection Code (CWE)> ^ <Shared Telecommunication Identifier (EI)> ^ <Preference Order (NM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Shared Telecommunication Identifier (EI): <Entity Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Definition: This field contains the phone number of the study contact identified in *CM0-9 - Contact for Study*.

8.11.2.11 CM0-11 Contact's Address (XAD) 01020

Components: <Street Address (SAD)> ^ <Other Designation (ST)> ^ <City (ST)> ^ <State or Province (ST)> ^ <Zip or Postal Code (ST)> ^ <Country (ID)> ^ <Address Type (ID)> ^ <Other Geographic Designation (ST)> ^ <County/Parish Code (CWE)> ^ <Census Tract (CWE)> ^ <Address Representation Code (ID)> ^ <WITHDRAWN Constituent> ^ <Effective Date (DTM)> ^ <Expiration Date (DTM)> ^ <Expiration Reason (CWE)> ^ <Temporary Indicator (ID)> ^ <Bad Address Indicator (ID)> ^ <Address Usage (ID)> ^ <Addressee (ST)> ^ <Comment (ST)> ^ <Preference Order (NM)> ^ <Protection Code (CWE)> ^ <Address Identifier (EI)>

Subcomponents for Street Address (SAD): <Street or Mailing Address (ST)> & <Street Name (ST)> & <Dwelling Number (ST)>

Subcomponents for County/Parish Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Census Tract (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Expiration Reason (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Protection Code (CWE): <Identifier (ST)> & <Text (ST)> & <Name of Coding System (ID)> & <Alternate Identifier (ST)> & <Alternate Text (ST)> & <Name of Alternate Coding System (ID)> & <Coding System Version ID (ST)> & <Alternate Coding System Version ID (ST)> & <Original Text (ST)> & <Second Alternate Identifier (ST)> & <Second Alternate Text (ST)> & <Name of Second Alternate Coding System (ID)> & <Second Alternate Coding System Version ID (ST)> & <Coding System OID (ST)> & <Value Set OID (ST)> & <Value Set Version ID (DTM)> & <Alternate Coding System OID (ST)> & <Alternate Value Set OID (ST)> & <Alternate Value Set Version ID (DTM)> & <Second Alternate Coding System OID (ST)> & <Second Alternate Value Set OID (ST)> & <Second Alternate Value Set Version ID (DTM)>

Subcomponents for Address Identifier (EI): <Entity Identifier (ST)> & <Namespace ID (IS)> & <Universal ID (ST)> & <Universal ID Type (ID)>

Definition: This field contains the address of the study contact identified in *CM0-9 - Contact for Study*.

8.11.3 CM1 - Clinical Study Phase Master Segment

The Technical Steward for the CM1 segment is Orders and Observations.

Each Clinical Study Phase Master (CM1) segment contains the information about one phase of a study identified in the preceding CM0. This is an optional structure to be used if the study has more than one treatment or evaluation phase within it. The identification of study phases that the patient enters are sent in the CSP segment: sequence 2. The CM1 segment describes the phase in general for the receiving system.

HL7 Attribute Table - CM1 - Clinical Study Phase Master

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	1..4		SI	R			01021	Set ID - CM1
2			CWE	R			01022	Study Phase Identifier
3		300=	ST	R			01023	Description of Study Phase

8.11.3.1 CM1-1 Set ID - CM1 (SI) 01021

Definition: This field contains a number that uniquely identifies this transaction for the purpose of adding, changing, or deleting the transaction. For those messages that permit segments to repeat, the Set IF field is used to identify the repetitions.

8.11.3.2 CM1-2 Study Phase Identifier (CWE) 01022

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field should correspond to the study phase ID coding system in Chapter 7, section 7.7.2.1, "Study Phase ID."

8.11.3.3 CM1-3 Description of Study Phase (ST) 01023

Definition: This field contains a brief explanation for recipients to understand what the phase represents.

8.11.4 CM2 - Clinical Study Schedule Master Segment

The Technical Steward for the CM2 segment is Orders and Observations.

The Clinical Study Schedule Master (CM2) contains the information about the scheduled time points for study or phase-related treatment or evaluation events. The fact that a patient has data satisfying a scheduled time point is sent in the CSS segment, sequence 2. The CM2 segment describes the scheduled time points in general.

HL7 Attribute Table - CM2 - Clinical Study Schedule Master

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	1..4		SI	O			01024	Set ID- CM2
2			CWE	R			01025	Scheduled Time Point
3		300=	ST	O			01026	Description of Time Point
4			CWE	R	Y/200		01027	Events Scheduled This Time Point

8.11.4.1 CM2-1 Set ID - CM2 (SI) 01024

Definition: This field contains a number that uniquely identifies this transaction for the purpose of adding, changing, or deleting the transaction. For those messages that permit segments to repeat, the Set ID field is used to identify the repetitions.

8.11.4.2 CM2-2 Scheduled Time Point (CWE) 01025

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field should correspond to the scheduled time point coding system in Chapter 7, section 7.8.3.1, "Study scheduled time point."

8.11.4.3 CM2-3 Description of Time Point (ST) 01026

Definition: This field contains a brief explanation so recipients will understand what the time point represents.

8.11.4.4 CM2-4 Events Scheduled This Time Point (CWE) 01027

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
             <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
             Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
             System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
             Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
             Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
             (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
             Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
             Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
             Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
             Alternate Value Set Version ID (DTM)>
```

Definition: This field contains a study-specific event. Coding systems may be developed for this field or applications may use facility-wide or standardized orders and procedures coding systems. This enables integration of procedures or events ordered for clinical trials with medical order entry systems.

8.12 INVENTORY ITEM MASTER FILES

8.12.1 MFN/MFK - Inventory Item Master File Message (Event M15)

This section is concerned with describing a master file message that should be used to communicate information that relates to the inventory of items that can be used to perform an ordered service. While an order specifies a service that is represented in an Other Observation/Service Item master file, this message is concerned with communicating attributes of those orderable items (for example lot number and expiration date) that are represented in the Other Observation/Service Item master file. These attributes are more granular than can be represented in the Other Observation/Service Item master file as there may be multiple items in inventory that meet the characteristics of the Service Item but have different specific characteristics, e.g., multiple lots of a vaccine.

Each MFE/IIM structure describes a specific set of lot, expiration date, location, etc. for a Service Item. Multiple instances of MFE/IIM could be used to describe the same Service Item lot at multiple locations, or a location with multiple lots of the same Service Item.

This message is not intended to act as a complete inventory management system. Various inventory management concepts, e.g., PAR levels, invoice and purchase order tracking, are intentionally not supported. The message is intended to synchronize limited orderable item attributes, e.g., quantity on hand, lot number, expiration date, between communicating systems. Such systems may include a Pharmacy Application and a Nurse-based dispensing system. While the Pharmacy application may define the service items (communicated in [MFN^M12^MFN_12] Other Observation/Service Item master file Messages), the dispensing system would communicate the lot numbers, expiration date and quantity on hand for service items in inventory using the Inventory Item Master file message.

Note: The IIM segment has been moved to Chapter 17.

MFN^M15^MFN_M15: Master File Notification – Inventory Item

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_INV_ITEM begin		
MFE	Master File Entry		8
IIM	Inventory Item Master		17
}	--- MF_INV_ITEM end		

MFK^M15^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK segment		8

Master Files Query Response: See conformance based queries as defined in Chapter 5. Refer to Section ***Error! Reference source not found.***, "***Error! Reference source not found.***," for an example of a master file conformance based query.

8.12.2 MFN/MFK - Inventory Item Master File Message – Enhanced (Event M16)

This section describes a master file message designed to communicate information that relates to the sharing of material item master catalog and material item-inventory information between materials management systems and other systems such as surgical and immunization systems. The synchronization of the "item master" between systems and across the enterprise enables the success of the subsequent interfacing of transactions such as: material item requisitions (pre and post case), accounts payable invoices for the payment of material items, journal entries generated from the issue of items to departments or other inventory locations, and patient charges that allow a customer to improve patient care through the better

management of materials. To face budget challenges, healthcare organizations need materials management systems that integrate with finance to automate logistics, eliminate paperwork and analyze data to improve efficiency and reduce overall costs. This process is a major contributor to improving the customers' bottom line by helping to eliminate materials waste, streamline ordering, ensure accurate payment of materials purchased, ensure accurate billing for materials used, and an accurate presentation of the financial statements of a healthcare facility.

Material items defined in this message include consumable supplies, devices, surgical sets, and implants.

Each MFE/ITM structure describes a set of attributes, specific to a material item existing in an item master catalog. The PCE and NTE segments are optional and repeating, associated with the item referred to in the ITM segment. An item may be linked to many patient charge exception combinations.

Each VND/PKG segment grouping includes the available vendors and packaging information valid for the item referred to in the ITM segment. An item may be associated with many vendors. A vendor may be linked to many packaging configurations. Therefore the vendor segment can repeat and can include a repeating PKG segment within each repetition of the vendor segment.

Each MFE/ITM/IVT structure describes a set of attributes specific to the inventory locations associated with the item referred to in the associated ITM segment. An inventory item can exist in more than one inventory location with different values for the same attributes, therefore, this segment repeats.

The ILT segment describes lot and quantity information for a material product. In the message structure, this segment is directly associated with the IVT segment, thus the lot/quantity information is always related to a location. Repetition of the ILT segment supports the case where more than one lot of a material product may exist in an inventory location.

Note that the quantities in the ILT segment are not necessarily intended to refer to continuously updated inventory quantities. The expectation is that periodic inventory quantities would be updated with subsequent master file messages. This segment can be used for interfacing, for example, Immunization information.

Additional specialized information segments may be defined as additional use cases are defined, such as medication/drug segments.

MFN^M16^MFN_M16: Master File Notification – Inventory Item Enhanced

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MATERIAL_ITEM_RECORD begin		
MFE	Master File Entry		8
ITM	Material Item		17
[{NTE}]	Notes for ITM		
[{	--- STERILIZATION begin		
STZ	Sterilization Parameters		17
[{NTE}]	Notes for STZ		2
}]	--- STERILIZATION end		
[{	--- PURCHASING_VENDOR begin		
VND	Purchasing Vendor		17

Segments	Description	Status	Chapter
[{	--- PACKAGING begin		
PKG	Packaging		17
[{PCE}]	Patient Charge Cost Center Exception		17
}]	--- PACKAGING end		
}]	--- PURCHASING_VENDOR end		
[{	--- MATERIAL_LOCATION begin		
IVT	Material Location		17
[{ILT}]	Material Lot/Quantity		17
[{NTE}]	Notes for IVT		2
}]	--- MATERIAL_LOCATION end		
}	--- MATERIAL_ITEM_RECORD end		

MFK^M16^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
{ [MFA] }	Master File ACK segment		8

Master Files Query Response: See conformance based queries as defined in Chapter 5. Refer to Section ***Error! Reference source not found.***, "***Error! Reference source not found.***," for an example of a master file conformance based query.

8.13 DRG MASTER FILES

8.13.1 MFN/MFK - DRG Master File Message (Event M17)

This section is specifically concerned with describing a master file message that should be used to transmit information which identifies the DRG basic information, such as relative weight, lower and upper trim points, etc.

The DMI segment must be preceded by the MFI and MFE segments, as described in Section 8.5, GENERAL MASTER FILE SEGMENTS. In the following message, the *MFI-1 - Master File Identifier* field should equal "DMI".

MFN^M17^MFN_M17: Master File Notification - DRG

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2

Segments	Description	Status	Chapter
[UAC]	User Authentication Credential		2
MFI	Master File Identification		8
{	--- MF_DRG begin		
MFE	Master File Entry		8
DMI	DRG Master		8
}	--- MF_DRG end		

MFK^M17^MFK_M01: Master File Acknowledgment

Segments	Description	Status	Chapter
MSH	Message Header		2
[{ SFT }]	Software		2
[UAC]	User Authentication Credential		2
MSA	Acknowledgment		2
[{ ERR }]	Error		2
MFI	Master File Identification		8
[{ MFA }]	Master File ACK		8

Master Files Query Response: See conformance based queries as defined in Chapter 5. Refer to Section ***Error! Reference source not found.***, "***Error! Reference source not found.***," for an example of a master file conformance based query.

8.13.2 DMI - DRG Master File Information Segment

The Technical Steward for the DMI segment is Financial Management.

The DMI segment contains the DRG related basic information, for example, relative weight, etc. The DMI segment is used to send the fixed information assigned to a specific DRG.

HL7 Attribute Table - DMI - DRG Master File Information

SEQ	LEN	C.LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1			CNE	O		0055	00382	Diagnostic Related Group
2			CNE	C		0118	00381	Major Diagnostic Category
3			NR	C			02231	Lower and Upper Trim Points
4		5#	NM	C			02232	Average Length of Stay
5		7#	NM	C			02233	Relative Weight

8.13.2.1 DMI-1 Diagnostic Related Group (CNE) 00382

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field contains the DRG for the transaction. Interim DRG's could be determined for an encounter. Refer to *External Table 0055 – Diagnosis Related Group* in Chapter 2C, Code Tables, for suggested values.

8.13.2.2 DMI-2 Major Diagnostic Category (CNE) 00381

```
Components:  <Identifier (ST)> ^ <Text (ST)> ^ <Name of Coding System (ID)> ^
           <Alternate Identifier (ST)> ^ <Alternate Text (ST)> ^ <Name of Alternate
           Coding System (ID)> ^ <Coding System Version ID (ST)> ^ <Alternate Coding
           System Version ID (ST)> ^ <Original Text (ST)> ^ <Second Alternate
           Identifier (ST)> ^ <Second Alternate Text (ST)> ^ <Name of Second
           Alternate Coding System (ID)> ^ <Second Alternate Coding System Version ID
           (ST)> ^ <Coding System OID (ST)> ^ <Value Set OID (ST)> ^ <Value Set
           Version ID (DTM)> ^ <Alternate Coding System OID (ST)> ^ <Alternate Value
           Set OID (ST)> ^ <Alternate Value Set Version ID (DTM)> ^ <Second Alternate
           Coding System OID (ST)> ^ <Second Alternate Value Set OID (ST)> ^ <Second
           Alternate Value Set Version ID (DTM)>
```

Definition: This field indicates the determined Major Diagnostic Category (MDC) value. Refer to *External Table 0118 – Major Diagnostic Category* in Chapter 2C, Code Tables, for suggested values.

8.13.2.3 DMI-3 Lower and Upper Trim Points (NR) 02231

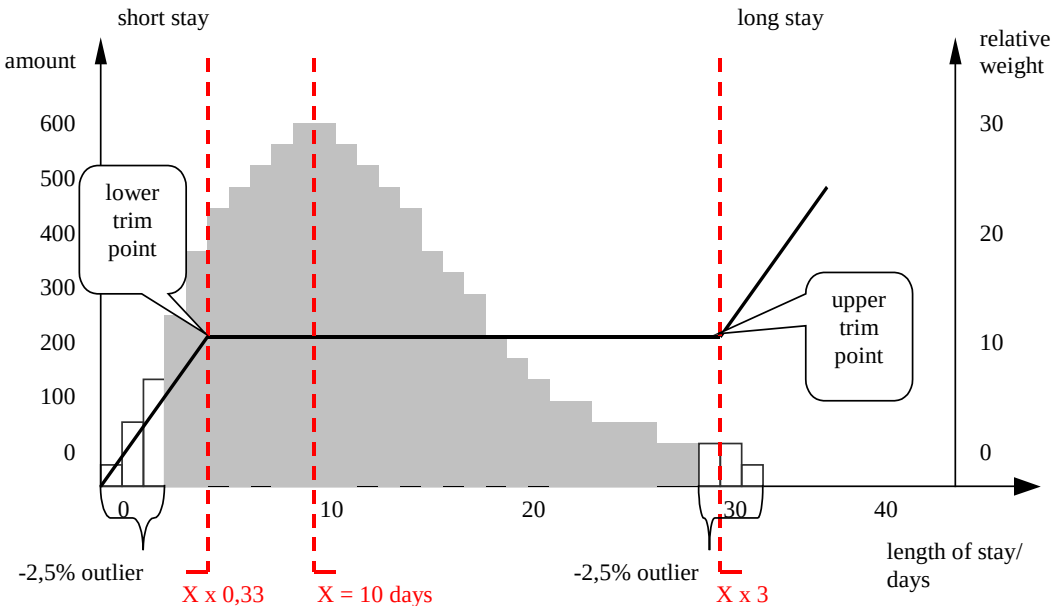
```
Components:  <Low Value (NM)> ^ <High Value (NM)>

Components:  <Lower Trim Point (NM)> ^ <Upper Trim Point (NM)>
```

Definition: This field contains the lower and upper trim points as calculated for this DRG..

Example as used in Germany: The "lower trim point" is equivalent to 1/3 of the average length of stay for patients having this DRG. The "upper trim point" is equivalent to 3 times the average length of stay. It is marked as the right dotted line within the graphics below.

The following graphics provides an overview of the German usage:



The gray boxes represent the amount of cases according to the length of stay. The higher and lower 2,5% outliers (white boxes) are cut off. The average length of stay is calculated thereof and is represented by the middle dotted line. From that the lower trim point is calculated by dividing by 3, the upper trim point is the average multiplied with 3.

8.13.2.4 DMI-4 Average Length of Stay (NM) 02232

Definition: This field contains the average length of stay in days, calculated as the geometric mean value, allocated to the determined DRG.

8.13.2.5 DMI-5 Relative Weight (NM) 02233

Definition: Each DRG has its own relative weight (cost weight) which is calculated (defined) by official institutions. This value is the basis for calculating other values, e.g., the effective weight.

8.14 Examples

8.14.1 Master file update examples: with original and enhanced acknowledgment protocol

This example shows the lab system using the Master Files specification to send two update test dictionary entries to an ICU system. The OM1 (observation dictionary) segment, currently under development by HL7 and ASTM, carries the dictionary information. Several varieties of acknowledgement are shown. The choice of acknowledgment mode is site-specific.

Original mode example:

```
MSH|^~\&|LABxxx|ClinLAB|ICU||19910918060544||MFN^M03^MFN_M03|MSGID002|P|2.8
MFI|OMA|LABxxx^Lab Test Dictionary^L|UPD|||AL
MFE|MUP|199109051000|199110010000|12345^WBC^L|CWE
OM1|...
MFE|MP|199109051015|199110010000|6789^RBC^L|CWE
OM1|...
```

Original mode acknowledgment of the HL7 message according to MFI Response Level Code of AL.

MSH|^~\&|ICU||LABxxx|ClinLAB|19910918060545||MFK^M03^MFK_M01|MSGID99002|P|2.8

MSA|AA|MSGID002

MFI|OMA|LABxxx^Lab Test Dictionary^L|UPD|||AL

MFA|MUP|199110010000|199110010040|S|12345^WBC^L|CWE

MFA|MUP|199110010000|199110010041|S|6789^RBC^L|CWE

Enhanced mode example

Initial message with accept acknowledgment

MSH|^~\&|LABxxx|ClinLAB|ICU||19910918060544||MFN^M03^MFN_M03|MSGID002|P|2.8|||AL|AL

MFI|OMA|LABxxx^Lab Test Dictionary^L|UPD|||AL

MFE|MUP|199109051000|199110010000|12345^WBC^L|CWE

OM1|...

MFE|MUP|199109051015|199110010000|6789^RBC^L|CWE

OM1|...

MSH|^~\&|ICU||LABxxx|ClinLAB|19910918060545||ACK^M03^ACK|MSGID99002|P|2.7

MSA|CA|MSGID002

Application acknowledgment message

MSH|^~\&|ICU||LABxxx|ClinLAB|19911001080504||MFK^M03^MFK_M01|MSGID5002|P|2.8|||AL|

MSA|AA|MSGID002

MFI|OMA|LABxxx^Lab Test Dictionary^L|UPD|||AL

MFA|MUP|199109051000|199110010040|S|12345^WBC^L|CWE

MFA|MUP|199109051015|199110010041|S|6789^RBC^L|CWE

MSH|^~\&|LABxxx|ClinLAB|ICU||19911001080507||ACK^M03^ACK|MSGID444|P|2.7

MSA|CA|MSGID5002

8.15 OUTSTANDING ISSUES

We invite proposals for the specification of other HL7-wide master files segments.