3. Patient Administration

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3.1 CHAPTER 3 CONTENTS

3.2 PURPOSE

The Patient Administration transaction set provides for the transmission of new or updated demographic and visit information about patients. Since virtually any system attached to the network requires information about patients, the Patient Administration transaction set is one of the most commonly used.

Generally, information is entered into a Patient Administration system and passed to the nursing, ancillary and financial systems either in the form of an unsolicited update or a response to a record-oriented query.

This chapter defines the transactions that occur at the seventh level, that is, the abstract messages. The examples included in this chapter were constructed using the HL7 Encoding Rules.

3.3 TRIGGER EVENTS AND MESSAGE DEFINITIONS

Each trigger event is listed below, along with the applicable form of the message exchange. The notation used to describe the sequence, optionality, and repetition of segments is described in Chapter 2, Section 2.12, "Chapter Formats for Defining HL7 Messages."

The trigger events that follow are all served by the ADT unsolicited update and the ACK response.

In the following trigger event descriptions, the term "admitted" patient will be used instead of "inpatient" to indicate any patient classes that are assigned to a patient bed for at least a few hours. "Non-admitted" patients will be used instead of "outpatients" to indicate any patient classes that are not assigned to a bed, but rather to an exam room or another type of encounter room or clinic waiting room.

We recognize that different hospital systems use different definitions of the terms "inpatient," "outpatient," "emergency room," and "recurring patient classes," or handle these patients differently. Therefore, the trigger events are not defined as specific to any patient class. The patient class for any visit related information must be specified in *PV1-2 - Patient class* in order to enable each system to handle the transaction properly. This means that both the event and the patient class must be checked in order to determine how to handle the transaction. If a certain patient class can sometimes be assigned to a bed and sometimes not, for example, "observation patients," then *PV1-3 - Assigned patient location* must also be checked.

In order to accommodate non-admitted patient events without using the same trigger events as those for admitted patients, we would need an entirely new set of non-admitted patient events. If we do that, disparate systems would still have a hard time agreeing about whether certain patient classes should use the admitted patient events or the non-admitted patient events, because of the differences between how admitted and non-admitted patients are defined and handled.

Both admitted and non-admitted patient events are transmitted using most of the same events. The meaning or interpretation of those events will depend upon the patient class.

The information that is included in any of these trigger event transactions can be more than the minimum necessary to communicate the event. Any of the fields can be used that are in the segments listed for the message. As many or as few fields can be used as are agreed upon during implementation. However, please note that when the contents of a field change for a field that is not necessarily related to the trigger event, it is a matter for implementation negotiation as to whether the receiving systems can capture this changed data.

In order to alleviate this ambiguity, we recommend (but do not require) that the A08 (update patient information) transaction be used to update fields that are not necessarily related to any of the other trigger events. For example, if a Patient Administration system allows the patient's medical service and attending doctor to be changed in the transfer function, the Patient Administration system should send two HL7 messages. It should send an A02 (transfer a patient) event to reflect the location change, followed by an A08 (update patient information) event to reflect the change in the medical service and the attending doctor.

3.3.1 ADT/ACK - admit/visit notification (event A01)

An A01 event is intended to be used for "Admitted" patients only. An A01 event is sent as a result of a patient undergoing the admission process which assigns the patient to a bed. It signals the beginning of a patient's stay in a healthcare facility. Normally, this information is entered in the primary Patient Administration system and broadcast to the nursing units and ancillary systems. It includes short stay and "John Doe" (e.g. patient name is unknown) admissions. For example, an A01 event can be used to notify:

the pharmacy system that a patient has been admitted and may be legitimately prescribed drugs; the nursing system that the patient has been admitted and needs a care plan prepared; the finance system of the start of the billing period; the dietary system that a new patient has been installed and requires dietary services; the laboratory, pathology, and radiology systems that a patient has been admitted and is entitled to receive services; the clinical repository that an admission has taken place for the EMR (electronic medical record).

When an account's start and end dates span a period greater than any particular visit, the P01 (add patient account) event should be used to transmit the opening of an account. The A01 event can notify systems of the creation of an account as well as notify them of a patient's arrival in the healthcare facility. In order to create a new account without notifying of patient's arrival, use the P01 event.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A01^ADT_A01	**ADT Message**	**Chapter**
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6
[PDA]	Patient Death and Autopsy	3

ACK^A01^ACK	**General Acknowledgment**	**Chapter**
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.2 ADT/ACK - transfer a patient (event A02)

An A02 event is issued as a result of the patient changing his or her assigned physical location.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition. If the transfer function of your Patient Administration system allows demographics to change at the same time as the transfer (for example an address change), we recommend (but do not require) sending two messages (an A02 followed by an A08). This A02 event can be used with admitted and non-admitted patients.

The new patient location should appear in *PV1-3 - Assigned Patient Location* while the old patient location should appear in *PV1-6 - Prior Patient Location*. For example, an A02 event can be used to notify: laboratory, radiology, pathology that the patient has changed location and test results should be redirected; pharmacy that drugs should be redirected for the patient; dietary that the meals should be delivered to a different location; the clinical repository that a transfer has taken place for the Electronic Medical Record.

If the patient is going to a temporary location (such as the O/R, X-RAY, LIMBO, the HALLWAY) it is recommended that the A09 (patient departing-tracking) and A10 (patient arriving-tracking) events be used instead of A02. It is recommended that A02 be used only for a real change in the census bed in the Patient Administration system.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A02^ADT_A02	**ADT Message**	**Chapter**
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[PDA]	Patient Death and Autopsy	3

ACK^A02^ACK	**General Acknowledgment**	**Chapter**
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.3 ADT/ACK - discharge/end visit (event A03)

An A03 event signals the end of a patient's stay in a healthcare facility. It signals that the patient's status has changed to "discharged" and that a discharge date has been recorded. The patient is no longer in the facility. The patient's location prior to discharge should be entered in *PV1-3 - Assigned Patient Location*.

An A03 event can be sent to notify: the pharmacy that the patient's stay has ended and that entitlement to drugs has changed accordingly; the nursing system that the patient has been discharged and that the care plan can be completed; the finance system that the patient billing period has ended; and/or the clinical repository that discharge has taken place for the EMR.

For non-admitted patients, an A03 event signals the end of a patient's visit to a healthcare facility. It could be used to signal the end of a visit for a one-time or recurring outpatient who is not assigned to a bed. It could also be used to signal the end of a visit to the Emergency Room. *PV1-45 - Discharge Date/Time* can be used for the visit end date/time.

When an account's start and end dates span a period greater than any particular visit, the P06 (end account) event should be used to transmit information about the closing of an account. To indicate that a patient has expired, use an A03 event with the *PID-29 - Patient Death Date and Time* and *PID-30 - Patient Death Indicator* filled in.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A03^ADT_A03	**ADT Message**	**Chapter**
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ OBX }]	Observation/Result	7
[PDA]	Patient Death and Autopsy	3

ACK^A03^ACK	**General Acknowledgment**	**Chapter**
MSH	Message Header	2
MSA	Message Acknowledgment	2

ACK^A03^ACK	General Acknowledgment	Chapter
[ERR]	Error	2

3.3.4 ADT/ACK - register a patient (event A04)

An A04 event signals that the patient has arrived or checked in as a one-time, or recurring outpatient, and is not assigned to a bed. One example might be its use to signal the beginning of a visit to the Emergency Room (= Casualty, etc.). Note that some systems refer to these events as outpatient registrations or emergency admissions. *PV1-44 - Admit Date/Time* is used for the visit start date/time.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A04^ADT_A01	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6
[PDA]	Patient Death and Autopsy	3

ACK^A04^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.5 ADT/ACK - pre-admit a patient (event A05)

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

pre-admit may be performed prior to inpatient or outpatient surgery so that lab tests can be performed prior to the surgery. This event can also be used to pre-register a non-admitted patient.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Visit level providers (corresponding to the PV1 data) are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A05^ADT_A05	**ADT Message**	**Chapter**
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6

ACK^A05^ACK	**General Acknowledgment**	**Chapter**
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.6 ADT/ACK - change an outpatient to an inpatient (event A06)

An A06 event is sent when a patient who was present for a non-admitted visit is being admitted after an evaluation of the seriousness of the patient's condition. This event changes a patient's status from non-admitted to admitted. The new patient location should appear in *PV1-3 - Assigned patient location*, while the old patient location (if different) should appear in *PV1-6 - Prior patient location*. The new patient class should appear in *PV1-2 - Patient class*.

It will be left to implementation negotiation to determine whether disparate systems merely change the patient class, or close and open a new account. The current active account number should appear in *PID-18 - Patient account number*; the prior account number can be included optionally in *MRG-3 - Prior*

patient account number. This arrangement is not intended to be a type of merge, but the MRG segment is used here for *MRG-3 - Prior patient account number*.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Visit level providers (corresponding to the PV1 data) are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 -Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL segment, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A06^ADT_A06	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[MRG]	Merge Information	3
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6

ACK^A06^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.7 ADT/ACK - change an inpatient to an outpatient (event A07)

An A07 event is sent when a patient who was admitted changes his/her status to "no longer admitted" but is still being seen for this episode of care. This event changes a patient from an "admitted" to a "non-admitted" status. The new patient location should appear in *PV1-3 - Assigned patient location*, while the old patient location (if different) should appear in *PV1-6 - Prior patient location*.

We leave it to implementation negotiation to determine whether disparate systems merely change the patient class, or close and open a new account. The current active account number should appear in field *PID-18 - Patient account number*; the prior account number can be included optionally in *MRG-3 - Prior patient account number*. This arrangement is not intended to be a type of merge. The MRG segment is only used here for *MRG-3 - Prior patient account number*. *PV1-19 - Visit number* can also be changed during this event.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL segment, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A07^ADT_A06	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[MRG]	Merge Information	3
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6

ACK^A07^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.8 ADT/ACK - update patient information (event A08)

This trigger event is used when any patient information has changed but when no other trigger event has occurred. For example, an A08 event can be used to notify the receiving systems of a change of address or a name change. We recommend that the A08 transaction be used to update fields that are not related to any of the other trigger events. The A08 event can include information specific to an episode of care, but it can also be used for demographic information only.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A08^ADT_A01	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6
[PDA]	Patient Death and Autopsy	3

ACK^A08^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.9 ADT/ACK - patient departing - tracking (event A09)

The A09 and A10 - patient arriving-tracking events are used when there is a change in a patient's physical location (inpatient or outpatient) and when this is NOT a change in the official census bed location, as in the case of an outpatient setting. There are three situations that qualify as non-census

location changes: (a) patient tracking, (b) the patient is in transit between locations for some time, (c) a notification of temporary location change.

Patient tracking: This can be used when the nursing application sends a "transfer" before the Patient Administration (or official census) system issues an A02 (transfer a patient) event. If the patient has left for a non-temporary location and is not in transit, then the *PV1-3 - assigned patient location* must contain the new patient location, while *PV1-6 - prior patient location* must contain the old patient location.

In transit: The patient's location during the time between an A09 and an A10 (patient arriving - tracking) is defined as "in transit." The A09 event is sent when a patient departs from one area of the healthcare facility for the purpose of arriving at another area, but without leaving the healthcare institution. This event is used when there is a time span during which the patient is neither at his/her old location nor at his/her new location. This process can take some time if a patient is being sent to another area in a multi-campus or multi-facility environment. The combination of an A09 and an A10 would serve the same purpose as an A02 (transfer a patient) event, except that it accounts for a gap in time required for transport between facilities. If the patient will be in transit during the time between the A09 (patient departing - tracking) event and the A10 (patient arriving - tracking) event, then *PV1-42 - Pending location* is used for the new location, and *PV1-11 - Temporary location* and *PV1-43 - Prior temporary location* would not be used. *PV1-6 - Prior patient location* should be used for the old location.

Temporary location: An A09 can also be used when the patient is being sent to a temporary location (such as the O/R, X-RAY, LIMBO, or HALLWAY). The patient may or may not return to the same assigned location after occupying the temporary location. If the patient is going to a temporary location (such as the O/R, X-RAY, LIMBO, or HALLWAY), then *PV1-11 - Temporary location* is used to indicate the new temporary location. If the patient is moving from one temporary location to another, then *PV1-43 - Prior temporary location* may also be used. *PV1-6 - Prior patient location* and *PV1-11 - Temporary location* should be used when the patient is moving from a permanent location to a temporary location.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The DG1 segment remains in this message for backward compatibility only.

ADT^A09^ADT_A09	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ DG1 }]	Diagnosis Information	6

ACK^A09^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.10 ADT/ACK - patient arriving - tracking (event A10)

The A10 event is sent when a patient arrives at a new location in the healthcare facility (inpatient or outpatient). The A09 - patient departing-tracking and A10 events are used when there is a change in a patient's physical location and when this is NOT a change in the official census bed location, as in the

case of an outpatient setting. There are three varieties of these non-census location changes involving three different kinds of notification: (a) an unofficial notification of location change prior to the official notification of patient tracking, (b) the patient is in transit between locations for some time, (c) a notification of a temporary location change.

Patient tracking: If the patient is now at a non-temporary location and is not in transit, then *PV1-3 - Assigned patient location* must contain the new patient location and *PV1-6 - Prior patient location* can contain the old patient location.

In transit: This is used when there is some period of time between when the patient leaves his/her old location and when he/she arrives at the new assigned location. If the patient was in transit during the time between the A09 (patient departing-tracking) event and the A10 (patient arriving-tracking) event, then *PV1-3 - assigned patient location* is used for the new location and *PV1-6 - prior patient location* should be used for the old location. *PV1-11 - temporary location* and *PV1-43 - prior temporary location* are not used.

Temporary location: An A10 event can also be used when the patient is being transferred from a temporary location (X-RAY, O/R, LIMBO, HALLWAY) to the new assigned location. If the patient is arriving at a temporary location (such as the O/R, X-RAY, LIMBO, the HALLWAY), then *PV1-11 - temporary location* would be used to indicate the new temporary location. If the patient is moving from one temporary location to another, then *PV1-43 - prior temporary location* may also be used. If the patient is arriving at a permanent location from a temporary location, *PV1-3 - assigned patient location* should be used for the new location, and *PV1-43 - prior temporary location* should be used for the old location.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition. **The DG1 segment remains in this message for backward compatibility only.**

ADT^A10^ADT_A09	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ DG1 }]	Diagnosis Information	6

ACK^A10^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.11 ADT/ACK - cancel admit / visit notification (event A11)

For "admitted" patients, the A11 event is sent when an A01 (admit/visit notification) event is cancelled, either because of an erroneous entry of the A01 event, or because of a decision not to admit the patient after all.

For "non-admitted" patients, the A11 event is sent when an A04 (register a patient) event is cancelled, either because of an erroneous entry of the A04 event, or because of a decision not to check the patient in for the visit after all. To cancel an A05 (pre-admit a patient) event, use the A38 (cancel pre-admit), which is new for Version 2.3 of this Standard.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The DG1 segment remains in this message for backward compatibility only.

ADT^A11^ADT_A09	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ DG1 }]	Diagnosis Information	6

ACK^A11^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.12 ADT/ACK - cancel transfer (event A12)

The A12 event is sent when an A02 (transfer a patient) event is cancelled, either because of erroneous entry of the A02 event or because of a decision not to transfer the patient after all. *PV1-3 - assigned patient location* must show the location of the patient prior to the original transfer.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) even be used in addition.

The DG1 segment remains in this message for backward compatibility only.

ADT^A12^ADT_A09	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[DG1]	Diagnosis Information	6

ACK^A12^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.13 ADT/ACK - cancel discharge / end visit (event A13)

The A13 event is sent when an A03 (discharge/end visit) event is cancelled, either because of erroneous entry of the A03 event or because of a decision not to discharge or end the visit of the patient after all. *PV1-3 - assigned patient location* should reflect the location of the patient after the cancellation has been processed. Note that this location may be different from the patient's location prior to the erroneous

discharge. Prior Location could be used to show the location of the patient prior to the erroneous discharge.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A13^ADT_A01	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6
[PDA]	Patient Death and Autopsy	3

ACK^A13^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.14 ADT/ACK - pending admit (event A14)

An A14 event notifies other systems of a planned admission, when there is a reservation or when patient admission is to occur imminently. The A14 event is similar to a pre-admit, but without the implication that an account should be opened for the purposes of tests prior to admission. It is used when advanced notification of an admit is required in order to prepare for the patient's arrival.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A14^ADT_A05	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ROL}]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6

ACK^A14^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.15 ADT/ACK - pending transfer (event A15)

An A15 event notifies other systems of a plan to transfer a patient to a new location when the patient has not yet left the old location. It is used when advanced notification of a transfer is required in order to prepare for the patient's location change. For example, this transaction could be sent so that staff will be on hand to move the patient or so that dietary services can route the next meal to the new location.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment

following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL segment, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

The DG1 segment remains in this message for backward compatibility only.

ADT^A15^ADT_A15	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ DG1 }]	Diagnosis Information	6

ACK^A15^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.16 ADT/ACK - pending discharge (event A16)

An A16 event notifies other systems of a plan to discharge a patient when the patient has not yet left the healthcare facility. It is used when advanced notification of a discharge is required in order to prepare for the patient's change in location. For example, it is used to notify the pharmacy of the possible need for discharge drugs or to notify psychotherapy of the possible need for post-discharge appointments.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A16^ADT_A16	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6

ACK^A16^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.17 ADT/ACK - swap patients (event A17)

The A17 is used when it is decided that two patients will exchange beds. The patient ID and visit data are repeated for the two patients changing places. See Section 3.6.1, "Swapping a patient," for a discussion of issues related to implementing this trigger event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A17^ADT_A17	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient (1) Identification	3
[PD1]	Additional Demographics	3
PV1	Patient (1) Visit	3
[PV2]	Patient (1) Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result (1)	7
PID	Patient (2) Identification	3
[PD1]	Additional Demographics	3
PV1	Patient (2) Visit	3
[PV2]	Patient (2) Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result (2)	7

ACK^A17^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.18 ADT/ACK - merge patient information (event A18)

Event A18 has been retained for backward compatibility. The A18 event was used to merge current and previous patient identification numbers: *PID-3 - patient identifier list*, *PID-2 - patient ID*, *PID-4 - alternate patient ID-PID*, and *PID-18 - patient account number*. This procedure is required, for example, when a previous patient is registered under a new patient identification number because of an error, or because there was insufficient time to determine the actual patient identification number. The merge event occurs when a decision is made to combine the information under either the new or the old identifier(s). The PID segment contains the surviving patient ID information. The MRG segment contains the non-surviving information.

From V2.3.1 onwards events A40 (merge patient-patient identifier list), A41 (merge account-patient account number), and A42 (merge visit-visit number) should be utilized in place of the A18 event**.**

This merge event is non-specific in that, as a result of the merge, several patient identifiers may or may not have changed. For sites requiring (or desiring) greater specificity with regard to this type of message, new events A40 (merge patient-patient identifier list), A41 (merge account-patient account number) and A42 (merge visit-visit number)) are now available as alternatives. See Section 3.6.2, "Merging patient/person information," for a discussion of issues related to implementing patient merge events.

ADT^A18^ADT_A18	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
PV1	Patient Visit	3

ACK^A18^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.19 QRY/ADR - patient query (event A19)

The following trigger event is served by QRY (a query from another system) and ADR (a response from an Patient Administration system.)

Another application determines a need for Patient Administration data about a patient and sends a query to the Patient Administration system. The Who Filter in the QRD can identify the patient or account number upon which the query is defined and can contain a format code of "R" (record-oriented). If the query is based on the Patient ID and there are data associated with multiple accounts, the problem of which account data should be returned becomes an implementation issue. The ADT event-type segment, if included in the response, describes the last event for which the Patient Administration system initiated an unsolicited update.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

QRY^A19^QRY_A19	Patient Query	Chapter
MSH	Message Header	2
QRD	Query Definition	2
[QRF]	Query Filter	2

ADR^A19^ADR_A19	ADT Response	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2
[QAK]	Query Acknowledgment	5
QRD	Query Definition	2
[QRF]	Query Filter	2
{		
[EVN]	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3

ADR^A19^ADR_A19	ADT Response	Chapter
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill Information	6
}		
[DSC]	Continuation Pointer	2

3.3.19.1 A19 usage notes

In addition to single-patient responses, the ADT record-oriented query/response needs to support responses containing multiple patients for the following query types (by subject filter): return census for a nursing unit (ANU), return patients matching a name search (APN), and return patients for a given medical practitioner, physician, etc. (APP).

For multiple patient responses, additional values for *QRD-9 - What subject filter* may be used, such as:

IP	Inpatient
OP	Outpatient
DC	Discharged

For the ANU subject filter, the Patient Administration systems response must have some method for conveying the fact that some beds are empty (as well as for returning the data for all patients in the occupied beds). This method will function as follows:

a) Bed Full
Regular { [EVN], PID, PV1 } segment group for each patient with *PV1-40 - bed status* value of "O" occupied.

b) Bed Empty
In this case, all fields in the corresponding EVN, PID, and PV1 segments are null except for the following fields in the PV1 segment.

- *PV1-3 - assigned patient location* contains the new bed location information
- *PV1-40 - bed status* contains one of the following values: U (unoccupied), H (housekeeping), or C (closed).

3.3.20 ADT/ACK - bed status update (event A20)

Certain nursing/census applications need to be able to update the Patient Administration system's bed status. The following is the associated record layout:

ADT^A20^ADT_A20	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
NPU	Non-Patient Update	3

ACK^A20^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.21 ADT/ACK - patient goes on a leave of absence (event A21)

An A21 event is sent to notify systems that an admitted patient has left the healthcare institution temporarily. It is used for systems in which a bed is still assigned to the patient, and it puts the current admitted patient activities on hold. For example, it is used to notify dietary services and laboratory systems when the patient goes home for the weekend.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

As there is no specific field for the LOA start date/time, it is recommended field *EVN-6 - Event occurred* contain the date/time the patient actually left. *PV2-47 - Expected LOA return date/time* is used to communicate the date/time the patient is expected to return from LOA.

ADT^A21^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A21^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.22 ADT/ACK - patient returns from a leave of absence (event A22)

An A22 event is sent to notify systems that an admitted patient has returned to the healthcare institution after a temporary "leave of absence." It is used for systems in which a bed is still assigned to the patient, and it takes their current admitted patient activities off of "hold" status. For example, it is used to notify dietary services and laboratory systems when the patient returns from a weekend trip to his/her home.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

As there is no specific field for the LOA start date/time, it is recommended that field *EVN-6 - Event occurred* contain the date/time the patient actually returned from LOA. *PV2-47 - Expected LOA return date/time* is used to communicate the date/time the patient was expected to return from LOA.

ADT^A22^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A22^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.23 ADT/ACK - delete a patient record (event A23)

The A23 event is used to delete visit or episode-specific information from the patient record. For example, it is used to remove old data from a database that cannot hold all historical patient visit data. When an event was entered erroneously, use one of the cancel transactions. This event can be used to purge account-level data while retaining the person in the database.

ADT^A23^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A23^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.24 ADT/ACK - link patient information (event A24)

The A24 event is used when the first PID segment needs to be linked to the second PID segment and when both patient identifiers identify the same patient. Linking two or more patients does not require the actual merging of patient information; following a link event, the affected patient data records should remain distinct. For example, this event could be used in a hospital network environment in which there are multiple campuses and in which records need to be linked. For example, hospital A, hospital B, and hospital C would each keep their own records on a patient, but an A24 link event would be sent to a corporate-wide MPI to enable the coupling of ID information with the corporate ID number. It is used for corporate data repositories, etc. This event is not meant to link mothers and babies since a field exists (*PID-21 - mother's identifier*) for that purpose. See Section 3.6.3, "Patient record links," for a discussion of issues related to implementing patient link messages and MPI issues.

This event can also be used to link two patient identifiers when a patient changes from inpatient to outpatient, or vice versa. This event can also be used to link two visits of the same patient.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A24^ADT_A24	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient (1) Identification	3
[PD1]	Patient (1) Additional Demographics	3
[PV1]	Patient (1) Visit	3
[{ DB1 }]	Patient (1) Disability Information	3
PID	Patient (2) Identification	3
[PD1]	Patient (2) Additional Demographics	3
[PV1]	Patient (2) Visit	3
[{ DB1 }]	Patient (2) Disability Information	3

ACK^A24^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.25 ADT/ACK - cancel pending discharge (event A25)

The A25 event is sent when an A16 (pending discharge) event is cancelled, either because of erroneous entry of the A16 event or because of a decision not to discharge the patient after all.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A25^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A25^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.26 ADT/ACK - cancel pending transfer (event A26)

The A26 event is sent when an A15 (pending transfer) event is cancelled, either because of erroneous entry of the A15 event or because of a decision not to transfer the patient after all.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A26^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A26^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.27 ADT/ACK - cancel pending admit (event A27)

The A27 event is sent when an A14 (pending admit) event is canceled, either because of erroneous entry of the A14 event or because of a decision not to admit the patient after all.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A27^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A27^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.28 ADT/ACK - add person or patient information (event A28)

The purpose of this and the three following messages was to allow sites with multiple systems and respective master patient databases to communicate activity related to a person regardless of whether that person is currently a patient on each system. Each system has an interest in the database activity of the others in order to maintain data integrity across an institution. Though they are defined within the ADT message set, these messages differ in that they are not patient-specific. To a certain registry, the person may be a person of interest, a potential future patient, or a potential guarantor. For example, these events can be used to maintain an MPI (master patient index), a cancer registry, members of a managed care plan, an HIV database, etc.

These events should not replace the use of the A01 (admit/visit notification), A03 (discharge/end visit), A04 (register a patient), A08 (update patient information), etc., events. They are not intended to be used for notification of real-time Patient Administration events. These events are primarily for demographic data, but optional historical non-demographic data may be sent as well.

The person whose data is being sent should be identified in the PID segment using the *PID-3 - patient identifier list*, even when the person is not a patient and may be a potential guarantor. An A28 establishes person identifiers, e.g., social security number, guarantor identifier, or other unique identifiers, and contains a person identifier in the *PID-3 - patient identifier list*. The person involved may or may not have active or inactive cases associated with them. When field names and descriptions say "patient," we must translate that to "person" for these transactions. In this manner, "person information" about a guarantor can be sent independently of the guarantor's relation to any patient.

For example, a site with separate inpatient, outpatient and medical records systems may require that each system maintain concurrent person information. Prior to an admit, the new person is added to the master database of the inpatient system, resulting in the broadcast of a message. The outpatient system receives the message and adds the person to its database with the possibility that the person may someday become a patient in its system. The medical records system receives the message and adds the person to its database with the possibility that it will track inpatient, outpatient, or clinical data for that person. The clinical repository database or MPI receives the message to keep all potential patients and guarantors in its database.

The A28 event can be used to send everything that is known about a person. For example, it can be sent to an ICU unit (in addition to the A02 (transfer a patient) event) when a patient is transferred to the ICU unit in order to backload all demographic information for the patient into the ICU system. An A28 (add person information) or A31 (update person information) can also be used for backloading MPI information for the person, or for backloading person and historical information.

In addition to adding a person to a database, the delete, update, and merge messages work in a similar manner to maintain concurrent person information. It is left up to site-specific negotiations to decide how much data must be transmitted or re-transmitted when a person becomes a patient.

To maintain backward compatibility with previous releases, the PV1 segment is required. However, a "pseudo-optional" PV1 can be achieved by valuing *PV1-2 - patient class* to N - not applicable.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A28^ADT_A05	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{		
PR1	Procedures	6
[{ ROL }]	Role	12
}]		

ADT^A28^ADT_A05	ADT Message	Chapter
[{ GT1 }]	Guarantor	6
[{		
IN1	Insurance	6
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6

ACK^A28^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.29 ADT/ACK - delete person information (event A29)

An A29 event can be used to delete all demographic information related to a given person. This event "undoes" an A28 (add person information) event. The information from the A28 event is deleted. This event is used, for example, when adding the information was performed in error, or when another record already exists for the person, or when one wants to purge the person from the database. When this event occurs, all visit and account level data for this person is also purged.

To maintain backward compatibility with previous releases, the PV1 segment is required. However, a "pseudo-optional" PV1 can be achieved by valuing *PV1-2 - patient class* to N - not applicable.

ADT^A29^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A29^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.30 ADT/ACK - merge person information (event A30)

Event A30 has been retained for backward compatibility only. An A30 event was used to merge person information on an MPI. From V 2.3.1 onwards, the A40 (merge patient-patient identifier list) events should be used to merge patient information for a current episode. The "incorrect MRN" identified on the MRG segment (*MRG-1 - prior patient identifier list*) is to be merged with the "correct MRN" identified on the PID segment (*PID-3 - patient identifier list*). The "incorrect MRN" then no longer exists. All PID data associated with the "correct MRN" are treated as updated information.

The MRNs involved may or may not have active or inactive cases associated with them. Any episode of care that was previously associated with the "incorrect MRN" is now associated with the "correct MRN." A list of these cases is not provided.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

An A30 (merge person information) is intended for merging person records without merging patient identifiers.

ADT^A30^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A30^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.31 ADT/ACK - update person information (event A31)

An A31 event can be used to update person information on an MPI. It is similar to an A08 (update patient information) event, but an A08 (update patient information) event should be used to update patient information for a current episode. An A28 (add person information) or A31 can also be used for backloading MPI information for the person, or for backloading person and historical information.

To maintain backward compatibility with previous releases, the PV1 segment is required. However, a "pseudo-optional" PV1 can be achieved by valuing *PV1-2 - patient class* to N - not applicable.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role Code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A31^ADT_A05	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
[{ NK1 }]	Next of Kin / Associated Parties	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ AL1 }]	Allergy Information	3
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6
[{ PR1	Procedures	6
{ ROL }]	Role	12
}]		
[{ GT1 }]	Guarantor	6
[		
{ IN1	Insurance	6

ADT^A31^ADT_A05	ADT Message	Chapter
[IN2]	Insurance Additional Info.	6
[{ IN3 }]	Insurance Additional Info - Cert.	6
[{ ROL }]	Role	12
}		
]		
[ACC]	Accident Information	6
[UB1]	Universal Bill Information	6
[UB2]	Universal Bill 92 Information	6

ACK^A31^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.32 ADT/ACK - cancel patient arriving - tracking (event A32)

The A32 event is sent when an A10 (patient arriving-tracking) event is cancelled, either because of erroneous entry of the A10 event or because of a decision not to receive the patient after all.

If the patient was in a non-temporary location, then the *PV1-3 - assigned patient location* may contain (if known) the original patient location prior to the erroneous A10 (patient arriving-tracking) event. If the patient was in a temporary location, then *PV1-11 - temporary location* may contain (if known) the original patient location prior to the erroneous A10 (patient arriving-tracking) event.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A32^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A32^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.33 ADT/ACK - cancel patient departing - tracking (event A33)

The A33 event is sent when an A09 (patient departing-tracking) event is cancelled, either because of erroneous entry of the A09 event or because of a decision not to send the patient after all.

If the patient was in a non-temporary location, then *PV1-3 - assigned patient* location must contain the original patient location prior to the erroneous A09 (patient departing-tracking) event. If the patient was in a temporary location, then *PV1-11 - temporary location* must contain the original patient location prior to the erroneous A09 (patient departing-tracking) event.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A33^ADT_A21	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7

ACK^A33^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.34 ACK/ADT - merge patient information - patient ID only (event A34)

Event A34 has been retained for backward compatibility only. From V2.3.1 onwards, event A40 (Merge patient - patient identifier list) should be used instead. Only the patient identifier list has changed as a result of the merge. See Section 3.6.2, "Merging patient/person information," for a discussion of issues related to the implementation of merge messages.

An A34 (merge patient information-patient ID only) event was intended for merging or changing patient identifiers. It was used to change patient identifiers on all of this patient's existing accounts.

ADT^A34^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A34^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error Information	2

3.3.35 ADT/ACK - merge patient information - account number only (event A35)

Event A35 has been retained for backward compatibility only. From V2.3.1 onwards, event A41 (Merge patient - patient account number) should be used instead. Only the patient account number has changed as a result of the merge. See Section 3.6.2, "Merging patient/person information," for a discussion of issues related to the implementation of merge messages.

An A35 (merge patient information-account number only) event was intended for merging or changing an account number only.

ADT^A35^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3

ADT^A35^ADT_A30	ADT Message	Chapter
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A35^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.36 ADT/ACK - merge patient information - patient ID & account number (event A36)

Event A36 has been retained for backward compatibility only. From V2.3.1 onwards, events A40 (merge patient - patient identifier list) and A41 (merge patient - patient account number) should be used instead. Both patient identifier list and the patient account number have changed as a result of the merge. See Section 3.6.2, "Merging patient/person information," for a discussion of issues related to the implementation of merge messages.

ADT^A36^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A36^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.37 ADT/ACK - unlink patient information (event A37)

The A37 event unlinks two patient identifiers.

ADT^A37^ADT_A37	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient (1) Identification	3
[PD1]	Additional Demographics	3
[PV1]	Patient (1) Visit	3
[{ DB1 }]	Disability Information	3
PID	Patient (2) Identification	3
[PD1]	Additional Demographics	3
[PV1]	Patient (2) Visit	3
[{ DB1 }]	Disability Information	3

ACK^A37^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.38 ADT/ACK - cancel pre-admit (event A38)

The A38 event is sent when an A05 (pre-admit a patient) event is cancelled, either because of erroneous entry of the A05 event or because of a decision not to pre-admit the patient after all.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A38^ADT_A38	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ DB1 }]	Disability Information	3
[{ OBX }]	Observation/Result	7
[{ DG1 }]	Diagnosis Information	6
[DRG]	Diagnosis Related Group	6

ACK^A38^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.39 ADT/ACK - merge person - patient ID (event A39)

Event A39 has been retained for backward compatibility only. From V2.3.1 onwards, event A40 (merge patient - patient identifier list) should be used instead. A merge has been done at the patient identifier level. That is, two *PID-2 - patient ID* identifiers have been merged into one.

An A39 event is used to signal a merge of records for a person that was incorrectly filed under two different *PID-2 - patient ID*s. The "incorrect source patient ID" identified in the MRG segment (*MRG-4 - prior patient ID*) is to be merged with the required "correct target patient ID" identified in the PID segment (*PID-2 - patient ID*). The "incorrect source patient ID" would then logically never be referenced in future transactions. It is noted that some systems may still physically keep this "incorrect identifier" for audit trail purposes or other reasons associated with database index implementation requirements.

Since this event is a merge at the *PID-2 - patient ID identifier* level, *PID-3 - patient identifier list* and *MRG-1 - prior patient identifier list* are not required.

The patient IDs involved in identifying the persons may or may not be patients, who may or may not have accounts, which may or may not have visits. An A39 (merge person-patient ID) event is intended for merging person records without merging other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source patient ID" are now associated with the "correct target patient ID." Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of "new subordinate identifiers" (in addition to the *PID-2 - patient ID* identifier). For those environments that may require changes to these other subordinate identifiers because of an A39 (merge person-patient ID), it is required that the old and new identifiers be a "tightly coupled" pair.

See sections 3.5.2 "Merging patient/person information" and 3.5.2.1.2 "Merge," for a discussion of issues related to the implementation of merge messages.

All data associated with the "correct target patient ID" are treated as updated information.

ADT^A39^ADT_A39	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
{ PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
[PV1]	Patient Visit	3
}		

ACK^A39^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.40 ADT/ACK - merge patient - patient identifier list (event A40)

A merge has been done at the patient identifier list level. That is, two *PID-3 - patient identifier list* identifiers have been merged into one.

An A40 event is used to signal a merge of records for a patient that was incorrectly filed under two different identifiers. The "incorrect source identifier" identified in the MRG segment (*MRG-1 - prior patient identifier list*) is to be merged with the required "correct target identifier" of the same "identifier type code" component identified in the PID segment (*PID-3 - patient identifier list*). The "incorrect source identifier" would then logically never be referenced in future transactions. It is noted that some systems may still physically keep this "incorrect identifier" for audit trail purposes or other reasons associated with database index implementation requirements.

The identifiers involved in identifying the patients may or may not have accounts, which may or may not have visits. An A40 (merge patient-patient identifier list) event is intended for merging patient records without merging other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source identifier" are now associated with the "correct target identifier." Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of any other "new subordinate identifiers" (in addition to the *PID-3 - patient identifier list* identifier). For those environments that may require changes to these other subordinate identifiers because of the A40 (merge patient-patient identifier list) event, it is required that the old and new identifiers be a "tightly coupled" pair.

See Sections 3.5.2 "Merging patient/person information" and 3.5.2.1.2 "Merge," for a discussion of issues related to the implementation of merge messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other fields change, it is recommended that the A31 (update person information) event be used for person level updates and A08 (update patient information) event for patient level updates.

ADT^A40^ADT_A39	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
{ PID	Patient Identification	3
[PD1]	Additional Demographics	3

ADT^A40^ADT_A39	ADT Message	Chapter
MRG	Merge Information	3
[PV1]	Patient Visit	3
}		

ACK^A40^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.41 ADT/ACK - merge account - patient account number (event A41)

A merge has been done at the account identifier level. That is, two *PID-18 - patient account number* identifiers have been merged into one.

An A41 event is used to signal a merge of records for an account that was incorrectly filed under two different account numbers. The "incorrect source patient account number" identified in the MRG segment (*MRG-3 - prior patient account number*) is to be merged with the "correct target patient account number" identified in the PID segment (*PID-18 - patient account number*). The "incorrect source patient account number" would then logically never be referenced in future transactions. It is noted that some systems may still physically keep this "incorrect identifier" for audit trail purposes or other reasons associated with database index implementation requirements.

The patient account numbers involved may or may not have visits. An A41 (merge account-patient account number) is intended for merging account records without merging other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source account number" are now associated with the required "correct target account number." Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of any other "new subordinate identifiers" (in addition to the *PID-18 - patient account number* identifier). For those environments that may require changes to these other subordinate identifiers because of this A41 (merge account-patient account number) event, it is required that the old and new identifiers be a "tightly coupled" pair.

Each superior identifier associated with this account identifier level should have the same value in both the PID and MRG segments.

See Sections 3.5.2 "Merging patient/person information" and 3.5.2.1.2 "Merge," for a discussion of issues related to the implementation of merge messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other fields change, it is recommended that the A08 (update patient information) event be used in addition

ADT^A41^ADT_A39	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
{ PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
[PV1]	Patient Visit	3
}		

ACK^A41^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.42 ADT/ACK - merge visit - visit number (event A42)

A merge has been done at the visit identifier level. That is, two *PV1-19 - visit number* identifiers have been merged into one.

An A42 event is used to signal a merge of records for a visit that was incorrectly filed under two different visit numbers. The "incorrect source visit number" identified in the MRG segment (*MRG-5 - prior visit number*) is to be merged with the required "correct target visit number" identified in the PV1 segment (*PV1-19 - visit number*). The "incorrect source visit number" would then logically never be referenced in future transactions. It is noted that some systems may still physically keep this "incorrect identifier" for audit trail purposes or other reasons associated with database index implementation requirements.

An A42 (merge visit-visit number) event is intended for merging visit records without merging other identifiers. Any other identifiers that were previously associated with the "incorrect source visit number" are now associated with the "correct target visit number."

Each superior identifier associated with this visit identifier level should have the same value in the PID and MRG segments, or the MRG and PV1 segments, as appropriate.

See Sections 3.5.2 "Merging patient/person information" and 3.5.2.1.2 "Merge," for a discussion of issues related to the implementation of merge messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other fields change, it is recommended that the A08 (update patient information) event be used in addition

ADT^A42^ADT_A39	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
{ PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
[PV1]	Patient Visit	3
}		

ACK^A42^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.43 ADT/ACK - move patient information - patient identifier list (event A43)

A move has been done at the patient identifier list level. Identifier to be moved in the *PID-3 - Patient identifier list* and *MRG-1 - prior patient identifier list* will have the same value. The "from" (incorrect source patient ID) and "to" (correct target patient ID) identifiers have different values. See A43 examples in section 5. The identifiers involved in identifying the patient to be moved (*MRG-1 - prior patient identifier list*) may or may not have accounts, which may or may not have visits. In any case, all subordinate data sets associated with the identifier in *MRG-1 - prior patient identifier list* are moved along with the identifier, from the "incorrect source patient ID" to the "correct target patient ID".

No identifiers subordinate to the identifier (account number, visit number, alternate visit ID) are valued in this message. Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of a "new identifier" (*PID-3 - patient identifier list*), which may be application and/or implementation specific and therefore require site negotiation.

See Sections 3.5.2 "Merging patient/person information" and 3.5.2.1.3, "Move," for a discussion of issues related to the implementation of move messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message. However, all PID data associated with the "correct target identifier" (*PID-3 - patient identifier list*) are treated as updated information.

ADT^A43^ADT_A43	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
{ PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
}		

ACK^A43^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.44 ADT/ACK - move account information - patient account number (event A44)

A move has been done at the account identifier level. That is, a *PID-18 - patient account number* associated with one *PID-3 - patient identifier list* has been moved to another patient identifier list.

An A44 event is used to signal a move of records identified by the *MRG-3 - prior patient account number* from the "incorrect source patient identifier list" identified in the MRG segment (*MRG-1 - prior patient identifier list*) to the "correct target patient identifier list" identified in the PID segment (*PID-3 - patient identifier list*).

The account number involved in identifying the account to be moved (*MRG-3 - prior patient account number*) may or may not have visits. In any case, all subordinate data sets associated with the account number in *MRG-3 - prior patient account number* are moved along with the account number, from the "incorrect source" ID (*MRG-1 - prior patient identifier list*) to the "correct target" ID (*PID-3 - patient identifier list*).

No identifiers subordinate to the account number (visit number, alternate visit ID) are valued in this message.

This event and the message syntax do, however, allow for the specification of a "new identifier" (*PID-18 - patient account number*), which may be application and/or implementation-specific and therefore require site negotiation.

All of the identifiers superior to the account number should be valued in both the MRG segment and the PID segment. In this message, the *PID-3 - patient identifier list* is superior to the account number.

See Sections 3.5.2 "Merging patient/person information" and 3.5.2.1.3 "Move" for a discussion of issues related to the implementation of move messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message. However, all PID data associated with the "account number" are treated as updated information.

ADT^A44^ADT_A43	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
{ PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
}		

ACK^A44^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.45 ADT/ACK - move visit information - visit number (event A45)

A move has been done at the visit identifier level. That is, a *PV1-19 - visit number* or *PV1-50 - alternate visit ID* associated with one account identifier (*PID-18 - patient account number*) has been moved to another account identifier.

An A45 event is used to signal a move of records identified by the *MRG-5 - prior visit number* or the *MRG-6 - prior alternate visit ID* from the "incorrect source account identifier" identified in the MRG segment (*MRG-3 - prior patient account number*) to the "correct target account identifier" identified in the PID segment (*PID-18 - patient account number*).

This event and the message syntax do allow for the specification of "new identifiers" (*PV1-19 - visit number*, or *PV1-50 - alternate visit ID*), which may be application and/or implementation-specific and therefore require site negotiation.

All of the identifiers superior to the visit number or alternate visit ID should be valued in both the MRG segment and the PID segments. In this message, the account number and *PID-3 - patient identifier list* are superior to the visit number and alternate visit ID.

See Sections 3.5.2 "Merging patient/person information," and 3.5.2.1.3 "Move," for a discussion of issues related to the implementation of move messages. The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message. However, all PID data associated with the "correct target visit ID" are treated as updated information.

ADT^A45^ADT_A45	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
{ MRG	Merge Information	3
PV1	Patient Visit	3
}		

ACK^A45^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.46 ADT/ACK - change patient ID (event A46)

Event A46 has been retained for backward compatibility only, corresponding with *PID-2 - patient ID*, which is also retained for backward compatibility. From V2.3.1 onwards, event A47 (change patient identifier list) should be used instead. A change has been done at the patient identifier level. That is, a *PID-2 - patient ID* has been found to be incorrect and has been changed.

An A46 event is used to signal a change of an incorrectly assigned *PID-2 - patient ID* value. The "incorrect source patient ID" value is stored in the MRG segment (*MRG-4 - prior patient ID*) and is to be changed to the "correct target patient ID" value stored in the PID segment (*PID-2 - patient ID*).

The patient ID involved in identifying the person may or may not represent a patient, who may or may not have accounts, which may or may not have visits. An A46 (change patient ID) event is intended for changing the value of the patient identifier without affecting other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source patient ID" are now associated with the "correct target patient ID." Specification of these other subordinate identifiers is not required to be provided.

This event and the message syntax do, however, allow for the specification of "new subordinate identifiers" (in addition to the *PID-2 - patient ID identifier*). For those environments that may require changes to these other subordinate identifiers because of this A46 (change patient ID) event, it is required that the old and new identifiers be a "tightly coupled" pair.

Since this event is a change at the *PID-2 - patient ID* identifier level, *PID-3 - patient identifier list* and *MRG-1 - prior patient identifier list* are not required.

See Sections 3.5.2, "Merging patient/person information," and 3.5.2.1.4 "Change identifier," for a discussion of issues related to the implementation of change messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A31 (update person information) event be used in conjunction with this message. However, all PID data associated with the new patient ID is treated as updated information.

ADT^A46^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A46^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.47 ADT/ACK - change patient identifier list (event A47)

A change has been done at the patient identifier list level. That is, a single PID-3 - patient identifier list value has been found to be incorrect and has been changed.

An A47 event is used to signal a change of an incorrectly assigned *PID-3 - patient identifier list* value. The "incorrect source identifier" value is stored in the MRG segment (*MRG-1 - prior patient identifier list*) and is to be changed to the "correct target patient ID" value stored in the PID segment (*PID-3 - patient identifier list*).

The identifier involved in identifying the patient may or may not have accounts, which may or may not have visits. An A47 (change patient identifier list) event is intended for changing the value of the patient identifier list without affecting other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source identifier" are now associated with the "correct target identifier." Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of "new subordinate identifiers" (in addition to the *PID-3 - patient identifier list* identifier). For those environments that may require changes to these other subordinate identifiers because of this A47 (change patient identifier list) event, it is required that the old and new identifiers be a "tightly coupled" pair.

See Sections 3.5.2, "Merging patient/person information," and 3.5.2.1.4, "Change identifier," for a discussion of issues related to the implementation of change messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A31 (update patient information) event be used in conjunction with this message.

ADT^A47^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A47^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.48 ADT/ACK - change alternate patient ID (event A48)

Event A48 has been retained for backward compatibility only, corresponding with *PID-4 - alternate Patient ID-PID*, which is also retained for backward compatibility. From V2.3.1 onwards, event A47 (change patient identifier list) should be used instead. A change has been done at the alternate patient identifier level. That is, a *PID-4 - alternate patient ID-PID* has been found to be incorrect and has been changed.

An A48 event is used to signal a change of an incorrectly assigned alternate patient identifier value. The "incorrect source alternate patient ID" value is stored in the MRG segment (*MRG-2 - prior alternate patient ID*) and is to be changed to the "correct target alternate patient ID" value stored in the PID segment (*PID-4 - alternate patient ID-PID*).

The alternate patient ID involved in identifying the patient may or may not have accounts, which may or may not have visits. An A48 (change alternate patient ID) event is intended for changing the value of the alternate patient identifier without affecting other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source alternate patient ID" are now associated with the "correct target alternate patient ID." Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of "new subordinate identifiers" (in addition to the *PID-4 - alternate patient ID-PID identifier*). For those environments that may require changes to these other subordinate identifiers because of this A48 (change alternate patient ID) event, it is required that the old and new identifiers be a "tightly coupled" pair.

Each superior identifier associated with this alternate patient identifier level should have the same value in both the PID and MRG segments.

See Sections 3.5.2, "Merging patient/person information," and 3.5.2.1.4, "Change identifier," for a discussion of issues related to the implementation of change messages

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message.

ADT^A48^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A48^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.49 ADT/ACK - change patient account number (event A49)

A change has been done at the account identifier level. That is, a PID-18 - patient account number has been found to be incorrect and has been changed.

An A49 event is used to signal a change of an incorrectly assigned account number value. The "incorrect source account number" value is stored in the MRG segment (*MRG-3 - prior patient account number*) and is to be changed to the "correct target account number" value stored in the PID segment (*PID-18 - patient account number*).

The patient account identifier involved in identifying the account may or may not have visits. An A49 (change patient account number) event is intended for changing the value of the account identifier without affecting other subordinate identifiers. Any other subordinate identifiers that were previously associated with the "incorrect source account number" are now associated with the "correct target account number". Specification of these other subordinate identifiers is not required.

This event and the message syntax do, however, allow for the specification of "new subordinate identifiers" (in addition to the *PID-18 - patient account number identifier*). For those environments that may require changes to these other subordinate identifiers because of this A49 (change patient account number) event, it is required that the old and new identifiers be a "tightly coupled" pair.

Each superior identifier associated with this account identifier level, i.e. the PID-3/MRG-1 should have the same value in both the PID and MRG segments.

See Sections 3.5.2, "Merging patient/person information," and 3.5.2.1.4, "Change identifier," for a discussion of issues related to the implementation of change messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message.

ADT^A49^ADT_A30	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3

ACK^A49^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error Information	2

3.3.50 ADT/ACK - change visit number (event A50)

A change has been done at the visit identifier level. That is, a *PV1-19 - visit number* has been found to be incorrect and has been changed.

An A50 event is used to signal a change of an incorrectly assigned visit number value. The "incorrect source visit number" value is stored in the MRG segment (*MRG-5 - prior visit number*) and is to be changed to the "correct target visit number" value stored in the PV1 segment (*PV1-19 - visit number*).

Each superior identifier associated with this visit number identifier level, i.e. PID-3/MRG-1 and PID-18/MRG-3 should have the same value in both the PID and MRG segments.

See Sections 3.5.2, "Merging patient/person information," and 3.5.2.1.4, "Change identifier," for a discussion of issues related to the implementation of change messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message.

ADT^A50^ADT_A50	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
PV1	Patient Visit	3

ACK^A50^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.51 ADT/ACK - change alternate visit ID (event A51)

A change has been done at the alternate visit identifier level. That is, a *PV1-50 - alternate visit ID* has been found to be incorrect and has been changed.

An A51 event is used to signal a change of an incorrectly assigned alternate visit ID value. The "incorrect source alternate visit ID" value is stored in the MRG segment (*MRG-6 - prior alternate visit ID*) and is to be changed to the "correct target alternate visit ID" value stored in the PV1 segment (*PV1-50 - alternate visit ID*).

Each superior identifier associated with this alternate visit identifier level i.e. PID-3/MRG-1 and PID-18/MRG-3 should have the same value in both the PID and MRG segments.

See Sections 3.5.2, "Merging patient/person information," and 3.5.2.1.4, "Change identifier," for a discussion of issues related to the implementation of change messages.

The fields included when this message is sent should be the fields pertinent to communicate this event. When demographic data in other fields change, it is recommended that the A08 (update patient information) event be used in conjunction with this message.

ADT^A51^ADT_A50	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
MRG	Merge Information	3
PV1	Patient Visit	3

ACK^A51^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.52 ADT/ACK- cancel leave of absence for a patient (event A52)

The A52 event is sent when an A21 (patient goes on "leave of absence") event is cancelled, either because of erroneous entry of the A21 event or because of a decision not to put the patient on "leave of absence" after all.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

As there is no specific field for the cancel LOA date/time, it is recommended field *EVN-6 - Event occurred* contain the date/time the LOA was actually cancelled (but not necessarily recorded).

ADT^A52^ADT_A52	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3

ACK^A52^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.53 ADT/ACK - cancel patient returns from a leave of absence (event A53)

The A53 event is sent when an A22 (patient returns from "leave of absence") event is cancelled, either because of erroneous entry of the A22 event or because of a decision not to return the patient from "leave of absence" after all.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

As there is no specific field for the cancel LOA date/time, it is recommended that field *EVN-6 - Event occurred* contain the date/time the return from LOA was actually cancelled (but not necessarily recorded).

PV2-47 - Expected LOA return date/time is used to communicate the date/time the patient is expected to return from LOA.

ADT^A53^ADT_A52	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3

ACK^A53^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.54 ADT/ACK - change attending doctor (event A54)

An A54 event is issued as a result of a change in the attending doctor responsible for the treatment of a patient.

When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

The new attending doctor of the patient should appear in the *PV1-7 - attending doctor*. For example, an A54 event can be used to notify the billing system that doctors' fees should be billed to the new doctor starting from the timestamp in the message.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments.

To communicate the begin and end date of the attending, referring, or admitting doctor, use the *ROL-5 - Role begin date/time* and the *ROL-6 - Role end date/time* in the ROL segment, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment. Use "UP" in *ROL-2 - Action code*.

ADT^A54^ADT_A54	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{ ROL }]	Role	12
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ ROL }]	Role	12

ACK^A54^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.55 ADT/ACK - cancel change attending doctor (event A55)

The A55 event is sent when an A54 (change attending doctor) event is cancelled, either because of erroneous entry of the A54 event or because of a decision not to change the attending doctor after all. *PV1-7 - attending doctor* must contain the patient's doctor prior to the change of attending doctor.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event be used in addition.

ADT^A55^ADT_A52	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3

ACK^A55^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.56 Get person demographics (QBP) and response (RSP) (events Q21 and K21)

This query/response is designed for interaction between a client system and an MPI (Master Person Index). The query consists of an identifier for a person, and the response the demographics for that person.

Query Statement ID:	Q21
Query Type:	Query
Query Name:	Q21 Get Person Demographics

Query Statement ID:	Q21
Query Trigger:	QBP^Q21^QBP_Q21
Query Mode:	
Response Trigger:	RSP^K21^RSP_K21
Query Characteristics	
Purpose:	Returns demographics information for a specified person

QBP^Q21^QBP_Q21	Query By Parameter	Chapter
MSH	Message Header	2
QPD	Query Parameter Definition Segment	5
RCP	Response Control Parameters	5
[DSC]	Continuation Pointer	2

RSP^K21^RSP_K21	Segment Pattern Response	Group Control	Comment	Support Indicator	Chapter
MSH	Message Header				2
MSA	Message Acknowledgement				2
[ERR]	Error				2
QAK	Query Acknowledgement				5
QPD	Query Parameter Definition Segment				5
[		Query Result Cluster, Begin PID Group			
PID	Patient Identification				3
[PD1]	Additional Demographics				3
]		End PID Group, End Query Results			
[DSC]	Continuation Pointer				2

Field Seq.	Field Name	Key/ Search	Sort	LEN	TYPE	Opt	Rep	Match Op	TBL	Segment Field Name	LOINC or HL7 Code/ Domain	ElementName
1	PersonIdentifier	S	Y	250	CX	R	N			PID-3		Patient Identifier List
2	WhatDomains Returned				CX	O	Y			PID-3		Patient Identifier List

Input Parameter	Comp. Name	DT	Description
PersonIdentifier ()		CX	Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)> ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)
			The combination of values for *PersonIdentifier.ID, and PersonIdentifier.AssigningAuthority,* are intended to identify a person uniquely. The *PersonIdentifier.IDTypeCode* is useful for further filtering or to supply uniqueness in the event that the assigning authority may have more than one coding system.
			Example: . . . |112234^^^METRO HOSPITAL|. . .
			Only one PID.3 may be specified, only 1 segment pattern will be returned.
			The following components may be talked about
PersonIdentifier.	ID		PID.3.1must be valued.
PersonIdentifier	Assigning Authority		PID.3.4 must be valued.
PersonIdentifier	Identifier type code		
WhatDomainsReturned		CX	Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)> ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)
			This parameter restricts the set of domains for which identifiers are returned in PID-3. If this is not specified, then identifiers for all known domains shall be returned. It does not restrict the search for the person.
			Example: . . . |^^^METRO HOSPITAL~^^^SOUTH LAB|. . .
			Only the following components should be valued.
WhatDomainsReturned	Assigning Authority		PID.3.4 must be valued.
WhatDomainsReturned	Identifier type code		

Following is an example of a Q21/K21 query/response pair of messages. First is the query:

```
MSH|^&~\|CLINREG|WESTCLIN|HOSPMPI|HOSP|199912121135-0600||QBP^Q21^QBP_Q21|1|D|2.4

QPD|Q21^Get Person Demographics^HL7nnn|111069|112234^^^METRO HOSPITAL|^^^METRO
    HOSPITAL~^^^SOUTH LAB|

RCP||I|
```

This query is asking for demographics for the person identified by the identifier 112234 from the assigning authority METRO HOSPITAL. With the demographics, we want identifiers returned for the person from the assigning authorities METRO HOSPITAL and SOUTH LAB. Here is a sample response:

```
MSH|^&~\|HOSPMPI|HOSP|CLINREG|WESTCLIN|199912121135-0600||RSP^K21^RSP_K21|1|D|2.4|

MSA|AA|8699|

QAK|111069|OK|Q21^Get Person Demographics^HL7nnn|1|

QPD|Q21^Get Person Demographics^HL7nnn|111069|112234^^^METRO HOSPITAL|^^^METRO
    HOSPITAL~^^^SOUTH LAB|
```

```
PID|||112234^^^METRO HOSPITAL~98223^^^SOUTH LAB||Everyman^Adam||19600614|M||C|2101
    Webster # 106^^Oakland^CA^94612|
```

3.3.57 Find candidates (QBP) and response (RSP) (events Q22 and K22)

This query/response is designed for interaction between a client system and an MPI (Master Person Index). The query consists of a set of demographics for a person, and the response is the list of candidates considered by the MPI to match that set.

Each returned person, specified by a PID segment, can also have an optional *QRI - Query Response Instance* segment containing information about the quality of the match.

Query Statement ID:	Q22
Query Type:	Query
Query Name:	Q22 Find Candidates
Query Trigger:	QBP^Q22^QBP_Q21
Query Mode:	
Response Trigger:	RSP^K22^RSP_K22
Query Characteristics	
Purpose:	Returns list of candidates matching demographic data specified by the input parameters.

QBP^Q22^QBP_Q21	Query By Parameter	Chapter
MSH	Message Header	2
QPD	Query Parameter Definition Segment	5
RCP	Response Control Parameters	5
[DSC]	Continuation Pointer	2

RSP^K22^RSP_K22	Segment Pattern Response	Group control	Comment	Support Indicator	Chapter
MSH	Message Header				2
MSA	Message Acknowledgement				2
[ERR]	Error				2
QAK	Query Acknowledgement				5
QPD	Query Parameter Definition Segment				5
{		Query Result Cluster, Begin PID Group			
[					
PID	Patient Identification				3
[PD1]	Additional Demographics				5
[QRI]	Query Response Instance				5
]					
}		End PID Group, End Query Results			
[DSC]		Continuation			2

RSP^K22^RSP_K22	Segment Pattern Response	Group control	Comment	Support Indicator	Chapter
		Pointer			

Field Seq.	Field Name	Key/ Search	Sort	LEN	TYPE	Opt	Rep	Match Op	TBL	Segment Field Name	LOINC or HL7 Code/ Domain	ElementName
1	Demographics Fields				QIP	R	Y					
2	SearchConfidenceThreshold				NM	O	N					
3	AlgorithmName				ST	O	N					
4	AlgorithmVersion				ST	O	N					
5	AlgorithmDescription				ST	O	N					
6	WhatDomainsReturned				CX	O	Y			PID-3		Patient Identifier List

Input Parameter	Comp. Name	DT	Description
DemographicsFields		QIP	Components: <segment field name (ST)> ^ <value1 (ST) & value2 (ST) & value3 (ST...>
			Components may be any fields in the PID or PD1. If subcomponents of fields need to be specified, each subcomponent should be listed separately.
			Example: ...|@PID.5.1^SMITH~@PID.5.2^JOHN~@PID.8^M|...
SearchConfidenceThreshold		NM	Indicates the minimum match confidence for candidates to be returned for the query. The value instructs the queried system to return no records (PID segments) for persons whose "match weight" on the lookup was lower than the user-defined value.
			Example: |80|
AlgorithmName		ST	Identifies the specific algorithm the queried system should use.
			Example: |MATCHWARE|
AlgorithmVersion		ST	Identifies the specific algorithm version the queried system should use.
			Example: |1.2|
AlgorithmDescription		ST	Description of the algorithm the queried system should use.
WhatDomainsReturned		CX	Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)> ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)

Input Parameter	Comp. Name	DT	Description
			This parameter restricts the set of domains for which identifiers are returned in PID-3. If this is not specified, then identifiers for all known domains shall be returned. It does not restrict the search for persons.
			Example: ...|^^^METRO HOSPITAL~^^^SOUTH LAB|...
			Only the following components should be valued.
WhatDomainsReturned	Assigning Authority		PID.3.4 must be valued.
WhatDomainsReturned	Identifier type code		

Following is an example of a Q22/K22 query/response pair of messages. First is the query:

```
MSH|^&~\|CLINREG|WESTCLIN|HOSPMPI|HOSP|199912121135-0600||QBP^Q22^QBP_Q21|1|D|2.4

QPD|Q22^Find Candidates^HL7nnn|111069|@PID.5.1^SMITH~@PID.5.2^JOHN~
    @PID.8^M|80|MATCHWARE|1.2||^^^METRO HOSPITAL~^^^SOUTH LAB|

RCP||I|20^RD
```

This query is asking for a list of persons matching the name JOHN SMITH with the gender Male. Candidates with a match level above 80 using the algorithm Matchware version 1.2 should be returned. The returned records should include identifiers for both the assigning authorities METRO HOSPITAL and SOUTH LAB. The RCP segment specifies that the number of matches should be limited to 20. Here is a sample response:

```
MSH|^&~\|HOSPMPI|HOSP|CLINREG|WESTCLIN|199912121135-0600||RSP^K22^RSP_K22|1|D|2.4|

MSA|AA|8699|

QAK|111069|OK|Q22^Find Candidates^HL7nnnn|3|

QPD|Q22^Find Candidates^HL7nnn|111069|@PID.5.1^SMITH~
    @PID.5.2^JOHN~@PID.8^M|80|MATCHWARE|1.2||^^^METRO HOSPITAL~^^^SOUTH LAB|

PID|||66785^^^METRO HOSPITAL~66532^^^SOUTH LAB||Smith^John||19630423|M||C|N2378
    South Street^^Madison^WI^53711|

QRI|95||MATCHWARE 1.2|

PID|||87443^^^METRO HOSPITAL~651189^^^SOUTH LAB||Smith^Jon||19470606|M||C|124
    Second Street^^Madison^WI^53711|

QRI|90||MATCHWARE 1.2|

PID|||43266^^^METRO HOSPITAL~81209^^^SOUTH LAB||Smithy^John||19901210|M||C|W11234
    Bay Drive^^Lodi^WI^53555|

QRI|85||MATCHWARE 1.2|
```

Three candidates were returned. Notice the 3 at the end of the QAK segment signifying the number of matches. Each has a PID and QRI segment, and the QRI segment in each case gives a confidence factor for each of the candidates

3.3.58 Get corresponding identifiers (QBP) and response (RSP) (events Q23 and K23)

This query/response is designed for interaction between a client system and an MPI (Master Person Index). The query consists of an identifier for a person, and the response is a list of identifiers for that person from the domains specified.

Query Statement ID:	Q23
Query Type:	Query
Query Name:	Q23 Get Corresponding Identifiers
Query Trigger:	QBP^Q23^QBP_Q21
Query Mode:	
Response Trigger:	RSP^K23^RSP_K23
Query Characteristics	
Purpose:	Returns list of identifiers from the specified domains, given an identifier from a given domain.

QBP^Q23^QBP_Q21	Query By Parameter	Chapter
MSH	Message Header	2
QPD	Query Parameter Definition Segment	5
RCP	Response Control Parameters	5
[DSC]	Continuation Pointer	2

RSP^K23^RSP_K23	Segment Pattern Response	Group Control	Comment	Support Indicator	Chapter
MSH	Message Header				2
MSA	Message Acknowledgement				2
[ERR]	Error				2
QAK	Query Acknowledgement				5
QPD	Query Parameter Definition Segment				5
[		Query Result Cluster, Begin PID Group			
PID	Patient Identification		Only PID.3 of this segment is to be valued		3
]		End PID Group, End Query Results			
[DSC]	Continuation Pointer				2

Field Seq.	Field Name	Key/ Search	Sort	LEN	TYPE	Opt	Rep	Match Op	TBL	Segment Field Name	LOINC or HL7 Code/ Domain	Element Name
1	PersonIdentifier	S	Y	20	CX	R	N			PID-3		Patient Identifier List

Field Seq.	Field Name	Key/ Search	Sort	LEN	TYPE	Opt	Rep	Match Op	TBL	Segment Field Name	LOINC or HL7 Code/ Domain	Element Name
2	WhatDomains Returned				CX	O	Y			PID-3		Patient Identifier List

Input Parameter	Comp. Name	DT	Description
PersonIdentifier		CX	Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)> ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)
			The combination of values for *PersonIdentifier.ID, and PersonIdentifier.AssigningAuthority,* are intended to identify a person uniquely. The *PersonIdentifier.IDTypeCode* is useful for further filtering or to supply uniqueness in the event that the assigning authority may have more than one coding system.
			Example: . . . |112234^^^METRO HOSPITAL|. . .
			Only one PID.3 may be specified, only 1 segment pattern will be returned.
			The following components may be talked about
PersonIdentifier	ID		PID.3.1must be valued.
PersonIdentifier	Assigning Authority		PID.3.4 must be valued.
PersonIdentifier	Identifier type code		
WhatDomainsReturned		CX	Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)> ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)
			This parameter restricts the set of domains for which identifiers are returned in PID-3. If this is not specified, then identifiers for all known domains shall be returned. It does not restrict the search for the person.
			Example: . . . |^^^METRO HOSPITAL~^^^SOUTH LAB|. . .
			Only the following components should be valued.
WhatDomainsReturned	Assigning Authority		PID.3.4 must be valued.
WhatDomainsReturned.	Identifier type code		

Following is an example of a Q23/K23 query/response pair of messages. First is the query:

```
MSH|^&~\|CLINREG|WESTCLIN|HOSPMPI|HOSP|199912121135-0600||QBP^Q23^QBP_Q21|1|D|2.4
QPD|Q23^Get Corresponding IDs^HL7nnnn|111069|112234^^^METRO HOSPITAL|^^^WEST
    CLINIC~^^^SOUTH LAB|
RCP||I|
```

```
SEC|0614
```

This query is asking for identifiers from WEST CLINIC and SOUTH LAB for the person identified with the identifier 112234 from the assigning authority METRO HOSPITAL. Here is a sample response:

```
MSH|^&~\|HOSPMPI|HOSP|CLINREG|WESTCLIN|199912121135-0600||RSP^K23^RSP_K23|1|D|2.4|
MSA|AA|8699|
QAK|111069|OK|Q23^Get Corresponding IDs^HL7nnnn|1|
QPD|Q23^Get Corresponding IDs^HL7nnn|111069|112234^^^METRO HOSPITAL|^^^WEST
    CLINIC~^^^SOUTH LAB|
PID|||56321A^^^WEST CLINIC~66532^^^SOUTH LAB||Smith^John||19630423|M||C|N2378
    South Street^^Madison^WI^53711|
```

Note that the identifiers returned do not include the METRO HOSPITAL identifier, as it was not specified in the list of WhatDomainsReturned.

3.3.59 Allocate identifiers (QBP) and response (RSP) (events Q24 and K24)

This query/response is designed for interaction between a client system and an MPI (Master Person Index). The query consists of domains in which identifiers should be allocated. The response is new identifiers in those domains.

This event is not meant to cause the creation of a new person record, or to bind identifiers to a particular person record. The events *A28 - Add person information* and *A24 - Link patient information* should be used for that purpose. This event is meant to simply reserve the use of identifiers.

Query Statement ID:	Q24
Query Type:	Query
Query Name:	Allocate Identifiers
Query Trigger:	QBP^Q24^QBP_Q21
Query Mode:	
Response Trigger:	RSP^K24^RSP_K24
Query Characteristics	
Purpose:	Request that an MPI allocate an identifier for a given domain.

QBP^Q24^QBP_Q21	Query By Parameter	Chapter
MSH	Message Header	2
QPD	Query Parameter Definition Segment	5
RCP	Response Control Parameters	5
[DSC]	Continuation Pointer	2

RSP^K24^RSP_K24	Segment Pattern Response	Group Control	Comment	Support Indicator	Chapter
MSH	Message Header				2
MSA	Message Acknowledgement				2
[ERR]	Error				2
QAK	Query Acknowledgement				5
QPD	Query Parameter Definition Segment				5

RSP^K24^RSP_K24	Segment Pattern Response	Group Control	Comment	Support Indicator	Chapter
[		Query Result Cluster, Begin PID Group			
PID	Patient Identification		Only PID.3 of this segment is to be valued		3
]		End PID Group, End Query Results			
[DSC]	Continuation Pointer				2

Field Seq.	Field Name	Key/ Search	Sort	LEN	TYPE	Opt	Rep	Match Op	TBL	Segment Field Name	LOINC or HL7 Code/ Domain	Element Name
1	DomainToAllocateIn				CX	R	Y			PID-3		Patient Identifier

Input Parameter	Comp. Name	DT	Description
DomainToAllocateIn ()		CX	Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)> ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)
			This parameter specifies in which domains to allocate identifiers.
			Example: . . . |^^^METRO HOSPITAL|. . .
			Only the following components should be valued.
DomainToAllocateIn	Assigning Authority		PID.3.4 must be valued.
DomainToAllocateIn	Identifier type code		

Following is an example of a Q24/K24 query/response pair of messages. First is the query:

```
MSH|^&~\|CLINREG|WESTCLIN|HOSPMPI|HOSP|199912121135-0600||QBP^Q24^QBP_Q11|1|D|2.4
QPD|Q24^Allocate Identifiers^HL7nnnn|111069|^^^WEST CLINIC~^^^SOUTH LAB|
RCP||I|
SEC|0614
```

This query is asking for identifiers from WEST CLINIC and SOUTH LAB to be reserved and returned. Here is a sample response:

```
MSH|^&~\|HOSPMPI|HOSP|CLINREG|WESTCLIN|199912121135-0600||RSP^K24^RSP_K11|1|D|2.4|
MSA|AA|8699|
```

```
QAK|111069|OK|Q24^Allocate Identifiers^HL7nnnn|1|
QPD|A56^Allocate Identifiers^HL7nnn|111069|^^^WEST CLINIC~^^^SOUTH LAB|
PID|||624335A^^^WEST CLINIC~564325^^^SOUTH LAB|
```

Note that the PID segment returned does not include any person demographics as the identifiers are not yet "attached" to any person record. Presumably the querying system would eventually send back to the MPI an *A28 Add person information* to create a person record for the identifiers or an *A24 Link patient information* to link the identifiers to an existing person record.

3.3.60 ADT/ACK - update adverse reaction information (event A60)

This trigger event is used when person/patient allergy information has changed. It is used in conjunction with a new allergy segment, the *IAM - patient allergy information segment-unique identifier,* which supports Action code/unique identifier mode update for repeating segments as defined in *2.14.4 Modes for updating via repeating segments*.

ADT^A60^ADT_A60	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PV1]	Patient Visit	3
[PV2]	Patient Visit - Additional Info.	3
[{ IAM }]	Patient adverse reaction information	3

ACK^A60^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.61 ADT/ACK - change consulting doctor (event A61)

An A61 event is used as a result of a change in the consulting physician(s) for the treatment of a patient.

When other important fields change, it is recommended that the A08 (update patient information) event be used in addition. If the Patient Administration system allows demographics to change at the same time (for example an address change), two messages (an A61 followed by an A08) should be sent.

The new consulting doctor(s) of the patient should appear in the *PV1-9 - consulting doctor* and may appear in a role segment per new consulting physician.

If a consulting doctor stops being consulting doctor for this patient-visit, the end date/time can be sent in the *ROL-6 - Role end date/time*.

For example, an A61 event can be used to notify the billing system that doctors' fees for being a consulting doctor, should be billed to the new doctor(s) starting from the timestamp in the message.

It is recommended that field *EVN-6 - Event occurred* contains the date/time the event actually occurred to the patient.

The ROL - Role Segment is used in this message to communicate providers not specified elsewhere. Person level providers with an ongoing relationship are reported in the ROL segment following the PID/PD1 segments. Providers corresponding to the PV1 data are reported in the ROL segment following the PV1/PV2 segments. Providers related to a specific procedure are reported in the ROL segment

following the PR1 segment. Providers related to a specific insurance are reported in the ROL segment following the IN1/IN2/IN3 segments. To communicate the begin and end date of the provider, use the *ROL-5 - Role Begin Date/Time* and the *ROL-6 - Role End Date/Time* in the ROL segment, with the applicable *ROL-3 - Role code*. Refer to section 12.3.3 for the definition of the ROL segment.

ADT^A61^ADT_A61	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[{ROL}]	Role	12
[PV2]	Patient Visit - Additional Info.	3

ACK^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.3.62 ADT/ACK - cancel change consulting doctor (event A62)

The A62 event is sent when an A61 (change consulting doctor) event is cancelled, either because of erroneous entry of the A61 event or because of a decision not to change the consulting physician(s) after all. *PV1-9 - consulting doctor* must show the patient's doctor prior to the change being cancelled.

The fields included when this message is sent should be the fields pertinent to communicate this event. When other important fields change, it is recommended that the A08 (update patient information) event is used.

ADT^A62^ADT_A61	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[{ROL}]	Role	12
[PV2]	Patient Visit - Additional Info.	3

ACK^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

3.4 MESSAGE SEGMENTS

3.4.1 EVN - event type segment

The EVN segment is used to communicate necessary trigger event information to receiving applications. Valid event types for all chapters are contained in *HL7 Table 0003 - Event type*.

HL7 Attribute Table – EVN – Event type

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3	ID	B		0003	00099	Event Type Code
2	26	TS	R			00100	Recorded Date/Time
3	26	TS	O			00101	Date/Time Planned Event
4	3	IS	O		0062	00102	Event Reason Code
5	250	XCN	O	Y	0188	00103	Operator ID
6	26	TS	O			01278	Event Occurred
7	180	HD	O			01534	Event Facility

3.4.1.0 EVN field definitions

3.4.1.1 EVN-1 Event type code (ID) 00099

Definition: **This field has been retained for backward compatibility only.** We recommend using the second component (trigger event) of *MSH-9 - Message Type* to transmit event type code information. This field contains the events corresponding to the trigger events described in this section, e.g., admission, transfer, or registration. Refer to *HL7 Table 0003 - Event type* for valid values.

3.4.1.2 EVN-2 Recorded date/time (TS) 00100

Definition: Most systems will default to the system date/time when the transaction was entered, but they should also permit an override.

3.4.1.3 EVN-3 Date/time planned event (TS) 00101

Definition: This field contains the date/time that the event is planned. We recommend that *PV2-8 - Expected Admit Date/Time*, *PV2-9 - Expected Discharge Date/Time* or *PV2-47 - Expected LOA Return date/time* be used whenever possible.

3.4.1.4 EVN-4 Event reason code (IS) 00102

Definition: This field contains the reason for this event. Refer to *User-defined Table 0062 - Event reason* for suggested values.

User-defined Table 0062 - Event reason

Value	Description
01	Patient request
02	Physician/health practitioner order
03	Census management

3.4.1.5 EVN-5 Operator ID (XCN) 00103

```
Components: <ID number (ST)> ^ <family name (ST)> <given name (ST)> ^ <second and further given names
            or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^
            <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^ <name type
            code (ID)> ^ <identifier check digit (ST)> ^ <code identifying the check digit scheme
            employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^ <name
            representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)>
```

```
Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field identifies the individual responsible for triggering the event. Refer to *User-defined Table 0188 - Operator ID* for suggested values.

User-defined Table 0188 - Operator ID

Value	Description
	No suggested values defined

3.4.1.6 EVN-6 Event occurred (TS) 01278

Definition: This field contains the date/time that the event actually occurred. For example, on a transfer (A02 transfer a patient), this field would contain the date/time the patient was actually transferred. On a cancellation event, this field should contain the date/time that the event being cancelled occurred.

3.4.1.7 EVN-7 Event facility (HD) 01534

```
Components: <namespace ID (IS)> ^ <universal ID  (ST)> ^ <universal ID type (ID)>
```

Definition: This field identifies the actual facility where the event occured as differentiated from the sending facility (MSH-4). It would be the facility at which the Operator (EVN-5) has entered the event.

Use Case: System A is where the patient is originally registered. This registration message is sent to an MPI, System B. The MPI needs to broadcast the event of this update and would become the sending facility. This new field would allow for retention of knowledge of the originating facility where the event occurred. The MPI could be the assigning authority for the ID number as well which means that it is performing the function of assigning authority for the facility originating the event.

3.4.2 PID - patient identification segment

The PID segment is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

It should be noted that from V2.4 onwards the demographics of animals can also be sent in the PID segment (see PID-35 to PID-38).

The assigning authority, the fourth component of the patient identifiers, is a HD data type that is uniquely associated with the assigning authority that originally assigned the number. A given institution, or group of intercommunicating institutions, should establish a list of assigning authorities that may be potential assignors of patient identification (and other important identification) numbers. The list will be one of the institution's master dictionary lists. Since third parties (other than the assignors of patient identification numbers) may send or receive HL7 messages containing patient identification numbers, the assigning authority in the patient identification numbers may not be the same as the sending and receiving systems identified in the MSH. The assigning authority must be unique across applications at a given site. This

field is required in HL7 implementations that have more than a single Patient Administration application assigning such numbers. The assigning authority and identifier type codes are strongly recommended for all CX data types.

With HL7 V2.3, the nomenclature for the fourth component of the patient identifiers was changed from "assigning facility ID" to "assigning authority". While the identifier may be unique to a given healthcare facility (for example, a medical record assigned by facility A in Hospital XYZ), the identifier might also be assigned at a system level (for example a corporate person index or enterprise number spanning multiple facilities) or by a government entity, for example a nationally assigned unique individual identifier. While a facility is usually an assigning authority, not all assigning authorities are facilities. Therefore, the fourth component is referred to as an assigning authority, but retains backward compatibility using the construct of the HD data type (see the note in section 2.8.18). Additionally, CX data types support the use of assigning facility (HD) as the sixth component.

HL7 Attribute Table – PID – Patient identification

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00104	Set ID - PID
2	20	CX	B			00105	Patient ID
3	250	CX	R	Y		00106	Patient Identifier List
4	20	CX	B	Y		00107	Alternate Patient ID - PID
5	250	XPN	R	Y		00108	Patient Name
6	250	XPN	O	Y		00109	Mother's Maiden Name
7	26	TS	O			00110	Date/Time of Birth
8	1	IS	O		0001	00111	Administrative Sex
9	250	XPN	B	Y		00112	Patient Alias
10	250	CE	O	Y	0005	00113	Race
11	250	XAD	O	Y		00114	Patient Address
12	4	IS	B		0289	00115	County Code
13	250	XTN	O	Y		00116	Phone Number - Home
14	250	XTN	O	Y		00117	Phone Number - Business
15	250	CE	O		0296	00118	Primary Language
16	250	CE	O		0002	00119	Marital Status
17	250	CE	O		0006	00120	Religion
18	250	CX	O			00121	Patient Account Number
19	16	ST	B			00122	SSN Number - Patient
20	25	DLN	O			00123	Driver's License Number - Patient
21	250	CX	O	Y		00124	Mother's Identifier
22	250	CE	O	Y	0189	00125	Ethnic Group
23	250	ST	O			00126	Birth Place
24	1	ID	O		0136	00127	Multiple Birth Indicator
25	2	NM	O			00128	Birth Order
26	250	CE	O	Y	0171	00129	Citizenship
27	250	CE	O		0172	00130	Veterans Military Status
28	250	CE	B		0212	00739	Nationality
29	26	TS	O			00740	Patient Death Date and Time
30	1	ID	O		0136	00741	Patient Death Indicator
31	1	ID	O		0136	01535	Identity Unknown Indicator
32	20	IS	O	Y	0445	01536	Identity Reliability Code
33	26	TS	O			01537	Last Update Date/Time
34	40	HD	O			01538	Last Update Facility
35	250	CE	C		0446	01539	Species Code
36	250	CE	C		0447	01540	Breed Code

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
37	80	ST	O			01541	Strain
38	250	CE	O	2	0429	01542	Production Class Code

3.4.2.0 PID field definitions

3.4.2.1 PID-1 Set ID - PID (SI) 00104

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

3.4.2.2 PID-2 Patient ID (CX) 00105

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field has been retained for backward compatibility only.** The arbitrary term of "external ID" has been removed from the name of this field. The repetition, assigning authority, healthcare facility, and identifier type code attributes of *PID-3 - patient identifier list* allow for distinctive identifier representation. This field remains for systems with a negotiated understanding of "external." It is recommended to use *PID-3 - patient identifier list* for all patient identifiers.

When used for backward compatibility, this field is valued when the patient is from another institution, outside office, etc., and the identifier used by that institution can be shown in this field. This may be a number that multiple disparate corporations or facilities share. Refer to *HL7 Table 0061 - Check digit scheme*.

3.4.2.3 PID-3 Patient identifier list (CX) 00106

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient (e.g., medical record number, billing number, birth registry, national unique individual identifier, etc.). In Canada, the Canadian Provincial Healthcare Number should be sent in this field. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The arbitrary term of "internal ID" has been removed from the name of this field for clarity. Refer also to *HL7 Table 0203 - Identifier type* and *User-defined Table 0363 - Assigning authority* for valid values.

User-defined Table 0363 - Assigning Authority

Value	Description
AUSDVA	Australia - Dept. of Veterans Affairs
AUSHIC	Australia - Health Insurance Commission
CANAB	Canada - Alberta
CANBC	Canada - British Columbia
CANMB	Canada - Manitoba
CANNB	Canada - New Brunswick
CANNF	Canada - Newfoundland
CANNS	Canada - Nova Scotia
CANNT	Canada - Northwest Territories
CANNU	Canada - Nanavut
CANON	Canada - Ontario
CANPE	Canada - Prince Edward Island
CANQC	Canada - Quebec
CANSK	Canada - Saskatchewan
CANYT	Canada - Yukon Territories
NLVWS	NL - Ministerie van Volksgezondheid, Welzijn en Sport
USCDC	US Center for Disease Control
USHCFA	US Healthcare Finance Authority
USSSA	US Social Security Administration

3.4.2.4 PID-4 Alternate patient ID - PID (CX) 00107

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field has been retained for backward compatibility only.** It is recommended to use *PID-3 - patient identifier list* for all patient identifiers. When used for backward compatibility, this field contains the alternate, temporary, or pending optional patient identifier to be used if needed - or additional numbers that may be required to identify a patient. This field may be used to convey multiple patient IDs when more than one exist for a patient. Possible contents might include a visit number, a visit date, or a Social Security Number.

3.4.2.5 PID-5 Patient name (XPN) 00108

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>
```

```
Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field contains the names of the patient, the primary or legal name of the patient is reported first. Therefore, the name type code in this field should be "L - Legal". Refer to *HL7 Table 0200 - Name type* for valid values. Repetition of this field is allowed for representing the same name in different character sets. Note that "last name prefix" is synonymous to "own family name prefix" of previous versions of HL7, as is "second and further given names or initials thereof" to "middle initial or name". Multiple given names and/or initials are separated by spaces.

HL7 Table 0200 - Name type

Value	Description
A	Alias Name
B	Name at Birth
C	Adopted Name
D	Display Name
I	Licensing Name
L	Legal Name
M	Maiden Name
N	Nickname /"Call me" Name/Street Name
P	Name of Partner/Spouse (retained for backward compatibility only)
R	Registered Name (animals only)
S	Coded Pseudo-Name to ensure anonymity
T	Indigenous/Tribal/Community Name
U	Unspecified

For animals, if a Name Type of "R" is used, use "Name Context" to identify the authority with which the animal's name is registered.

3.4.2.6 PID-6 Mother's maiden name (XPN) 00109

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field contains the family name under which the mother was born (i.e., before marriage). It is used to distinguish between patients with the same last name.

3.4.2.7 PID-7 Date/time of birth (TS) 00110

Definition: This field contains the patient's date and time of birth.

3.4.2.8 PID-8 Administrative sex (IS) 00111

Definition: This field contains the patient's sex. Refer to *User-defined Table 0001 - Administrative sex* for suggested values.

User-defined Table 0001 - Administrative sex

Value	Description
F	Female
M	Male
O	Other
U	Unknown
A	Ambiguous
N	Not applicable

3.4.2.9 PID-9 Patient alias (XPN) 00112

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: **This field has been retained for backward compatibility only.** It is recommended to use *PID-5 - patient name* for all patient names. This field contained the name(s) by which the patient has been known at some time. Refer to *HL7 Table 0200 - Name type* for valid values.

3.4.2.10 PID-10 Race (CE) 00113

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field refers to the patient's race. Refer to *User-defined Table 0005 - Race* for suggested values. The second triplet of the CE data type for race (alternate identifier, alternate text, and name of alternate coding system) is reserved for governmentally assigned codes.

User-defined Table 0005 - Race

Value	Description
1002-5	American Indian or Alaska Native
2028-9	Asian
2054-5	Black or African American
2076-8	Native Hawaiian or Other Pacific Islander
2106-3	White
2131-1	Other Race

Note: The above values contain a pre-calculated Mod 10 check digit separated by a dash.

3.4.2.11 PID-11 Patient address (XAD) 00114

```
Components: In Version 2.3 and later, replaces the AD data type.  <street address (ST)> ^ <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 (IS)> ^ <census tract (IS)> ^ <address representation code (ID)> ^
            <address validity range (DR)>

Subcomponents of street address: <street address (ST)> & <street name (ST)> & <dwelling number (ST)>
```

Definition: This field contains the mailing address of the patient. Address type codes are defined by *HL7 Table 0190 - Address type*. Multiple addresses for the same person may be sent in the following sequence: The primary mailing address must be sent first in the sequence (for backward compatibility); if the mailing address is not sent, then a repeat delimiter must be sent in the first sequence.

3.4.2.12 PID-12 County code (IS) 00115

Definition: **This field has been retained for backward compatibility.** This field contains the patient's county code. The county can now be supported in the county/parish code component of the XAD data type (*PID-11 - Patient Address*). Refer to *User-defined Table 0289 - County/parish* for suggested values

3.4.2.13 PID-13 Phone number - home (XTN) 00116

```
Components: [NNN] [(999)]999-9999 [X99999] [B99999] [C any text] ^ <telecommunication use code (ID)>
            ^ <telecommunication equipment type (ID)> ^ <e-mail address (ST)> ^ <country code (NM)>
            ^ <area/city code (NM)> ^ <phone number (NM)> ^ <extension (NM)> ^ <any text (ST)>
```

Definition: This field contains the patient's personal phone numbers. All personal phone numbers for the patient are sent in the following sequence. The first sequence is considered the primary number (for backward compatibility). If the primary number is not sent, then a repeat delimiter is sent in the first sequence. Refer to *HL7 Table 0201 - Telecommunication use code* and *HL7 Table 0202 - Telecommunication equipment type* for valid values.

3.4.2.14 PID-14 Phone number - business (XTN) 00117

```
Components: [NNN] [(999)]999-9999 [X99999] [B99999] [C any text] ^ <telecommunication use code (ID)>
            ^ <telecommunication equipment type (ID)> ^ <e-mail address (ST)> ^ <country code (NM)>
            ^ <area/city code (NM)> ^ <phone number (NM)> ^ <extension (NM)> ^ <any text (ST)>
```

Definition: This field contains the patient's business telephone numbers. All business numbers for the patient are sent in the following sequence. The first sequence is considered the patient's primary business phone number (for backward compatibility). If the primary business phone number is not sent, then a repeat delimiter must be sent in the first sequence. Refer to *HL7 Table 0201 - Telecommunication use code* and *HL7 Table 0202 - Telecommunication equipment type* for valid values.

3.4.2.15 PID-15 Primary language (CE) 00118

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the patient's primary language. HL7 recommends using ISO table 639 as the suggested values in *User-defined Table 0296 - Primary Language*.

User-defined Table 0296 - Primary language

Value	Description
	No suggested values defined

3.4.2.16 PID-16 Marital status (CE) 00119

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the patient's marital (civil) status. Refer to *User-defined Table 0002 - Marital status* for suggested values.

User-defined Table 0002 - Marital status

Value	Description
A	Separated
D	Divorced
M	Married
S	Single
W	Widowed
C	Common law
G	Living together
P	Domestic partner
R	Registered domestic partner
E	Legally Separated
N	Annulled
I	Interlocutory
B	Unmarried
U	Unknown
O	Other
T	Unreported

3.4.2.17 PID-17 Religion (CE) 00120

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the patient's religion, for example, Baptist, Catholic, Methodist, etc. Refer to *User-defined Table 0006 - Religion* for suggested values.

User-defined Table 0006 - Religion

Value	Description
AGN	Agnostic
ATH	Atheist

Value	Description
BAH	Baha'i
BUD	Buddhist
BMA	Buddhist: Mahayana
BTH	Buddhist: Theravada
BTA	Buddhist: Tantrayana
BOT	Buddhist: Other
CFR	Chinese Folk Religionist
CHR	Christian
ABC	Christian: American Baptist Church
AMT	Christian: African Methodist Episcopal
AME	Christian: African Methodist Episcopal Zion
ANG	Christian: Anglican
AOG	Christian: Assembly of God
BAP	Christian: Baptist
CAT	Christian: Roman Catholic
CRR	Christian: Christian Reformed
CHS	Christian: Christian Science
CMA	Christian: Christian Missionary Alliance
COC	Christian: Church of Christ
COG	Christian: Church of God
COI	Christian: Church of God in Christ
COM	Christian: Community
COL	Christian: Congregational
EOT	Christian: Eastern Orthodox
EVC	Christian: Evangelical Church
EPI	Christian: Episcopalian
FWB	Christian: Free Will Baptist
FRQ	Christian: Friends
GRE	Christian: Greek Orthodox
JWN	Christian: Jehovah's Witness
LUT	Christian: Lutheran
LMS	Christian: Lutheran Missouri Synod
MEN	Christian: Mennonite
MET	Christian: Methodist

Value	Description
MOM	Christian: Latter-day Saints
NAZ	Christian: Church of the Nazarene
ORT	Christian: Orthodox
COT	Christian: Other
PRC	Christian: Other Protestant
PEN	Christian: Pentecostal
COP	Christian: Other Pentecostal
PRE	Christian: Presbyterian
PRO	Christian: Protestant
QUA	Christian: Friends
REC	Christian: Reformed Church
REO	Christian: Reorganized Church of Jesus Christ-LDS
SAA	Christian: Salvation Army
SEV	Christian: Seventh Day Adventist
SOU	Christian: Southern Baptist
UCC	Christian: United Church of Christ
UMD	Christian: United Methodist
UNI	Christian: Unitarian
UNU	Christian: Unitarian Universalist
WES	Christian: Wesleyan
WMC	Christian: Wesleyan Methodist
CNF	Confucian
ERL	Ethnic Religionist
HIN	Hindu
HVA	Hindu: Vaishnavites
HSH	Hindu: Shaivites
HOT	Hindu: Other
JAI	Jain
JEW	Jewish
JCO	Jewish: Conservative
JOR	Jewish: Orthodox
JOT	Jewish: Other
JRC	Jewish: Reconstructionist
JRF	Jewish: Reform

Value	Description
JRN	Jewish: Renewal
MOS	Muslim
MSU	Muslim: Sunni
MSH	Muslim: Shiite
MOT	Muslim: Other
NAM	Native American
NRL	New Religionist
NOE	Nonreligious
OTH	Other
SHN	Shintoist
SIK	Sikh
SPI	Spiritist
VAR	Unknown

3.4.2.18 PID-18 Patient account number (CX) 00121

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account. Refer to *HL7 Table 0061 - Check digit scheme* for valid values.

3.4.2.19 PID-19 SSN number - patient (ST) 00122

Definition: **This field has been retained for backward compatibility only.** It is recommended to use *PID-3 - Patient Identifier List* for all patient identifiers. However, in order to maintain backward compatibility, this field should also be populated. When used for backward compatibility, this field contains the patient's social security number. This number may also be a RR retirement number.

3.4.2.20 PID-20 Driver's license number - Patient (DLN) 00123

```
Components: <license number (ST)> ^ <issuing state, province, country (IS)> ^ <expiration date (DT)>
```

Definition: This field contains the patient's driver's license number. Some sites may use this number as a unique identifier of the patient. The default of the second component is the state in which the patient's license is registered.

3.4.2.21 PID-21 Mother's identifier (CX) 00124

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field is used, for example, as a link field for newborns. Typically a patient ID or account number may be used. This field can contain multiple identifiers for the same mother. Refer to *HL7 Table 0061 - Check digit scheme* for valid values.

3.4.2.22 PID-22 Ethnic group (CE) 00125

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field further defines the patient's ancestry. Refer to *User-defined Table 0189 - Ethnic group* for suggested values. The second triplet of the CE data type for ethnic group (alternate identifier, alternate text, and name of alternate coding system) is reserved for governmentally assigned codes. In the US, a current use is to report ethnicity in line with US federal standards for Hispanic origin.

User-defined Table 0189 - Ethnic group

Value	Description
H	Hispanic or Latino
N	Not Hispanic or Latino
U	Unknown

3.4.2.23 PID-23 Birth place (ST) 00126

Definition: This field indicates the location of the patient's birth, for example "St. Francis Community Hospital of Lower South Side". The actual address is reported in PID-11 with an identifier of "N".

3.4.2.24 PID-24 Multiple birth indicator (ID) 00127

Definition: This field indicates whether the patient was part of a multiple birth. Refer to *HL7 Table 0136 - Yes/No Indicator* for valid values.

3.4.2.25 PID-25 Birth order (NM) 00128

Definition: When a patient was part of a multiple birth, a value (number) indicating the patient's birth order is entered in this field.

3.4.2.26 PID-26 Citizenship (CE) 00129

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

Definition: This field contains the patient's country of citizenship. HL7 recommends using ISO table 3166 as the suggested values in *User-defined Table 0171 - Citizenship*.

In the Netherlands, this field is used for "Nationaliteit".

User-defined Table 0171 - Citizenship

Value	Description
	No suggested values defined

3.4.2.27 PID-27 Veterans military status (CE) 00130

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the military status assigned to a veteran. Refer to *User-defined Table 0172 - Veterans military status* for suggested values.

User-defined Table 0172 - Veterans military status

Value	Description
	No suggested values defined

3.4.2.28 PID-28 Nationality (CE) 00739

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: **From V2.4 onward, this field has been retained for backward compatibility only. It is recommended to refer to *PID-10 - Race, PID-22 - Ethnic group* and *PID-26 - Citizenship*.** This field contains a code that identifies the nation or national grouping to which the person belongs. This information may be different from a person's citizenship in countries in which multiple nationalities are recognized (for example, Spain: Basque, Catalan, etc.).

3.4.2.29 PID-29 Patient death date and time (TS) 00740

Definition: This field contains the date and time at which the patient death occurred.

3.4.2.30 PID-30 Patient death indicator (ID) 00741

Definition: This field indicates whether the patient is deceased. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

Y the patient is deceased

N the patient is not deceased

3.4.2.31 PID-31 Identity unknown indicator (ID) 01535

Definition: This field indicates whether or not the patient's/person's identity is known. Refer to *HL7 Table 0136 - Yes/no indicator* for suggested values.

Y the patient's/person's identity is unknown

N the patient's/person's identity is known

3.4.2.32 PID-32 Identity reliability code (IS) 01536

Definition: This field contains a coded value used to communicate information regarding the reliability of patient/person identifying data transmitted via a transaction. Values could indicate that certain fields on a PID segment for a given patient/person are known to be false (e.g., use of default or system-generated values for Date of Birth or Social Security Number. Refer to *User-defined Table 0445 - Identity reliability code* for suggested values.

User-defined Table 0445 - Identity Reliability Code

Value	Description
US	Unknown/Default Social Security Number
UD	Unknown/Default Date of Birth
UA	Unknown/Default Address
AL	Patient/Person Name is an Alias

3.4.2.33 PID-33 Last update date/time (TS) 01537

Definition: This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment. Receiving systems will use this field to determine how to apply the transaction to their systems. If the receiving system (such as an enterprise master patient index) already has a record for the person with a later last update date/time, then the EMPI could decide not to apply the patient's/person's demographic and identifying data from this transaction.

3.4.2.34 PID-34 Last update facility (HD) 01538

Definition: This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment. Receiving systems or users will use this field to determine how to apply the transaction to their systems. If the receiving system (such as a hospital's patient management system) already has a record for the patient/person, then it may decide to only update its data if the source is a "trusted" source. A hospital might consider other hospitals trusted sources, but not "trust" updates from non-acute care facilities. For example:

```
...|Metro Hospital|...
```

3.4.2.35 PID-35 Species code (CE) 01539

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

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.

User-defined Table 0446 - Species Code

Value	Description
	No suggested values defined

Conditionality Rule: This field must be valued if *PID-36 - Breed Code* or *PID-38 - Production Class Code* is valued.

For example:

```
...|L-80700^Canine, NOS^SNM3|...
...|L-80100^Bovine^SNM3|...
...|L-80A00^Feline^SNM3|...
```

3.4.2.36 PID-36 Breed code (CE) 01540

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: The specific breed of animal. This field, unlike Species and Strain is specific to animals and cannot be generally used for all living organisms. SNOMED is the recommended coding system. Refer to *User-defined Table 0447 - Breed Code* for suggested values.

User-defined Table 0447 - Breed Code

Value	Description
	No suggested values defined

Conditionality Rule: This field must be valued if *PID-37 - Strain* is valued.

For example, (showing primary and alternative coding systems, using locally defined "American Kennel Club" nomenclature):

```
...|L-80733^ Staffordshire bull terrier^SNM3^^American Staffordshire
    Terrier^99AKC|...
...|L-80900^Weimaraner^SNM3|...
...|L-80439^Peruvian Paso Horse^SNM3|...
```

3.4.2.37 PID-37 Strain (ST) 01541

Definition: This field contains the specific strain of animal. It can also be expanded to include strain of any living organism and is not restricted to animals.

Example:

```
...|DeKalb|...
...|Balb/c|...
...|DXL|...
```

3.4.2.38 PID-38 Production class code (CE) 01542

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the code and/or text indicating the primary use for which the living subject was bred or grown. Refer to *User-defined Table 0429 - Production Class Code* for suggested values. For example:

```
...|DA^Dairy^L|...
...|MT^Meat^L|...
...|RA^Racing^L|...
```

User-defined Table 0429 - Production class Code

Value	Description
BR	Breeding/genetic stock
DA	Dairy
DR	Draft
DU	Dual Purpose
LY	Layer, Includes Multiplier flocks
MT	Meat
OT	Other
PL	Pleasure
RA	Racing
SH	Show
NA	Not Applicable
U	Unknown

3.4.3 PV1 - patient visit segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on an account or visit-specific basis. The default is to send account level data. To use this segment for visit level data *PV1-51 - visit indicator* must be valued to "V". The value of PV-51 affects the level of data being sent on the PV1, PV2, and any other segments that are part of the associated PV1 hierarchy (e.g. ROL, DG1, or OBX).

The facility ID, the optional fourth component of each patient location field, is a HD data type that is uniquely associated with the healthcare facility containing the location. A given institution, or group of intercommunicating institutions, should establish a list of facilities that may be potential assignors of patient locations. The list will be one of the institution's master dictionary lists. Since third parties other than the assignors of patient locations may send or receive HL7 messages containing patient locations, the facility ID in the patient location may not be the same as that implied by the sending and receiving systems identified in the MSH. The facility ID must be unique across facilities at a given site. This field is required for HL7 implementations that have more than a single healthcare facility with bed locations, since the same <point of care> ^ <room> ^ <bed> combination may exist at more than one facility.

HL7 Attribute Table - PV1 – Patient visit

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00131	Set ID - PV1
2	1	IS	R		0004	00132	Patient Class
3	80	PL	O			00133	Assigned Patient Location

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
4	2	IS	O		0007	00134	Admission Type
5	250	CX	O			00135	Preadmit Number
6	80	PL	O			00136	Prior Patient Location
7	250	XCN	O	Y	0010	00137	Attending Doctor
8	250	XCN	O	Y	0010	00138	Referring Doctor
9	250	XCN	B	Y	0010	00139	Consulting Doctor
10	3	IS	O		0069	00140	Hospital Service
11	80	PL	O			00141	Temporary Location
12	2	IS	O		0087	00142	Preadmit Test Indicator
13	2	IS	O		0092	00143	Re-admission Indicator
14	6	IS	O		0023	00144	Admit Source
15	2	IS	O	Y	0009	00145	Ambulatory Status
16	2	IS	O		0099	00146	VIP Indicator
17	250	XCN	O	Y	0010	00147	Admitting Doctor
18	2	IS	O		0018	00148	Patient Type
19	250	CX	O			00149	Visit Number
20	50	FC	O	Y	0064	00150	Financial Class
21	2	IS	O		0032	00151	Charge Price Indicator
22	2	IS	O		0045	00152	Courtesy Code
23	2	IS	O		0046	00153	Credit Rating
24	2	IS	O	Y	0044	00154	Contract Code
25	8	DT	O	Y		00155	Contract Effective Date
26	12	NM	O	Y		00156	Contract Amount
27	3	NM	O	Y		00157	Contract Period
28	2	IS	O		0073	00158	Interest Code
29	1	IS	O		0110	00159	Transfer to Bad Debt Code
30	8	DT	O			00160	Transfer to Bad Debt Date
31	10	IS	O		0021	00161	Bad Debt Agency Code
32	12	NM	O			00162	Bad Debt Transfer Amount
33	12	NM	O			00163	Bad Debt Recovery Amount
34	1	IS	O		0111	00164	Delete Account Indicator
35	8	DT	O			00165	Delete Account Date
36	3	IS	O		0112	00166	Discharge Disposition
37	25	CM	O		0113	00167	Discharged to Location
38	250	CE	O		0114	00168	Diet Type
39	2	IS	O		0115	00169	Servicing Facility
40	1	IS	B		0116	00170	Bed Status
41	2	IS	O		0117	00171	Account Status
42	80	PL	O			00172	Pending Location
43	80	PL	O			00173	Prior Temporary Location
44	26	TS	O			00174	Admit Date/Time
45	26	TS	O	Y		00175	Discharge Date/Time
46	12	NM	O			00176	Current Patient Balance
47	12	NM	O			00177	Total Charges
48	12	NM	O			00178	Total Adjustments
49	12	NM	O			00179	Total Payments
50	250	CX	O		0203	00180	Alternate Visit ID
51	1	IS	O		0326	01226	Visit Indicator
52	250	XCN	B	Y	0010	01274	Other Healthcare Provider

3.4.3.0 PV1 field definitions

3.4.3.1 PV1-1 Set ID - PV1 (SI) 00131

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

3.4.3.2 PV1-2 Patient class (IS) 00132

Definition: This field is used by systems to categorize patients by site. It does not have a consistent industry-wide definition. It is subject to site-specific variations. Refer to *User-defined Table 0004 - Patient class* for suggested values.

User-defined Table 0004 - Patient class

Value	Description
E	Emergency
I	Inpatient
O	Outpatient
P	Preadmit
R	Recurring patient
B	Obstetrics
C	Commercial Account
N	Not Applicable
U	Unknown

"Commercial Account" is used by reference labs for specimen processing when the service is billed back to a third party. A registration is processed for the specimen to facilitate the subsequent billing. The identity of the patient may be known or unknown. In either case, for billing and statistical purposes, the patient class is considered a commercial account due to the third party billing responsibility.

"Not Applicable" is used only in cases where the PV1 segment itself is not applicable but is retained in the message definitions for backwards compatibility (for example when a managed care system sends A28, A29, or A31 messages to indicate the enrolment of a patient in the system and there is no scheduled "visit" or "encounter" and hence the entire PV1 segment is not applicable).

3.4.3.3 PV1-3 Assigned patient location (PL) 00133

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient. For canceling a transaction or discharging a patient, the

current location (after the cancellation event or before the discharge event) should be in this field. If a value exists in the fifth component (location status), it supersedes the value in *PV1-40 - Bed Status*.

3.4.3.4 PV1-4 Admission type (IS) 00134

Definition: This field indicates the circumstances under which the patient was or will be admitted. Refer to *User-defined Table 0007 - Admission type* for suggested values. In the US, it is recommended to report the UB92 FL 19 "Type of Admission" in this field.

User-defined Table 0007 - Admission type

Value	Description	Comments
A	Accident	
E	Emergency	US UB92 code "1"
L	Labor and Delivery	
R	Routine	
N	Newborn (Birth in healthcare facility)	US UB92 code "4"
U	Urgent	US UB92 code "2"
C	Elective	US UB92 code "3"

3.4.3.5 PV1-5 Preadmit number (CX) 00135

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field uniquely identifies the patient's pre-admit account. Some systems will continue to use the pre-admit number as the billing number after the patient has been admitted. **For backward compatibility, a ST data type can be sent**; however HL7 recommends use of the CX data type, like the account number, for new implementations. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.3.6 PV1-6 Prior patient location (PL) 00136

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field contains the prior patient location if the patient is being transferred. The old location is null if the patient is new. If a value exists in the fifth component (location status), it supersedes the value in *PV1-40 - bed status*.

3.4.3.7 PV1-7 Attending doctor (XCN) 00137

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)>  ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the attending physician information. Multiple names and identifiers for the same physician may be sent. The field sequences are not used to indicate multiple attending doctors. The legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence. Depending on local agreements, either ID or the name may be absent in this field. Refer to *User-defined Table 0010 - Physician ID* for suggested values.

User-defined Table 0010 - Physician ID

Value	Description
	No suggested values defined

3.4.3.8 PV1-8 Referring doctor (XCN) 00138

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)>  ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the referring physician information. Multiple names and identifiers for the same physician may be sent. The field sequences are not used to indicate multiple referring doctors. The legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence. Depending on local agreements, either the ID or the name may be absent from this field. Refer to *User-defined Table 0010 - Physician ID* for suggested values.

3.4.3.9 PV1-9 Consulting doctor (XCN) 00139

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)>  ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)>
```

```
Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field has been retained for backward compatibility only.** It is recommended to use the ROL - Role segment for consulting physicians instead. This field contains the consulting physician information. The field sequences are used to indicate multiple consulting doctors. Depending on local agreements, either the ID or the name may be absent from this field. Refer to *User-defined Table 0010 - Physician ID* for suggested values.

3.4.3.10 PV1-10 Hospital service (IS) 00140

Definition: This field contains the treatment or type of surgery that the patient is scheduled to receive. It is a required field with trigger events A01 (admit/visit notification), A02 (transfer a patient), A14 (pending admit), A15 (pending transfer). Refer to *User-defined Table 0069 - Hospital service* for suggested values.

User-defined Table 0069 - Hospital service

Values	Description
MED	Medical Service
SUR	Surgical Service
URO	Urology Service
PUL	Pulmonary Service
CAR	Cardiac Service

3.4.3.11 PV1-11 Temporary location (PL) 00141

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)>

Subcomponents of facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field contains a location other than the assigned location required for a temporary period of time (e.g., OR, operating theatre, etc.). If a value exists in the fifth component (location status), it supersedes the value in *PV1-40 - bed status*.

3.4.3.12 PV1-12 Preadmit test indicator (IS) 00142

Definition: This field indicates whether the patient must have pre-admission testing done in order to be admitted. Refer to *User-defined Table 0087 - Pre-admit test indicator* for suggested values.

User-defined Table 0087 - Pre-admit test indicator

Value	Description
	No suggested values defined

3.4.3.13 PV1-13 Re-admission indicator (IS) 00143

Definition: This field indicates that a patient is being re-admitted to the healthcare facility and gives the circumstances. We suggest using "**R**" for readmission or else null. Refer to *User-defined Table 0092 - Re-admission indicator* for suggested values.

User-defined Table 0092 - Re-admission indicator

Value	Description
R	Re-admission

3.4.3.14 PV1-14 Admit source (IS) 00144

Definition: This field indicates where the patient was admitted. Refer to *User-defined Table 0023 - Admit source* for suggested values. In the US, this field is used on UB92 FL20 "Source of Admission". The UB codes listed as examples are not an exhaustive or current list; refer to a UB specification for additional information.

Note:	The official title of UB is "National Uniform Billing Data Element Specifications." Most of the codes added came from the UB-92 specification, but some came from the UB-82.

User-defined Table 0023 - Admit source

Value	Description
1	Physician referral
2	Clinic referral
3	HMO referral
4	Transfer from a hospital
5	Transfer from a skilled nursing facility
6	Transfer from another health care facility
7	Emergency room
8	Court/law enforcement
9	Information not available

3.4.3.15 PV1-15 Ambulatory status (IS) 00145

Definition: This field indicates any permanent or transient handicapped conditions. Refer to *User-defined Table 0009 - Ambulatory status* for suggested entries.

User-defined Table 0009 - Ambulatory status

Value	Description
A0	No functional limitations
A1	Ambulates with assistive device
A2	Wheelchair/stretcher bound
A3	Comatose; non-responsive
A4	Disoriented

Value	Description
A5	Vision impaired
A6	Hearing impaired
A7	Speech impaired
A8	Non-English speaking
A9	Functional level unknown
B1	Oxygen therapy
B2	Special equipment (tubes, IVs, catheters)
B3	Amputee
B4	Mastectomy
B5	Paraplegic
B6	Pregnant

3.4.3.16 PV1-16 VIP indicator (IS) 00146

Definition: This field identifies the type of VIP. Refer to *User-defined Table 0099 - VIP indicator* for suggested values.

User-defined Table 0099 - VIP indicator

Value	Description
	No suggested values defined

3.4.3.17 PV1-17 Admitting doctor (XCN) 00147

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)>  ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the admitting physician information. Multiple names and identifiers for the same physician may be sent. The field sequences are not used to indicate multiple admitting doctors. The legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence. By local agreement, the name or ID may be absent in this field. Refer to *User-defined Table 0010 - Physician ID* for suggested values.

3.4.3.18 PV1-18 Patient type (IS) 00148

Definition: This field contains site-specific values that identify the patient type. Refer to *User-defined Table 0018 - Patient type* for suggested values.

User-defined Table 0018 - Patient type

Value	Description
	No suggested values defined

3.4.3.19 PV1-19 Visit number (CX) 00149

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **For backward compatibility**, a NM data type may be sent, but HL7 recommends that new implementations use the CX data type**.** This field contains the unique number assigned to each patient visit. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.3.20 PV1-20 Financial class (FC) 00150

```
Components: <financial class (IS)> ^ <effective date (TS)>
```

Definition: This field contains the financial class(es) assigned to the patient for the purpose of identifying sources of reimbursement. Refer to *User-defined Table 0064 - Financial class* for suggested values.

User-defined Table 0064 - Financial class

Value	Description
	No suggested values defined

3.4.3.21 PV1-21 Charge price indicator (IS) 00151

Definition: This field contains the code used to determine which price schedule is to be used for room and bed charges. Refer to *User-defined Table 0032 - Charge/price indicator* for suggested values.

User-defined Table 0032 - Charge/price indicator

Value	Description
	No suggested values defined

3.4.3.22 PV1-22 Courtesy code (IS) 00152

Definition: This field indicates whether the patient will be extended certain special courtesies. Refer to *User-defined Table 0045 - Courtesy code* for suggested values.

User-defined Table 0045 - Courtesy code

Value	Description
	No suggested values defined

3.4.3.23 PV1-23 Credit rating (IS) 00153

Definition: This field contains the user-defined code to determine past credit experience. Refer to *User-defined Table 0046 - Credit rating* for suggested values.

User-defined Table 0046 - Credit rating

Value	Description
	No suggested values defined

3.4.3.24 PV1-24 Contract code (IS) 00154

Definition: This field identifies the type of contract entered into by the healthcare facility and the guarantor for the purpose of settling outstanding account balances. Refer to *User-defined Table 0044 - Contract code* for suggested values.

User-defined Table 0044 - Contract code

Value	Description
	No suggested values defined

3.4.3.25 PV1-25 Contract effective date (DT) 00155

Definition: This field contains the date that the contract is to start or started.

3.4.3.26 PV1-26 Contract amount (NM) 00156

Definition: This field contains the amount to be paid by the guarantor each period according to the contract.

3.4.3.27 PV1-27 Contract period (NM) 00157

Definition: This field specifies the duration of the contract for user-defined periods.

3.4.3.28 PV1-28 Interest code (IS) 00158

Definition: This field indicates the amount of interest that will be charged the guarantor on any outstanding amounts. Refer to *User-defined Table 0073 - Interest rate code* for suggested values.

User-defined Table 0073 - Interest rate code

Value	Description
	No suggested values defined

3.4.3.29 PV1-29 Transfer to bad debt code (IS) 00159

Definition: This field indicates that the account was transferred to bad debts and gives the reason. Refer to *User-defined Table 0110 - Transfer to bad debt code* for suggested values.

User-defined Table 0110 - Transfer to bad debt code

Value	Description
	No suggested values defined

3.4.3.30 PV1-30 Transfer to bad debt date (DT) 00160

Definition: This field contains the date that the account was transferred to a bad debt status.

3.4.3.31 PV1-31 Bad debt agency code (IS) 00161

Definition: **This field can be used as a ST type for backward compatibility**. This field uniquely identifies the bad debt agency to which the account was transferred. This code is site defined. One possible implementation would be to edit against a table such as *User-defined Table 0021 - Bad debt agency code*; however, this is not required.

User-defined Table 0021 - Bad debt agency code

Value	Description
	No suggested values defined

3.4.3.32 PV1-32 Bad debt transfer amount (NM) 00162

Definition: This field contains the amount that was transferred to a bad debt status.

3.4.3.33 PV1-33 Bad debt recovery amount (NM) 00163

Definition: This field contains the amount recovered from the guarantor on the account.

3.4.3.34 PV1-34 Delete account indicator (IS) 00164

Definition: This field indicates that the account was deleted from the file and gives the reason. Refer to *User-defined Table 0111 - Delete account code* for suggested values.

User-defined Table 0111 - Delete account code

Value	Description
	No suggested values defined

3.4.3.35 PV1-35 Delete account date (DT) 00165

Definition: This field contains the date that the account was deleted from the file.

3.4.3.36 PV1-36 Discharge disposition (IS) 00166

Definition: This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.). Refer to *User-defined Table 0112 - Discharge disposition* for suggested values. In the US, this field is used on UB92 FL22. The UB codes listed as examples are not an exhaustive or current list; refer to a UB specification for additional information.

User-defined Table 0112 - Discharge disposition

Value	Description
01	Discharged to home or self care (routine discharge)
02	Discharged/transferred to another short term general hospital for inpatient care
03	Discharged/transferred to skilled nursing facility (SNF)
04	Discharged/transferred to an intermediate care facility (ICF)
05	Discharged/transferred to another type of institution for inpatient care or referred for outpatient services to another institution
06	Discharged/transferred to home under care of organized home health service organization
07	Left against medical advice or discontinued care
08	Discharged/transferred to home under care of Home IV provider
09	Admitted as an inpatient to this hospital
10 …19	Discharge to be defined at state level, if necessary
20	Expired (i.e. dead)
21 ... 29	Expired to be defined at state level, if necessary
30	Still patient or expected to return for outpatient services (i.e. still a patient)
31 … 39	Still patient to be defined at state level, if necessary (i.e. still a patient)
40	Expired (i.e. died) at home
41	Expired (i.e. died) in a medical facility; e.g., hospital, SNF, ICF, or free standing hospice
42	Expired (i.e. died) - place unknown

3.4.3.37 PV1-37 Discharged to location (CM) 00167

```
Components: <discharge location (IS)> ^ <effective date (TS)>
```

Definition: This field indicates the healthcare facility to which the patient was discharged. Refer to *User-defined Table 0113 - Discharged to location* for suggested values.

User-defined Table 0113 - Discharged to location

Value	Description
	No suggested values defined

3.4.3.38 PV1-38 Diet type (CE) 00168

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates a special diet type for a patient. Refer to *User-defined Table 0114 - Diet type* for suggested values.

User-defined Table 0114 - Diet type

Value	Description
	No suggested values defined

3.4.3.39 PV1-39 Servicing facility (IS) 00169

Definition: This field is used in a multiple facility environment to indicate the healthcare facility with which this visit is associated. Refer to *User-defined Table 0115 - Servicing facility* for suggested values.

User-defined Table 0115 - Servicing facility

Value	Description
	No suggested values defined

An optional sixth component, the facility ID, may be valued in each individual location field in PV1, instead of placing it here.

3.4.3.40 PV1-40 Bed status (IS) 00170

Definition: **This field has been retained for backward compatibility only**. The information is now held in the fifth component of the PL datatype in PV1-3. This field contains the status of the bed. Refer to *User-defined Table 0116 - Bed status* for suggested values.

User-defined Table 0116 - Bed status

Value	Description
C	Closed
H	Housekeeping
O	Occupied
U	Unoccupied
K	Contaminated
I	Isolated

3.4.3.41 PV1-41 Account status (IS) 00171

Definition: This field contains the account status. Refer to *User-defined Table 0117 - Account status* for suggested values.

User-defined Table 0117 - Account status

Value	Description
	No suggested values defined

3.4.3.42 PV1-42 Pending location (PL) 00172

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)>

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field indicates the point of care, room, bed, healthcare facility ID, and bed status to which the patient may be moved. The first component may be the nursing station for inpatient locations, or the clinic, department, or home for locations other than inpatient. If a value exists in the fifth component (location status), it supersedes the value in *PV1-40 - bed status*.

3.4.3.43 PV1-43 Prior temporary location (PL) 00173

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)>

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field is used to reflect the patient's temporary location (such as the operating room/theatre or x-ray) prior to a transfer from a temporary location to an actual location, or from a temporary location to another temporary location. The first component may be the nursing station for inpatient locations, or the clinic, department, or home for locations other than inpatient.

3.4.3.44 PV1-44 Admit date/time (TS) 00174

Definition: This field contains the admit date/time. It is to be used if the event date/time is different than the admit date and time, i.e., a retroactive update. This field is also used to reflect the date/time of an outpatient/emergency patient registration.

3.4.3.45 PV1-45 Discharge date/time (TS) 00175

Definition: This field contains the discharge date/time. It is to be used if the event date/time is different than the discharge date and time, that is, a retroactive update. This field is also used to reflect the date/time of an outpatient/emergency patient discharge.

3.4.3.46 PV1-46 Current patient balance (NM) 00176

Definition: This field contains the visit balance due.

3.4.3.47 PV1-47 Total charges (NM) 00177

Definition: This field contains the total visit charges.

3.4.3.48 PV1-48 Total adjustments (NM) 00178

Definition: This field contains the total adjustments for visit.

3.4.3.49 PV1-49 Total payments (NM) 00179

Definition: This field contains the total payments for visit.

3.4.3.50 PV1-50 Alternate visit ID (CX) 00180

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the alternative, temporary, or pending optional visit ID number to be used if needed. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. Refer to *HL7 Table 0203 - Identifier type* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.3.51 PV1-51 Visit indicator (IS) 01226

Definition: This field specifies the level on which data are being sent. It is the indicator used to send data at two levels, visit and account. HL7 recommends sending an 'A' or no value when the data in the message are at the account level, or 'V' to indicate that the data sent in the message are at the visit level. Refer to *User-defined Table 0326 - Visit indicator* for suggested values.

The value of this element affects the context of data sent in PV1, PV2 and any associated hierarchical segments (e.g. DB1, AL1, DG1, etc.).

User-defined Table 0326 - Visit indicator

Value	Description
A	Account level (default)
V	Visit level

3.4.3.52 PV1-52 Other healthcare provider (XCN) 01274

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)>  ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE) ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field has been retained for backward compatibility only.** Use the ROL-Role Segment to communicate providers not specified elsewhere. Refer to section 12.3.3 for the definition of the ROL segment. This field contains the other healthcare providers (e.g. nurse care practitioner, midwife, physician assistant). Multiple healthcare providers can be sent. Depending on local agreements, either the ID or the name may be absent from this field. Use values in *User-defined Table 0010 - Physician ID* for first component.

3.4.4 PV2 - patient visit - additional information segment

The PV2 segment is a continuation of information contained on the PV1 segment.

HL7 Attribute Table - PV2 – Patient visit – additional information

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	80	PL	C			00181	Prior Pending Location
2	250	CE	O		0129	00182	Accommodation Code
3	250	CE	O			00183	Admit Reason
4	250	CE	O			00184	Transfer Reason
5	25	ST	O	Y		00185	Patient Valuables
6	25	ST	O			00186	Patient Valuables Location
7	2	IS	O	Y	0130	00187	Visit User Code
8	26	TS	O			00188	Expected Admit Date/Time
9	26	TS	O			00189	Expected Discharge Date/Time
10	3	NM	O			00711	Estimated Length of Inpatient Stay
11	3	NM	O			00712	Actual Length of Inpatient Stay
12	50	ST	O			00713	Visit Description
13	250	XCN	O	Y		00714	Referral Source Code
14	8	DT	O			00715	Previous Service Date
15	1	ID	O		0136	00716	Employment Illness Related Indicator
16	1	IS	O		0213	00717	Purge Status Code
17	8	DT	O			00718	Purge Status Date
18	2	IS	O		0214	00719	Special Program Code
19	1	ID	O		0136	00720	Retention Indicator
20	1	NM	O			00721	Expected Number of Insurance Plans
21	1	IS	O		0215	00722	Visit Publicity Code
22	1	ID	O		0136	00723	Visit Protection Indicator
23	250	XON	O	Y		00724	Clinic Organization Name
24	2	IS	O		0216	00725	Patient Status Code
25	1	IS	O		0217	00726	Visit Priority Code
26	8	DT	O			00727	Previous Treatment Date
27	2	IS	O		0112	00728	Expected Discharge Disposition
28	8	DT	O			00729	Signature on File Date
29	8	DT	O			00730	First Similar Illness Date
30	250	CE	O		0218	00731	Patient Charge Adjustment Code
31	2	IS	O		0219	00732	Recurring Service Code
32	1	ID	O		0136	00733	Billing Media Code
33	26	TS	O			00734	Expected Surgery Date and Time
34	1	ID	O		0136	00735	Military Partnership Code
35	1	ID	O		0136	00736	Military Non-Availability Code
36	1	ID	O		0136	00737	Newborn Baby Indicator
37	1	ID	O		0136	00738	Baby Detained Indicator
38	250	CE	O		0430	01543	Mode of Arrival Code

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
39	250	CE	O	Y	0431	01544	Recreational Drug Use Code
40	250	CE	O		0432	01545	Admission Level of Care Code
41	250	CE	O	Y	0433	01546	Precaution Code
42	250	CE	O		0434	01547	Patient Condition Code
43	2	IS	O		0315	00759	Living Will Code
44	2	IS	O		0316	00760	Organ Donor Code
45	250	CE	O	Y	0435	01548	Advance Directive Code
46	8	DT	O			01549	Patient Status Effective Date
47	26	TS	C			01550	Expected LOA Return Date/Time

3.4.4.0 PV2 field definitions

3.4.4.1 PV2-1 Prior pending location (PL) 00181

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)>

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field is required for cancel pending transfer (A26) messages. In all other events it is optional.

3.4.4.2 PV2-2 Accommodation code (CE) 00182

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the specific patient accommodations for this visit. Refer to *User-defined Table 0129 - Accommodation code* for suggested values.

3.4.4.3 PV2-3 Admit reason (CE) 00183

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the short description of the reason for patient admission.

3.4.4.4 PV2-4 Transfer reason (CE) 00184

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the short description of the reason for a patient location change.

3.4.4.5 PV2-5 Patient valuables (ST) 00185

Definition: This field contains the short description of patient valuables checked in during admission.

3.4.4.6 PV2-6 Patient valuables location (ST) 00186

Definition: This field indicates the location of the patient's valuables.

3.4.4.7 PV2-7 Visit user code (IS) 00187

Definition: This field further categorizes a patient's visit with respect to an individual institution's needs, and is expected to be site-specific. Refer to *User-defined Table 0130 - Visit user code* for suggested values.

User-defined Table 0130 - Visit user code

Value	Description
TE	Teaching
HO	Home
MO	Mobile Unit
PH	Phone

3.4.4.8 PV2-8 Expected admit date/time (TS) 00188

Definition: This field contains the date and time that the patient is expected to be admitted. This field is also used to reflect the date/time of an outpatient/emergency patient registration.

3.4.4.9 PV2-9 Expected discharge date/time (TS) 00189

Definition: This field contains the date and time that the patient is expected to be discharged. This is a non-event related date used by ancillaries to determine more accurately the projected workloads. This field is also used to reflect the anticipated discharge date/time of an outpatient/emergency patient, or an inpatient.

3.4.4.10 PV2-10 Estimated length of inpatient stay (NM) 00711

Definition: This field specifies the estimated days of inpatient stays.

3.4.4.11 PV2-11 Actual length of inpatient stay (NM) 00712

Definition: This field contains the actual days of inpatient stays. The actual length of the inpatient stay may not be calculated from the admission and discharge dates because of possible leaves of absence.

3.4.4.12 PV2-12 Visit description (ST) 00713

Definition: This field contains a brief user-defined description of the visit.

3.4.4.13 PV2-13 Referral source code (XCN) 00714

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
```

```
                <name type code (ID)> ^ <identifier check digit (ST)> ^ <code identifying the check
                digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
                <name representation code (ID)> ^ <name context (CE) ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
              (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
              (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
              (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
              (ID)>
```

Definition: This field contains the name and the identification numbers of the person or organization that made the referral. This person/organization is not the same as the referring doctor. For example, Joe Smith referred me to the Clinic (or to Dr. Jones at the Clinic).

3.4.4.14 PV2-14 Previous service date (DT) 00715

Definition: This field contains the date of previous service for the same recurring condition. This may be a required field for billing certain illnesses (e.g., accident related) to a third party.

3.4.4.15 PV2-15 Employment illness related indicator (ID) 00716

Definition: This field specifies whether a patient's illness was job-related. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.16 PV2-16 Purge status code (IS) 00717

Definition: This field contains the purge status code for the account. It is used by the application program to determine purge processing. Refer to *User-defined Table 0213 - Purge status code* for suggested values.

User-defined Table 0213 - Purge status code

Value	Description
P	Marked for purge. User is no longer able to update the visit.
D	The visit is marked for deletion and the user cannot enter new data against it.
I	The visit is marked inactive and the user cannot enter new data against it.

3.4.4.17 PV2-17 Purge status date (DT) 00718

Definition: This field contains the date on which the data will be purged from the system.

3.4.4.18 PV2-18 Special program code (IS) 00719

Definition: This field designates the specific health insurance program for a visit required for healthcare reimbursement. Examples include Child Health Assistance, Elective Surgery Program, Family Planning, etc. Refer to *User-defined Table 0214 - Special program codes* for suggested values.

User-defined Table 0214 – Special program codes

Value	Description
	No suggested values

3.4.4.19 PV2-19 Retention indicator (ID) 00720

Definition: This field allows the user to control the financial and demographic purge processes at the visit. It is used to preserve demographic and financial data on specific, high priority visits. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.20 PV2-20 Expected number of insurance plans (NM) 00721

Definition: This field contains the number of insurance plans that may provide coverage for this visit.

3.4.4.21 PV2-21 Visit publicity code (IS) 00722

Definition: This field contains a user-defined code indicating what level of publicity is allowed (e.g., No Publicity, Family Only) for a specific visit. Refer to *User-defined Table 0215 - Publicity code* for suggested values. Refer to *PD1-11 - publicity code* for the patient level publicity code.

3.4.4.22 PV2-22 Visit protection indicator (ID) 00723

Definition: This field identifies the person's protection that determines, in turn, whether access to information about this person should be kept from users who do not have adequate authority for a specific visit. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values. Refer to *PD1-12 - protection indicator* for the patient level protection indicator.

3.4.4.23 PV2-23 Clinic organization name (XON) 00724

```
Components: <organization name (ST)> ^ <organization name type code (ID)> ^ <ID number (ID)> ^ <check
            digit (NM)> ^ < check digit scheme (ID)> ^ <assigning authority (HD)> ^ <identifier type
            code (ID)> ^ <assigning facility (HD)> ^ <name representation code (ID)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the organization name or sub-unit and identifier that is associated with the (visit) episode of care. For example, the Allergy or Oncology Clinic within the healthcare facility might be named.

3.4.4.24 PV2-24 Patient status code (IS) 00725

Definition: This field indicates the status of the episode of care: for instance, Active Inpatient, Discharged Inpatient. Refer to *User-defined Table 0216 - Patient status* for suggested values.

User-defined Table 0216 – Patient status

Value	Description
	No suggested values

3.4.4.25 PV2-25 Visit priority code (IS) 00726

Definition: This field contains the priority of the visit. Refer to *User-defined Table 0217 - Visit priority code* for suggested values.

User-defined Table 0217 - Visit priority code

Value	Description
1	Emergency
2	Urgent
3	Elective

3.4.4.26 PV2-26 Previous treatment date (DT) 00727

Definition: This field contains the date that the patient last had treatment for any condition prior to this visit. In the case of a prior hospital visit, it is likely to be the previous discharge date.

3.4.4.27 PV2-27 Expected discharge disposition (IS) 00728

Definition: This field describes what the patient's disposition is expected to be at the end of the visit. Refer to *User-defined Table 0112 - Discharge disposition* for suggested values.

3.4.4.28 PV2-28 Signature on file date (DT) 00729

Definition: This field contains the date on which a signature was obtained for insurance billing purposes.

3.4.4.29 PV2-29 First similar illness date (DT) 00730

Definition: This field is used to determine if the patient has a pre-existing condition.

3.4.4.30 PV2-30 Patient charge adjustment code (CE) 00731

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains a user-defined code that indicates which adjustments should be made to this patient's charges. Refer to *User-defined Table 0218 - Charge adjustment* for suggested values. This field is the same as *GT1-26 - guarantor charge adjustment code*.

3.4.4.31 PV2-31 Recurring service code (IS) 00732

Definition: This field indicates whether the treatment is continuous. Refer to *User-defined Table 0219 - Recurring service* for suggested values.

User-defined Table 0219 – Recurring service

Value	Description
	No selected values

3.4.4.32 PV2-32 Billing media code (ID) 00733

Definition: This field indicates if the account is to be rejected from tape billing. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.33 PV2-33 Expected surgery date and time (TS) 00734

Definition: This field contains the date and time on which the surgery is expected to occur.

3.4.4.34 PV2-34 Military partnership code (ID) 00735

Definition: This field indicates that a military healthcare facility has contracted with a non-military healthcare facility for the use of its services. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.35 PV2-35 Military non-availability code (ID) 00736

Definition: This field indicates whether a patient has permission to use a non-military healthcare facility for treatment. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.36 PV2-36 Newborn baby indicator (ID) 00737

Definition: This field indicates whether the patient is a baby. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.37 PV2-37 Baby detained indicator (ID) 00738

Definition: This field indicates if the baby is detained after the mother's discharge. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.4.38 PV2-38 Mode of arrival code (CE) 01543

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: Identifies how the patient was brought to the healthcare facility. Refer to *User-defined Table 0430 - Mode of arrival code* for suggested values.

User-defined Table 0430 - Mode of arrival code

Value	Description
A	Ambulance
C	Car
F	On foot
H	Helicopter
P	Public Transport
O	Other
U	Unknown

3.4.4.39 PV2-39 Recreational drug use code (CE) 01544

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates what recreational drugs the patient uses. It is used for the purpose of room assignment. Refer to *User-defined Table 0431 - Recreational drug use code* for suggested values.

User-defined Table 0431 - Recreational drug use code

Value	Description
A	Alcohol
K	Kava
M	Marijuana
T	Tobacco - smoked
C	Tobacco - chewed
O	Other
U	Unknown

3.4.4.40 PV2-40 Admission level of care code (CE) 01545

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the acuity level assigned to the patient at the time of admission. Refer to *User-defined Table 0432 - Admission level of care code* for suggested values.

User-defined Table 0432 - Admission level of care code

Value	Description
AC	Acute
CH	Chronic
CO	Comatose
CR	Critical
IM	Improved

Value	Description
MO	Moribund

3.4.4.41 PV2-41 Precaution code (CE) 01546

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates non-clinical precautions that need to be taken with the patient. Refer to *User-defined Table 0433 - Precaution code* for suggested values.

User-defined Table 0433 - Precaution code

Value	Description
A	Aggressive
B	Blind
C	Confused
D	Deaf
I	On IV
N	"No-code" (i.e. Do not resuscitate)
P	Paraplegic
O	Other
U	Unknown

3.4.4.42 PV2-42 Patient condition code (CE) 01547

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the patient's current medical condition for the purpose of communicating to non-medical outside parties, e.g. family, employer, religious minister, media, etc,. Refer to *User-defined Table 0434 - Patient condition code* for suggested values.

User-defined Table 0434 - Patient condition code

Value	Description
A	Satisfactory
C	Critical
P	Poor
S	Stable
O	Other
U	Unknown

3.4.4.43 PV2-43 Living will code (IS) 00759

Definition: This field indicates whether or not the patient has a living will and, if so, whether a copy of the living will is on file at the healthcare facility. If the patient does not have a living will, the value of

this field indicates whether the patient was provided information on living wills. Refer to *User-defined Table 0315 - Living will code* for suggested values. See also *PD1-7 - Living will code*.

User-defined Table 0315 - Living will code

Value	Description
Y	Yes, patient has a living will
F	Yes, patient has a living will but it is not on file
N	No, patient does not have a living will and no information was provided
I	No, patient does not have a living will but information was provided
U	Unknown

3.4.4.44 PV2-44 Organ donor code (IS) 00760

Definition: This field indicate whether the patient wants to donate his/her organs and whether an organ donor card or similar documentation is on file with the healthcare organization. Refer to *User-defined Table 0316 - Organ donor code* for suggested values. See also *PD1-8 - Organ donor*.

User-defined Table 0316 - Organ donor code

Value	Description
Y	Yes, patient is a documented donor and documentation is on file
F	Yes, patient is a documented donor, but documentation is not on file
N	No, patient has not agreed to be a donor
I	No, patient is not a documented donor, but information was provided
R	Patient leaves organ donation decision to relatives
P	Patient leaves organ donation decision to a specific person
U	Unknown

3.4.4.45 PV2-45 Advance directive code (CE) 01548

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the patient's instructions to the healthcare facility. Refer to *User-defined Table 0435 - Advance directive code* for suggested values. See also *PD1-15 - Advance directive code*.

User-defined Table 0435 -Advance directive code

Value	Description
DNR	Do not resuscitate

3.4.4.46 PV2-46 Patient status effective date (DT) 01549

Definition: This field indicates the effective date for *PV2-24 - Patient Status*.

3.4.4.47 PV2-47 Expected LOA return date/time (TS) 01550

Definition: This field is conditionally required for A21 - Patient goes on LOA. It may be populated in A22 - Patient returns from LOA as well as in the A53 - Cancel LOA for a patient and the A54 - Cancel patient returns from LOA triggers. This field contains the date/time that the patient is expected to return from LOA.

3.4.5 NK1 - next of kin / associated parties segment

The NK1 segment contains information about the patient's other related parties. Any associated parties may be identified. Utilizing *NK1-1 - set ID*, multiple NK1 segments can be sent to patient accounts.

If a person or organization fulfills multiple contact roles, for example, a person is an emergency contact and a next of kin, it is recommended to send a NK1 segment for each contact role (field 7).

HL7 Attribute Table - NK1 – Next of kin / associated parties

SEQ	LEN	DT	OPT	R P/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			00190	Set ID - NK1
2	250	XPN	O	Y		00191	Name
3	250	CE	O		0063	00192	Relationship
4	250	XAD	O	Y		00193	Address
5	250	XTN	O	Y		00194	Phone Number
6	250	XTN	O	Y		00195	Business Phone Number
7	250	CE	O		0131	00196	Contact Role
8	8	DT	O			00197	Start Date
9	8	DT	O			00198	End Date
10	60	ST	O			00199	Next of Kin / Associated Parties Job Title
11	20	JCC	O		0327/ 0328	00200	Next of Kin / Associated Parties Job Code/Class
12	250	CX	O			00201	Next of Kin / Associated Parties Employee Number
13	250	XON	O	Y		00202	Organization Name - NK1
14	250	CE	O		0002	00119	Marital Status
15	1	IS	O		0001	00111	Administrative Sex
16	26	TS	O			00110	Date/Time of Birth
17	2	IS	O	Y	0223	00755	Living Dependency
18	2	IS	O	Y	0009	00145	Ambulatory Status
19	250	CE	O	Y	0171	00129	Citizenship
20	250	CE	O		0296	00118	Primary Language
21	2	IS	O		0220	00742	Living Arrangement
22	250	CE	O		0215	00743	Publicity Code
23	1	ID	O		0136	00744	Protection Indicator
24	2	IS	O		0231	00745	Student Indicator
25	250	CE	O		0006	00120	Religion
26	250	XPN	O	Y		00109	Mother's Maiden Name
27	250	CE	O		0212	00739	Nationality
28	250	CE	O	Y	0189	00125	Ethnic Group
29	250	CE	O	Y	0222	00747	Contact Reason
30	250	XPN	O	Y		00748	Contact Person's Name
31	250	XTN	O	Y		00749	Contact Person's Telephone Number
32	250	XAD	O	Y		00750	Contact Person's Address
33	250	CX	O	Y		00751	Next of Kin/Associated Party's Identifiers

SEQ	LEN	DT	OPT	R P/#	TBL#	ITEM#	ELEMENT NAME
34	2	IS	O		0311	00752	Job Status
35	250	CE	O	Y	0005	00113	Race
36	2	IS	O		0295	00753	Handicap
37	16	ST	O			00754	Contact Person Social Security Number

3.4.5.0 NK1 field definitions

3.4.5.1 NK1-1 Set ID - NK1 (SI) 00190

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

3.4.5.2 NK1-2 Name (XPN) 00191

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field contains the name of the next of kin or associated party. Multiple names for the same person are allowed, but the legal name must be sent in the first sequence. If the legal name is not sent, then the repeat delimiter must be sent in the first sequence. Refer to *HL7 Table 0200 - Name type* for valid values.

3.4.5.3 NK1-3 Relationship (CE) 00192

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the actual personal relationship that the next of kin/associated party has to the patient. Refer to *User-defined Table 0063 - Relationship* for suggested values.

User-defined Table 0063 - Relationship

Value	Description
SEL	Self
SPO	Spouse
DOM	Life partner
CHD	Child
GCH	Grandchild
NCH	Natural child
SCH	Stepchild
FCH	Foster child

Value	Description
DEP	Handicapped dependent
WRD	Ward of court
PAR	Parent
MTH	Mother
FTH	Father
CGV	Care giver
GRD	Guardian
GRP	Grandparent
EXF	Extended family
SIB	Sibling
BRO	Brother
SIS	Sister
FND	Friend
OAD	Other adult
EME	Employee
EMR	Employer
ASC	Associate
EMC	Emergency contact
OWN	Owner
TRA	Trainer
MGR	Manager
NON	None
UNK	Unknown
OTH	Other

3.4.5.4 NK1-4 Address (XAD) 00193

```
Components: In Version 2.3 and later, replaces the AD data type.  <street address (ST)> ^ <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 (IS)> ^ <census tract (IS)> ^ <address representation code (ID)> ^
            <address validity range (DR)>

Subcomponents of street address: <street address (ST)> & <street name (ST)> & <dwelling number (ST)>
```

Definition: This field contains the address of the next of kin/associated party. Multiple addresses are allowed for the same person. The mailing address must be sent in the first sequence. If the mailing address is not sent, then the repeat delimiter must be sent in the first sequence.

3.4.5.5 NK1-5 Phone number (XTN) 00194

```
Components: [NNN] [(999)]999-9999 [X99999] [B99999] [C any text] ^ <telecommunication use code (ID)>
            ^ <telecommunication equipment type (ID)> ^ <email address (ST)> ^ <country code (NM)> ^
            <area/city code (NM)> ^ <phone number (NM)> ^ <extension (NM)> ^ <any text (ST)>
```

Definition: This field contains the telephone number of the next of kin/associated party. Multiple phone numbers are allowed for the same person. The primary telephone number must be sent in the first sequence. If the primary telephone number is not sent, then the repeat delimiter must be sent in the first sequence. Refer to *HL7 Table 0201 - Telecommunication use code* and *HL7 Table 0202 - Telecommunication equipment type* for valid values.

3.4.5.6 NK1-6 Business phone number (XTN) 00195

```
Components: [NNN] [(999)]999-9999 [X99999] [B99999] [C any text] ^ <telecommunication use code (ID)>
            ^ <telecommunication equipment type (ID)> ^ <email address (ST)> ^ <country code (NM)> ^
            <area/city code (NM)> ^ <phone number (NM)> ^ <extension (NM)> ^ <any text (ST)>
```

Definition: This field contains the business telephone number of the next of kin/associated party. Multiple phone numbers are allowed for the same person. The primary business telephone number must be sent in the first sequence. If the primary business telephone number is not sent, then the repeat delimiter must be sent in the first sequence. Refer to *HL7 Table 0201 - Telecommunication use code* and *HL7 Table 0202 - Telecommunication equipment type* for valid values.

3.4.5.7 NK1-7 Contact role (CE) 00196

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the specific relationship role (next of kin, employer, emergency contact, etc.). Refer to *User-defined Table 0131 - Contact role* for suggested values. This field specifies the role that the next of kin/associated parties plays with regard to the patient. Examples might include an employer, emergency contact, next of kin, insurance company, state agency, federal agency, etc.

User-defined Table 0131 – Contact role

Value	Description
	No suggested values

3.4.5.8 NK1-8 Start date (DT) 00197

Definition: This field contains the start date of the contact role.

3.4.5.9 NK1-9 End date (DT) 00198

Definition: This field contains the end date of the contact role.

3.4.5.10 NK1-10 Next of kin / associated parties job title (ST) 00199

Definition: This field contains the title of the next of kin/associated parties at their place of employment. However, if the contact role is the patient's employer, this field contains the title of the patient at their place of employment.

3.4.5.11 NK1-11 Next of kin / associated parties job code/class (JCC) 00200

```
Components: <job code (IS)> ^ <employee classification (IS)>
```

Definition: This field contains the employer's job code and the employee classification used for the next of kin/associated parties at their place of employment. However, if the contact role is the patient's employer, this field contains the job code/class of the patient at their place of employment. Refer to *User-defined Table 0327 - Job code* and *User-defined Table 0328 - Employee classification* for suggested values.

Note: The JCC data element appears in other segments as ITEM# 00786 (GT1-50, IN2-47, STF-19). It is assigned a different ITEM# in the NK1 segment because the element name and usage is variable. For example the job code/class can be for the patient's employer, or for an associated party's employment information.

3.4.5.12 NK1-12 Next of kin / associated parties employee number (CX) 00201

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **For backward compatibility**, the ST data type can be sent; however HL7 recommends that the CX data type be used for new implementations. This field contains the number that the employer assigns to the employee that is acting as next of kin/associated parties. However, if the contact role is the patient's employer, this field contains the employee number of the patient at their place of employment. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.5.13 NK1-13 Organization name - NK1 (XON) 00202

```
Components: <organization name (ST)> ^ <organization name type code (ID)> ^ <ID number (ID)> ^ <check
            digit (NM)> ^ < check digit scheme (ID)> ^ <assigning authority (HD)> ^ <identifier type
            code (ID)> ^ <assigning facility (HD)> ^ <name representation code (ID)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the name of the organization that serves as a next of kin/associated party or as the next of kin of the patient. This field may also be used to communicate the name of the organization at which the associated party works. Multiple names for the same organization may be sent. If multiple names are sent, the legal name must be sent in the first sequence. If the legal name is not sent, then a repeat delimiter must be sent in the first sequence.

3.4.5.14 NK1-14 Marital status (CE) 00119

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the next of kin/associated party's marital status. Refer to *User-defined Table 0002 - Marital status* for suggested values.

3.4.5.15 NK1-15 Administrative sex (IS) 00111

Definition: This field contains the next of kin/associated party's sex. Refer to *User-defined Table 0001 - Administrative sex* for suggested values.

3.4.5.16 NK1-16 Date/time of birth (TS) 00110

Definition: This field contains the next of kin/associated party's birth date and time.

3.4.5.17 NK1-17 Living dependency (IS) 00755

Definition: This field identifies specific living conditions (e.g., spouse dependent on patient, walk-up) that are relevant to an evaluation of the patient's healthcare needs. This information can be used for discharge planning. Examples might include Spouse Dependent, Medical Supervision Required, Small Children Dependent. This field repeats because, for example, "spouse dependent" and "medical supervision required" can apply at the same time. Refer to *User-defined Table 0223 - Living dependency* for suggested values.

3.4.5.18 NK1-18 Ambulatory status (IS) 00145

Definition: This field identifies the transient rate of mobility for the next of kin/associated party. Refer to *User-defined Table 0009 - Ambulatory status* for suggested values.

3.4.5.19 NK1-19 Citizenship (CE) 00129

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the code to identify the next of kin/associated party's citizenship. HL7 recommends using ISO 3166 as the suggested values in *User-defined Table 0171 - Citizenship*.

3.4.5.20 NK1-20 Primary language (CE) 00118

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field identifies the next of kin/associated party's primary speaking language. HL7 recommends using ISO 639 as the suggested values in *User-defined Table 0296 - Language*.

3.4.5.21 NK1-21 Living arrangement (IS) 00742

Definition: This field identifies the situation that the associated party lives in at his/her residential address. Refer to *User-defined Table 0220 - Living arrangement* for suggested values. Examples of living arrangements might include Alone, Family, Institution, etc.

3.4.5.22 NK1-22 Publicity code (CE) 00743

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates what level of publicity is allowed (e.g., No Publicity, Family Only) for the next of kin/associated party. Refer to *User-defined Table 0215 - Publicity code* for suggested values.

3.4.5.23 NK1-23 Protection indicator (ID) 00744

Definition: This field identifies that next of kin/associated party's protection that determines, in turn, whether access to information about this person should be kept from users who do not have adequate authority. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.5.24 NK1-24 Student indicator (IS) 00745

Definition: This field identifies whether the next of kin/associated party is currently a student or not, and whether the next of kin/associated party is a full- or a part-time student. This field does not indicate the degree (high school, college) of the student or the field of study. Refer to *User-defined Table 0231 - Student status* for suggested values.

3.4.5.25 NK1-25 Religion (CE) 00120

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the type of religion practiced by the next of kin/associated party. Refer to *User-defined Table 0006 - Religion* for suggested values.

3.4.5.26 NK1-26 Mother's maiden name (XPN) 00109

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field indicates the maiden name of the next of kin/associated party's mother.

3.4.5.27 NK1-27 Nationality (CE) 00739

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field identifies the nation or national group to which the next of kin/associated party belongs. This information may be different than the person's citizenship in countries in which multiple nationalities are recognized (e.g., Spain: Basque, Catalan, etc.). Refer to *User-defined Table 0212 - Nationality* for suggested values.

3.4.5.28 NK1-28 Ethnic group (CE) 00125

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the next of kin/associated party's ethnic group. Refer to *User-defined Table 0189 - Ethnic group* for suggested values. The second triplet of the CE data type for ethnic group (alternate identifier, alternate text, and name of alternate coding system) is reserved for governmentally assigned codes. In the US, a current use is to report ethnicity in line with US federal standards for Hispanic origin.

3.4.5.29 NK1-29 Contact reason (CE) 00747

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field identifies how the contact should be used (e.g., contact employer if patient is unable to work). Refer to *User-defined Table 0222 - Contact reason* for suggested values.

3.4.5.30 NK1-30 Contact person's name (XPN) 00748

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field contains the names of the people to contact, depending on the value of the relationship defined in *NK1-3 - relationship*. This field is typically needed when the NK1 is an organization. The legal name should be sent first in the sequence. Refer to *HL7 Table 0200 - Name type* for valid values.

3.4.5.31 NK1-31 Contact person's telephone number (XTN) 00749

```
Components: [NNN] [(999)]999-9999 [X99999] [B99999] [C any text] ^ <telecommunication use code (ID)>
            ^ <telecommunication equipment type (ID)> ^ <email address (ST)> ^ <country code (NM)> ^
            <area/city code (NM)> ^ <phone number (NM)> ^ <extension (NM)> ^ <any text (ST)>
```

Definition: This field contains the telephone numbers of the contact person depending on the value of the relationship defined in *NK1-3 - relationship*. This field is typically needed when the NK1 is an organization. The primary telephone number must be sent in the first sequence. If the primary telephone number is not sent, then a repeat delimiter must be sent in the first sequence. Refer to *HL7 Table 0201 - Telecommunication use code* and *HL7 Table 0202 - Telecommunication equipment type* for valid values.

3.4.5.32 NK1-32 Contact person's address (XAD) 00750

```
Components: In Version 2.3 and later, replaces the AD data type.  <street address (ST)> ^ <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 (IS)> ^ <census tract (IS)> ^ <address representation code (ID)> ^
            <address validity range (DR)>

Subcomponents of street address: <street address (ST)> & <street name (ST)> & <dwelling number (ST)>
```

Definition: This field contains the addresses of the contact person depending on the value of the relationship defined in *NK1-3 - relationship*. This field is typically used when the NK1 is an organization. When multiple addresses are sent, the mailing address must be sent first in the sequence.

3.4.5.33 NK1-33 Next of kin/associated party's identifiers (CX) 00751

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the identifiers for the next of kin/associated party, for example, Social Security Number, driver's license, etc. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.5.34 NK1-34 Job status (IS) 00752

Definition: This field identifies the next of kin/associated party's job status. Refer to *User-defined Table 0311 - Job status* for suggested values.

User-defined Table 0311 - Job status

Values	Description
P	Permanent
T	Temporary
O	Other
U	Unknown

3.4.5.35 NK1-35 Race (CE) 00113

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field identifies the race of the next of kin/associated party. Refer to *User-defined Table 0005 - Race* for suggested values. The second triplet of the CE data type for race (alternate identifier, alternate text, and name of alternate coding system) is reserved for governmentally assigned codes.

3.4.5.36 NK1-36 Handicap (IS) 00753

Definition: This field contains the code that describes an associated party's disability. Refer to *User-defined Table 0295 - Handicap* for suggested values.

3.4.5.37 NK1-37 Contact person social security number (ST) 00754

Definition: In the US, this field contains the contact person's social security number. This number may also be a RR retirement number. For the Social Security number of the associated party, see *NK1-33 - next of kin/associated party*'s identifiers.

3.4.6 AL1 - patient allergy information segment

The AL1 segment contains patient allergy information of various types. Most of this information will be derived from user-defined tables. Each AL1 segment describes a single patient allergy.

HL7 Attribute Table - AL1 – Patient allergy information

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	250	CE	R			00203	Set ID - AL1
2	250	CE	O		0127	00204	Allergen Type Code
3	250	CE	R			00205	Allergen Code/Mnemonic/Description
4	250	CE	O		0128	00206	Allergy Severity Code
5	15	ST	O	Y		00207	Allergy Reaction Code
6	8	DT	B			00208	Identification Date

3.4.6.0 AL1 field definitions

3.4.6.1 AL1-1 Set ID - AL1 (CE) 00203

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
(ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

3.4.6.2 AL1-2 Allergen type code (CE) 00204

Definition: This field indicates a general allergy category (drug, food, pollen, etc.). Refer to *User-defined Table 0127 - Allergen type* for suggested values.

User-defined Table 0127 - Allergen type

Value	Description
DA	Drug allergy
FA	Food allergy
MA	Miscellaneous allergy
MC	Miscellaneous contraindication
EA	Environmental Allergy
AA	Animal Allergy
PA	Plant Allergy
LA	Pollen Allergy

3.4.6.3 AL1-3 Allergen code/mnemonic/description (CE) 00205

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
(ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field uniquely identifies a particular allergen. This element may conform to some external, standard coding system (that must be identified), or it may conform to local, largely textual or mnemonic descriptions.

3.4.6.4 AL1-4 Allergy severity code (CE) 00206

Definition: This field indicates the general severity of the allergy. Refer to *User-defined Table 0128 - Allergy severity* for suggested values.

User-defined Table 0128 - Allergy severity

Value	Description
SV	Severe
MO	Moderate
MI	Mild
U	Unknown

3.4.6.5 AL1-5 Allergy reaction code (ST) 00207

Definition: This field identifies the specific allergic reaction that was documented. This element may conform to some external, standard coding system, or it may conform to a local, largely textual or mnemonic descriptions (e.g., convulsions, sneeze, rash, etc.).

3.4.6.6 AL1-6 Identification date (DT) 00208

Definition: this field contains the date that the allergy was identified.

3.4.7 IAM - patient adverse reaction information segment - unique identifier

The IAM segment contains person/patient adverse reaction information of various types. Most of this information will be derived from user-defined tables. Each IAM segment describes a single person/patient adverse reaction. This segment is used in lieu of the *AL1 - Patient allergy information segment* to support action code/unique identifier mode update definition of repeating segments as defined in 2.14.4.2. The AL1 segment is used to support Snapshot mode update definition as defined in 2.14.4.1.

HL7 Attribute Table – IAM – Patient adverse reaction information – unique identifier

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			01612	Set ID – IAM
2	250	CE	O		0127	00204	Allergen Type Code
3	250	CE	R			00205	Allergen Code/Mnemonic/Description
4	250	CE	O		0128	00206	Allergy Severity Code
5	15	ST	O	Y		00207	Allergy Reaction Code
6	250	CNE	R		0323	01551	Allergy Action Code
7	80	EI	R			01552	Allergy Unique Identifier
8	60	ST	O			01553	Action Reason
9	250	CE	O		0436	01554	Sensitivity to Causative Agent Code
10	250	CE	O			01555	Allergen Group Code/Mnemonic/Description
11	8	DT	O			01556	Onset Date

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
12	60	ST	O			01557	Onset Date Text
13	8	TS	O			01558	Reported Date/Time
14	250	XPN	O			01559	Reported By
15	250	CE	O		0063	01560	Relationship to Patient Code
16	250	CE	O		0437	01561	Alert Device Code
17	250	CE	O		0438	01562	Allergy Clinical Status Code
18	250	XCN	O			01563	Statused by Person
19	250	XON	O			01564	Statused by Organization
20	8	TS	O			01565	Statused at Date/Time

3.4.7.0 IAM field definitions

3.4.7.1 IAM-1 Set ID - IAM (SI) 01612

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

3.4.7.2 IAM-2 Allergen type code (CE) 00204

Definition: This field indicates a general allergy category (drug, food, pollen, etc.). Refer to User-defined Table 0127 - Allergen type for suggested values.

3.4.7.3 IAM-3 Allergen code/mnemonic/description (CE) 00205

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field uniquely identifies a particular allergen. This element may conform to some external, standard coding system (that must be identified), or it may conform to local, largely textual or mnemonic descriptions.

If a system maintains allergen codes as it's unique identifier for a particular allergy, and two systems have agreed to process the IAM using update mode, then this field can be used as the unique identifier instead of *IAM-8 - Allergy Unique Identifier*. This does not preclude using allergen codes for unique identifiers for snapshot processing.

3.4.7.4 IAM-4 Allergy severity code (CE) 00206

Definition: This field indicates the general severity of the allergy. Refer to *User-defined Table 0128 - Allergy severity code* for suggested values.

3.4.7.5 IAM-5 Allergy reaction code (ST) 00207

Definition: This field identifies the specific allergic reaction that was documented. This element may conform to some external, standard coding system, or it may conform to a local, largely textual or mnemonic descriptions (e.g., convulsions, sneeze, rash, etc.).

3.4.7.6 IAM-6 Allergy action code (CNE) 01551

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)> ^ <coding system
            version ID (ST)> ^ alternate coding system version ID (ST)> ^ <original text (ST)>
```

Definition: This field contains a code defining the status of the record. It allows allergy messages to be sent to delete or update previously sent allergy messages. Refer to *HL7 Table 0323 - Action code* for suggested values.

HL7 Table 0323 - Action code

Value	Description
A	Add/Insert
D	Delete
U	Update

3.4.7.7 IAM-7 Allergy unique identifier (EI) 01552

```
Components:  <entity identifier (ST)> ^ <assigning authority (HD)>

Subcomponents of assigning authority:  <application identifier 1 (IS)> & <universal identifier (UI)>
```

Definition: This field contains a value that uniquely identifies a single allergy for a person. It is unique across all segments and messages for a person. If a system maintains allergen codes as a unique identifier for a particular allergy, then this field should not be used.

This field is conditionally required. The surrogate field to use is *IAM-3 - Allergen Code/Mnemonic/Description*, if that field can uniquely identify the allergy on the receiving system.

3.4.7.8 IAM-8 Action reason (ST) 01553

Definition: This field contains the reason for the action indicated in the *IAM-7 - Allergy action code* field.

3.4.7.9 IAM-9 Sensitivity to Causative Agent code (CE) 01554

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the reason why the patient should not be exposed to a substance. Refer to *User-defined Table 0436 - Sensitivity to causative Agent code* for suggested values.

User-defined Table 0436 - Sensitivity to Causative Agent code

Value	Description
AD	Adverse Reaction (Not otherwise classified)
AL	Allergy
CT	Contraindication
IN	Intolerance

3.4.7.10 IAM-10 Allergen group code/mnemonic/description (CE) 01555

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the code, mnemonic, or description used to uniquely identify an allergen group when both a detailed allergy (IAM-3) and group level (IAM-11) need to be communicated. In cases where systems want to communicate both a specific drug allergy and the group of drugs to which the specific drug belongs (i.e., Bactrim and Sulfa drugs; Ceclor and Penicillins/Cephalosporins) then the specific drug allergy is sent in IAM-3 and the group level is sent in IAM-11. However, if only a group level is being communicated, then it can be sent in IAM-3 as the primary identifier of the allergy.

3.4.7.11 IAM-11 Onset date (DT) 01556

Definition: This field contains the actual date of the first reaction.

3.4.7.12 IAM-12 Onset date text (ST) 01557

Definition: This field contains a text description of the time period of the first reaction when an exact date is not known. (e.g., adolescence, childhood, spring 1990).

3.4.7.13 IAM-13 Reported date/time (TS) 01558

Definition: This field contains the date/time the allergy was reported to a caregiver.

3.4.7.14 IAM-14 Reported by (XPN) 01559

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field contains the name of the person reporting the allergy to a caregiver at the time reported in *IAM-14 - reported date/time*.

3.4.7.15 IAM-15 Relationship to patient code (CE) 01560

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains the personal relationship that the person reporting the allergy has to the patient. It uses the same table as that used by NK1-3. Refer to *User-defined Table 0063 - Relationship* for suggested values. Examples include: brother, sister, mother, father, friend, spouse, etc.

3.4.7.16 IAM-16 Alert device code (CE) 01561

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field describes any type of allergy alert device the patient may be carrying or wearing. Refer to *User-defined Table 0437 - Alert device* for suggested values.

User-defined Table 0437 - Alert device code

Value	Description
B	Bracelet
N	Necklace
W	Wallet Card

3.4.7.17 IAM-17 Allergy clinical status code (CE) 01562

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the verification status for the allergy. Refer to *User-defined Table 0438 - Allergy clinical status* for suggested values.

User-defined Table 0438 - Allergy clinical status

Value	Description
U	Unconfirmed
P	Pending
S	Suspect
C	Confirmed or verified
I	Confirmed but inactive
E	Erroneous
D	Doubt raised

3.4.7.18 IAM-18 Statused by person (XCN) 01563

```
Components: <ID number (ST)> ^ <family name (ST) > & < last_name_prefix (ST)> ^ <given name (ST)> ^
            <middle initial or name (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code(ID)>  ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID )> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            < name representation code(ID)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field identifies the provider who assigned the clinical status to the allergy. (e.g. ...|Smith^John^J^III^DR^MD|...).

3.4.7.19 IAM-19 Statused by organization (XON) 01564

```
Components:  <organization name (ST)> ^ <organization name type code (IS)> ^ <ID number (NM)> ^
             <check digit (NM)> ^ <code identifying the check digit scheme employed (ID)> ^
             <assigning authority  (HD)> ^ <identifier type code (IS)> ^ <assigning facility ID (HD)>
             ^ <name representation code(ID)>
```

```
Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the name of the organization providing the update to the allergy (e.g. General Hospital).

3.4.7.20 IAM-20 Statused at date/time (TS) 01565

Definition: The date and time that this allergy was last statused by the *IAM-19 - Statused by person* in the *IAM-20 - Statused by organization*.

3.4.8 NPU - bed status update segment

The NPU segment allows the updating of census (bed status) data without sending patient-specific data. An example might include changing the status of a bed from "housekeeping" to "unoccupied."

HL7 Attribute Table – NPU – Bed status update

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	80	PL	R			00209	Bed Location
2	1	IS	O		0116	00170	Bed Status

3.4.8.0 NPU field definitions

3.4.8.1 NPU-1 Bed location (PL) 00209

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)>

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field contains the bed location that is a valid bed location.

3.4.8.2 NPU-2 Bed status (IS) 00170

Definition: This field contains the bed status. Refer to *User-defined Table 0116 - Bed status* for suggested values.

3.4.9 MRG - merge patient information segment

The MRG segment provides receiving applications with information necessary to initiate the merging of patient data as well as groups of records. It is intended that this segment be used throughout the Standard to allow the merging of registration, accounting, and clinical records within specific applications.

The assigning authority, the fourth component of the patient identifiers, is an HD data type that is uniquely associated with the assigning authority that originally assigned the number. A given institution, or group of intercommunicating institutions, should establish a list of assigning authorities that may be potential assignors of patient identification (and other important identification) numbers. The list will be

one of the institution's master dictionary lists. Since third parties (other than the assignors of patient identification numbers) may send or receive HL7 messages containing patient identification numbers, the assigning authority in the patient identification numbers may not be the same as those of the sending and receiving systems identified in the MSH. The assigning authority must be unique across applications at a given site. This field is required in HL7 implementations that have more than a single Patient Administration application assigning such numbers.

HL7 Attribute Table – MRG – Merge patient information

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	250	CX	R	Y		00211	Prior Patient Identifier List
2	250	CX	B	Y		00212	Prior Alternate Patient ID
3	250	CX	O			00213	Prior Patient Account Number
4	250	CX	B			00214	Prior Patient ID
5	250	CX	O			01279	Prior Visit Number
6	250	CX	O			01280	Prior Alternate Visit ID
7	250	XPN	O	Y		01281	Prior Patient Name

3.4.9.0 MRG field definitions

3.4.9.1 MRG-1 Prior patient identifier list (CX) 00211

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the prior patient identifier list. This field contains a list of potential "old" numbers to match. Only one old number can be merged with one new number in a transaction. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.9.2 MRG-2 Prior alternate patient ID (CX) 00212

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field has been retained for backward compatibility only.** Use *MRG-1 - Prior patient identifier list* for all patient identifiers. This field contains the prior alternate patient identifier. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.9.3 MRG-3 Prior patient account number (CX) 00213

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the prior patient account number. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.9.4 MRG-4 Prior patient ID (CX) 00214

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field has been retained for backward compatibility only.** Use *MRG-1 - prior patient identifier list* for all patient identifiers. This field contains the prior patient identifier. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.9.5 MRG-5 Prior visit number (CX) 01279

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the prior visit number. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.9.6 MRG-6 Prior alternate visit ID (CX) 01280

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the prior alternate visit number. Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.9.7 MRG-7 Prior patient name (XPN) 01281

```
Components: In Version 2.3, replaces the PN data type.  <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)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID) > ^
            <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^
            <name assembly order (ID)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>
```

Definition: This field contains the prior name of the patient. This field is not used to change a patient name. Refer to *HL7 Table 0200 - Name type* for valid values.

3.4.10 PD1 - patient additional demographic segment

The patient additional demographic segment contains demographic information that is likely to change about the patient.

HL7 Attribute Table - PD1 - patient additional demographic

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	2	IS	O	Y	0223	00755	Living Dependency
2	2	IS	O		0220	00742	Living Arrangement
3	250	XON	O	Y		00756	Patient Primary Facility
4	250	XCN	B	Y		00757	Patient Primary Care Provider Name & ID No.
5	2	IS	O		0231	00745	Student Indicator
6	2	IS	O		0295	00753	Handicap
7	2	IS	O		0315	00759	Living Will Code
8	2	IS	O		0316	00760	Organ Donor Code
9	1	ID	O		0136	00761	Separate Bill
10	250	CX	O	Y		00762	Duplicate Patient
11	250	CE	O		0215	00743	Publicity Code
12	1	ID	O		0136	00744	Protection Indicator
13	8	DT	O			01566	Protection Indicator Effective Date
14	250	XON	O	Y		01567	Place of Worship
15	250	CE	O	Y	0435	01548	Advance Directive Code
16	1	IS	O		0441	01569	Immunization Registry Status
17	8	DT	O			01570	Immunization Registry Status Effective Date
18	8	DT	O			01571	Publicity Code Effective Date
19	5	IS	O		0140	01572	Military Branch
20	2	IS	O		0141	00486	Military Rank/Grade
21	3	IS	O		0142	00487	Military Status

3.4.10.0 PD1 field definitions

3.4.10.1 PD1-1 Living dependency (IS) 00755

Definition: This field identifies specific living conditions (e.g., spouse dependent on patient, walk-up) that are relevant to an evaluation of the patient's healthcare needs. This information can be used for discharge planning. This field repeats because, for example, "spouse dependent" and "medical supervision required" can apply at the same time. Refer to *User-defined Table 0223 - Living dependency* for suggested values.

User-defined Table 0223 - Living dependency

Value	Description
S	Spouse Dependent
M	Medical Supervision Required
C	Small Children Dependent
O	Other
U	Unknown

3.4.10.2 PD1-2 Living arrangement (IS) 00742

Definition: This field identifies the situation in which the patient lives at his residential address. Examples might include Alone, Family, Relatives, Institution, etc. Refer to *User-defined Table 0220 - Living arrangement* for suggested values.

3.4.10.3 PD1-3 Patient primary facility (XON) 00756

```
Components: <organization name (ST)> ^ <organization name type code (ID)> ^ <ID number (ID)> ^ <check
            digit (NM)> ^ < check digit scheme (ID)> ^ <assigning authority (HD)> ^ <identifier type
            code (ID)> ^ <assigning facility (HD)> ^ <name representation code (ID)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field contains the name and identifier that specifies the "primary care" healthcare facility selected by the patient at the time of enrolment in an HMO Insurance Plan. Multiple names and identifiers are allowed for the same facility. The legal name of the healthcare facility must be sent in the first sequence. If the legal name of the facility is not sent, then the repeat delimiter must be sent in the first sequence. Refer to *User-defined Table 0204 - Organizational name type* for suggested values.

3.4.10.4 PD1-4 Patient primary care provider name & ID No. (XCN) 00757

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)> ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE) ^ <name validity range (DR)>
```

```
Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: **This field is retained for backward compatibility only.** The ROL segment is now used to convey more complete information about the primary care provider. This field contained the provider name and ID of the primary care provider. Multiple names are allowed for the same person. The legal name must be sent in the first sequence. If the legal name is not sent, then the repeat delimiter must be sent in the first sequence.

3.4.10.5 PD1-5 Student indicator (IS) 00745

Definition: This field indicates if the patient is currently a student or not, and whether the patient is a full-time or a part-time student. This field does not indicate the student's degree level (high school, college, elementary) or the student's field of study (accounting, engineering, etc.). Refer to *User-defined Table 0231 - Student status* for suggested values.

3.4.10.6 PD1-6 Handicap (IS) 00753

Definition: This field indicates the nature of the patient's permanent handicapped condition (e.g., deaf, blind). A handicapped condition is defined as a physical or mental disability that is permanent. Transient handicapped conditions should be sent in the ambulatory status. Refer to *User-defined Table 0295 - Handicap* for suggested values.

3.4.10.7 PD1-7 Living will code (IS) 00759

Definition: This field indicates whether or not the patient has a living will and, if so, whether a copy of the living will is on file at the healthcare facility. If the patient does not have a living will, the value of this field indicates whether the patient was provided information on living wills. Refer to *User-defined Table 0315 - Living will code* for suggested values. See also *PV2-43 - Living will code*.

3.4.10.8 PD1-8 Organ donor code (IS) 00760

Definition: This field indicates whether the patient wants to donate his/her organs and whether an organ donor card or similar documentation is on file with the healthcare organization. Refer to *User-defined Table 0316 - Organ donor* for suggested values. See also *PV2-44 - Organ donor*.

3.4.10.9 PD1-9 Separate bill (ID) 00761

Definition: This field specifies that charges for this patient are to be billed separately from other patient bills with the same guarantor. (This bill is now a patient bill rather than a guarantor bill.) Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

3.4.10.10 PD1-10 Duplicate patient (CX) 00762

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (ID)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field indicates that a patient is the same as, or a duplicate of, another patient found on the sending system. The intent is to be informational only and no action is required by the receiver. Include the patient identifier if the sender knows an identifier for the patient. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.10.11 PD1-11 Publicity code (CE) 00743

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field contains a user-defined code indicating what level of publicity is allowed (e.g., No Publicity, Family Only) for the patient. Refer to *User-defined Table 0215 - Publicity code* for suggested values. Refer to *PV2-21 - Visit publicity code* for visit level code.

3.4.10.12 PD1-12 Protection indicator (ID) 00744

Definition: This field identifies the patient's protection that determines, in turn, whether access to information about this person should be kept from users who do not have adequate authority for the patient. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values. Refer to *PV2-22 - Visit protection indicator* for visit level code.

3.4.10.13 PD1-13 Protection indicator effective date (DT) 01566

Definition: This field indicates the effective date for *PD1-12 - Protection Indicator*.

3.4.10.14 PD1-14 Place of worship (XON) 01567

```
Components:  <organization name (ST)> ^ <organization name type code (IS)> ^ <ID number (NM)> ^
             <check digit (NM)> ^ <code identifying the check digit scheme employed (ID)> ^
             <assigning authority  (HD)> ^ <identifier type code (IS)> ^ <assigning facility ID (HD)>
             ^ <name representation code(ID)>

Subcomponents of assigning authority:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
             (ID)>

Subcomponents of assigning facility:  <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
             (ID)>
```

Definition: The patient's place of worship. For example, the patient attends the First Baptist Church of Atlanta.

3.4.10.15 PD1-15 Advance directive code (CE) 01548

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field indicates the patient's instructions to the healthcare facility. Refer to *User-defined Table 0435 - Advance directive code* for suggested values. See also *PV2-45 - Advance directive code*.

3.4.10.16 PD1-16 Immunization registry status (IS) 01569

Definition: This field identifies the registry status of the patient. The field may be used to indicate the changed status of a once active patient in a registry, such as an immunization registry. Refer to *User-defined Table 0441 - Immunization registry status* for suggested values.

User-defined Table 0441 - Immunization registry status

Value	Description
A	Active
I	Inactive
L	Inactive - Lost to follow-up (cancel contract)
M	Inactive - Moved or gone elsewhere (cancel contract)
P	Inactive - Permanently inactive (Do not reactivate or add new entries to the record)
O	Other
U	Unknown

3.4.10.17 PD1-17 Immunization registry status effective date (DT) 01570

Definition: This field indicates the effective date for the registry status reported in *PD1-16 - Immunization registry status*.

3.4.10.18 PD1-18 Publicity code effective date (DT) 01571

Definition: This is the effective date for *PD1-11 - Publicity Code*.

3.4.10.19 PD1-19 Military branch (IS) 01572

Definition: This field is defined by HCFA or other regulatory agencies. Refer to *User-defined Table 0140 - Military service* for suggested values.

User-defined Table 0140 - Military service

Value	Description
USA	US Army
USN	US Navy
USAF	US Air Force
USMC	US Marine Corps

Value	Description
USCG	US Coast Guard
USPHS	US Public Health Service
NOAA	National Oceanic and Atmospheric Administration
NATO	North Atlantic Treaty Organization
AUSA	Australian Army
AUSN	Australian Navy
AUSAF	Australian Air Force

3.4.10.20 PD1-20 Military rank/grade (IS) 00486

Definition: This user-defined field identifies the military rank/grade of the patient. Refer to *User-defined Table 0141 - Military rank/grade* for suggested values.

User-defined Table 0141 - Military rank/grade

Value	Description
E1... E9	Enlisted
O1 ... O9	Officers
W1 ... W4	Warrant Officers

3.4.10.21 PD1-21 Military status (IS) 00487

Definition: This field is defined by HCFA or other regulatory agencies. Refer to *User-defined Table 0142 - Military status* for suggested values.

User-defined Table 0142 - Military status

Value	Description
ACT	Active duty
RET	Retired
DEC	Deceased

3.4.11 DB1 - disability segment

The disability segment contains information related to the disability of a person. This segment was created instead of adding disability attributes to each segment that contains a person (to which disability may apply). This is an optional segment that can be used to send disability information about a person already defined by the Patient Administration Chapter. The disabled person code and identifier allow for the association of the disability information to the person.

HL7 Attribute Table - DB1 - Disability

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	R			01283	Set ID - DB1
2	2	IS	O		0334	01284	Disabled Person Code

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
3	250	CX	O	Y		01285	Disabled Person Identifier
4	1	ID	O		0136	01286	Disability Indicator
5	8	DT	O			01287	Disability Start Date
6	8	DT	O			01288	Disability End Date
7	8	DT	O			01289	Disability Return to Work Date
8	8	DT	O			01290	Disability Unable to Work Date

3.4.11.0 DB1 field definitions

3.4.11.1 DB1-1 Set ID - DB1 (SI) 01283

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

3.4.11.2 DB1-2 Disabled person code (IS) 01284

Definition: The value of this field indicates to which person the disability information relates in the message. For example, if the value is PT, the disability information relates to the patient. Refer to *User-defined Table 0334 - Disabled person* for suggested values.

User-defined Table 0334 - Disabled person

Value	Description
PT	Patient
GT	Guarantor
IN	Insured
AP	Associated party

3.4.11.3 DB1-3 Disabled person identifier (CX) 01285

```
Components: <ID (ST)> ^ <check digit (ST)> ^ <code identifying the check digit scheme employed (ID)>
            ^ < assigning authority (HD)> ^ <identifier type code (IS)> ^ < assigning facility (HD)
            ^ <effective date (DT)> ^ <expiration date (DT)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This is the identifier (or identifiers) for the person whose disability information is sent on the segment. The assigning authority and identifier type code are strongly recommended for all CX data types.

3.4.11.4 DB1-4 Disability indicator (ID) 01286

Definition: This field indicates if the person's visit is a disability visit. Refer to *HL7 Table 0136 - Yes/No indicator* for valid values.

Y a disability visit

N not a disability visit

3.4.11.5 DB1-5 Disability start date (DT) 01287

Definition: This field specifies the date the person became disabled.

3.4.11.6 DB1-6 Disability end date (DT) 01288

Definition: This field specifies the ending date of the person's disability.

3.4.11.7 DB1-7 Disability return to work date (DT) 01289

Definition: This field indicates the authorized date on which the patient can return to work for a specified disability case.

3.4.11.8 DB1-8 Disability unable to work date (DT) 01290

Definition: This field specifies the first date in the date span that the patient is unable to work due to disability.

3.4.12 PDA - patient death and autopsy segment

This segment carries information on a patient's death and possible autopsy.

HL7 Attribute Table – PDA – Patient death and autopsy

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	250	CE	O	Y		01574	Death Cause Code
2	80	PL	O			01575	Death Location
3	1	ID	O		0136	01576	Death Certified Indicator
4	26	TS	O			01577	Death Certificate Signed Date/Time
5	250	XCN	O			01578	Death Certified By
6	1	ID	O		0136	01579	Autopsy Indicator
7	53	DR	O			01580	Autopsy Start and End Date/Time
8	250	XCN	O			01581	Autopsy Performed By
9	1	ID	O		0136	01582	Coroner Indicator

3.4.12.0 PDA field definitions

3.4.12.1 PDA-1 Death cause code (CE) 01574

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier
            (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>
```

Definition: This field is valued with the reason of the death.

3.4.12.2 PDA-2 Death location (PL) 01575

```
Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status
            (IS)> ^ <person location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <location
            description (ST)

Subcomponents of facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>
```

Definition: This field is valued with the place the death occurred.

3.4.12.3 PDA-3 Death certified indicator (ID) 01576

Definition: This field indicates whether a death was officially certified or not. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

Y death has been certified

N death has not been certified

3.4.12.4 PDA-4 Death certificate signed date/time (TS) 01577

Definition: This field is valued with the date and time the death certificate was signed.

3.4.12.5 PDA-5 Death certified by (XCN) 01578

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)> ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE) ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field is valued with the person who signed the death certificate.

3.4.12.6 PDA-6 Autopsy indicator (ID) 01579

Definition: This field indicates whether an autopsy was performed. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

Y an autopsy was performed

N an autopsy was not performed

3.4.12.7 PDA-7 Autopsy start and end date/time (DR) 01580

Definition: If an autopsy is performed, this field is valued with the date and time the autopsy was begun and completed

3.4.12.8 PDA-8 Autopsy performed by (XCN) 01581

```
Components: <ID number (ST)> ^ <family name (ST)> ^ <given name (ST)> ^ <second and further given
            names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR)
            (ST)> ^ <degree (e.g., MD) (IS)> ^ <source table (IS)> ^ <assigning authority (HD)> ^
            <name type code (ID)> ^ <identifier check digit (ST)> ^ <code identifying the check
            digit scheme employed (ID)> ^ <identifier type code (IS)> ^ <assigning facility (HD)> ^
            <name representation code (ID)> ^ <name context (CE) ^ <name validity range (DR)>

Subcomponents of family name: <family name (ST)> & <own family name prefix (ST)> & <own family name
            (ST)> & <family name prefix from partner/spouse (ST)> & <family name from partner/spouse
            (ST)>

Subcomponents of assigning authority: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>

Subcomponents of assigning facility: <namespace ID (IS)> & <universal ID (ST)> & <universal ID type
            (ID)>
```

Definition: This field is valued with the authority who performed the autopsy.

3.4.12.9 PDA-9 Coroner Indicator (ID) 01582

Definition: This flag indicates whether the case/death has been assigned to the coroner/medical examiner for investigative purposed. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.

Y Has been assigned to the coroner.

N Has not been assigned to the coroner.

3.5 EXAMPLE TRANSACTIONS

3.5.1 Admit/visit notification - event A01 (admitted patient)

```
MSH|^~\&|ADT1|MCM|LABADT|MCM|198808181126|SECURITY|ADT^A01|MSG00001|P|2.4|<cr>

EVN|A01|198808181123||<cr>

PID|1||PATID1234^5^M11^ADT1^MR^MCM~123456789^^^USSSA^SS||JONES^WILLIAM^A^III||1961
    0615|M||C|1200 N ELM STREET^^GREENSBORO^NC^27401-1020|GL|(91-
    9)379-1212|(919)271-3434||S||

   PATID12345001^2^M10^ADT1^AN^A|123456789|987654^NC|<cr>

NK1|1|JONES^BARBARA^K|WI^WIFE|||NK^NEXT OF KIN<cr>
```

PV1|1|I|2000^2012^01||||004777^LEBAUER^SIDNEY^J.|||SUR||||ADM|A0|<cr>Patient William A. Jones, III was admitted on July 18, 1988 at 11:23 a.m. by doctor Sidney J. Lebauer (#004777) for surgery (SUR). He has been assigned to room 2012, bed 01 on nursing unit 2000.

The message was sent from system ADT1 at the MCM site to system LABADT, also at the MCM site, on the same date as the admission took place, but three minutes after the admit.

3.5.2 Pre-admit notification - event A05 (nonadmitted patient)

```
MSH|^~\&|REGADT|MCM|IFENG||199901061000||ADT^A05|000001|P|2.4|||<cr>

EVN|A05|199901061000|199901101400|01||199901061000<cr>
```

```
PID|1||191919^^^GENHOS^MR^MCM~371-66-
    9256^^^USSSA^SS|253763|MASSIE^JAMES^A||19560129|M|||171
    ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925^^^GENHOS^AN|371-66-9256||<cr>

NK1|1|MASSIE^ELLEN|SPOUSE|171 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)545-1234~(900)545-1200|EC^EMERGENCY CONTACT<cr>

NK1|2|MASSIE^MARYLOU|MOTHER|300 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)545-1234~(900)545-1200|EC^EMERGENCY CONTACT<cr>

NK1|3<cr>

NK1|4|||123 INDUSTRY WAY^^ISHPEMING^MI^49849^""^||(900)545-
    1200|EM^EMPLOYER|19940605||PROGRAMMER|||ACME SOFTWARE COMPANY<cr>

PV1||O|||||0148^ADDISON,JAMES|0148^ADDISON,JAMES|0148^ADDISON,JAMES|AMB|||||||0148
    ^ADDISON,JAMES|S|1400|A|||||||||||||||||GENHOS||||||<cr>

PV2|||||||199901101400|||||||||||||||||||||||||199901101400<cr>

OBX||ST|1010.1^BODY WEIGHT||62|kg|||||F<cr>

OBX||ST|1010.1^HEIGHT||190|cm|||||F<cr>

DG1|1|19||BIOPSY||00<cr>

GT1|1||MASSIE^JAMES^""^""^""^""^||171 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)485-5344||||SE^SELF|371-66-925||||   |171
    ZOBERLEIN^^ISHPEMING^MI^49849^""|(900)485-
    5344|||||||||||||||||||||||||||||||MOOSES AUTO CLINIC<cr>

IN1|1|0|BC1|BLUE CROSS|171 ZOBERLEIN^^ISHPEMING^M1^49849^^||(900)485-
    5344|90||||||50 OK<cr>

IN1|2|""|""<cr>
```

Patient James A. Massie was pre-admitted on January 6th, 1999 for ambulatory surgery which is scheduled for January 10, 1999 at 1400. As part of the pre-admission process, he specified two emergency contacts as well as employer, insurance, and guarantor information. He also was measured and weighed. Note that the REGADT system supports the entry of four NK1 type records: first, second, and third emergency contacts and employer information. A third emergency contact was not provided for James A. Massie. However, an NK1 record must be sent to support "snapshot" mode of update. The REGADT system also supports entry of two insurance plans, one guarantor, and one diagnosis.

3.5.3 Register a patient - event A04 (nonadmitted patient)

```
MSH|^~\&|REGADT|MCM|IFENG||199112311501||ADT^A04|000001|P|2.4|||<cr>

EVN|A04|199901101500|199901101400|01||199901101410<cr>

PID|||191919^^^GENHOS^MR~371-66-
    9256^^^USSSA^SS|253763|MASSIE^JAMES^A||19560129|M|||171
    ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925^^^GENHOS^AN|371-66-9256||<cr>

NK1|1|MASSIE^ELLEN|SPOUSE|171 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)545-1234~(900)545-1200|EC1^FIRST EMERGENCY CONTACT<cr>

NK1|2|MASSIE^MARYLOU|MOTHER|300 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)545-1234~(900)545-1200|EC2^SECOND EMERGENCY CONTACT<cr>

NK1|3<cr>

NK1|4|||123 INDUSTRY WAY^^ISHPEMING^MI^49849^""^||(900)545-
    1200|EM^EMPLOYER|19940605||PROGRAMMER|||ACME SOFTWARE COMPANY<cr>

PV1||O|O/R||||0148^ADDISON,JAMES|0148^ADDISON,JAMES|0148^ADDISON,JAMES|AMB|||||||0
    148^ADDISON,JAMES|S|1400|A|||||||||||||||||GENHOS|||||199501101410|<cr>

PV2|||||||199901101400|||||||||||||||||||||||||199901101400<cr>

OBX||ST|1010.1^BODY WEIGHT||62|kg|||||F<cr>

OBX||ST|1010.1^HEIGHT||190|cm|||||F<cr>

DG1|1|19||BIOPSY||00|<cr>
```

```
GT1|1||MASSIE^JAMES^""^""^""^""^||171 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)485-5344||||SE^SELF|371-66-925||||MOOSES AUTO       CLINIC|171
    ZOBERLEIN^^ISHPEMING^MI^49849^""|(900)485-5344|<cr>

IN1|0|0|BC1|BLUE CROSS|171 ZOBERLEIN^^ISHPEMING^M149849^""^||(900)485-
    5344|90||||||50 OK|<cr>

IN1|2|""|""<cr>
```

Patient James A. Massie arrived at location O/R for surgery on January 10th, 1999 at 1410 for ambulatory surgery which was scheduled for January 10, 1999 at 1400. The visit event was recorded into the MCM system on January 10, 1999 at 1500. It was sent to the interface engine (IFENG) at 1501.

3.5.4 Change an outpatient to an inpatient - event A06

```
MSH|^~\&|REGADT|MCM|IFENG||199901110025||ADT^A06|000001|P|2.4|||<cr>

EVN|A06|19990110025||01||199901102300<cr>

PID|||191919^^^GENHOS^MR^FAC1~371-66-
          9256^^^USSSA^SS|253763|MASSIE^JAMES^A||19560129|M|||171
    ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925^^^GENHOS^AN|371-66-9256||<cr>

NK1|1|MASSIE^ELLEN|SPOUSE|171 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)545-1234~(900)545-1200|EC1^FIRST EMERGENCY CONTACT<cr>

NK1|2|MASSIE^MARYLOU|MOTHER|300 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)545-1234~(900)545-1200|EC2^SECOND EMERGENCY CONTACT<cr>

NK1|3<cr>

NK1|4|||123 INDUSTRY WAY^^ISHPEMING^MI^49849^""^||(900)545-
    1200|EM^EMPLOYER|19940605||PROGRAMMER|||ACME SOFTWARE COMPANY<cr>

PV1||I|6N^1234^A^GENHOS||||0100^ANDERSON,CARL|0148^ADDISON,JAMES||SUR||||||0148^A
    NDERSON,CARL|S|1400|A|||||||||||||||||GENHOS|||||199501102300|<cr>

OBX||ST|1010.1^BODY WEIGHT||62|kg|||||F<cr>

OBX||ST|1010.1^HEIGHT||190|cm|||||F<cr>

DG1|1|19||BIOPSY||00<cr>

GT1|1||MASSIE^JAMES^""^""^""^""^||171 ZOBERLEIN^^ISHPEMING^MI^49849^""^|(900)485-
    5344|(900)485-5344||||SE^SELF|371-66-925||||MOOSES AUTO       CLINIC|171
    ZOBERLEIN^^ISHPEMING^MI^49849^""|(900)485-5344<cr>

IN1|0|0|BC1|BLUE CROSS|171 ZOBERLEIN^^ISHPEMING^M149849^""^||(900)485-
    5344|90||||||50 OK<cr>

IN1|2|""|""<cr>
```

Patient James A. Massie was later converted to an inpatient on January 10th, 1999 at 2300 to recover from the operation. The change from outpatient to inpatient was recorded on the MCM system on January 11, 1999 at 0020. He was assigned to room 1234, bed A on unit 6N. When Patient James A. Massie was converted to an inpatient on January 10th, 1999 at 2300, his hospital service changed to SUR. His attending doctor and admitting doctors changed to Dr. Carl Anderson. As a result of the conversion, his account number changed from 10199923 to 10199925

3.5.5 Transfer patient - event A02 (first example)

```
MSH|^~\&|REGADT|MCM|IFENG||199901110500||ADT^A02|000001|P|2.4|||<cr>

EVN|A02|199901110520||01||199901110500<cr>

PID|||191919^^^GENHOS^MR~371-66-
    9256^^^USSSA^SS|253763|MASSIE^JAMES^A||19560129|M|||171
    ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925^^^GENHOS^AN|371-66-9256|||||||<cr>

PV1||I|SICU^0001^01^GENHOS|||6N^1234^A^GENHOS|0200^JONES, GEORGE|0148^ADDISON,
    JAMES||ICU||||||0148^ANDERSON,CARL|S|1400|A|||||||||||||||||GENHOS|||||1995
    01102300|<cr>
```

On January 11th, 1999 at 0500, James A. Massie condition became worse due to a complication. As a result, he was transferred to the surgical ICU (SICU). The transfer was recorded on the MCM system on January 11, 1999 at 0520. He was assigned to room 0001, bed 1. When Patient James A. Massie was transferred to SICU, his hospital service changed to ICU and his attending doctor changed to Dr. George Jones.

3.5.6 Cancel transfer - event A12

```
MSH|^~\&|REGADT|MCM|IFENG||199901110600||ADT^A12|000001|P|2.4|||<cr>

EVN|A02|199901110600||01||199901110500<cr>

PID|||191919^^^GENHOS|253763|MASSIE^JAMES^A||19560129|M|||171
    ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925|371-66-9256||

PV1||I|6N^1234^A^GENHOS|||SICU^0001^1^GENHOS|0100^ANDERSON,CARL|0148^ADDISON,JAMES
    ||SUR|||||||0148^ANDERSON,CARL|S|1400|A|||||||||||||||||GENHOS|||||199501102
    300|<cr>
```

It was determined that James A. Massie was transferred to the wrong room in the SICU. Therefore, the transfer was canceled.

3.5.7 Transfer patient - event A02 (second example)

```
MSH|^~\&|REGADT|MCM|IFENG||199901110603||ADT^A02|000001|P|2.4|||<cr>

EVN|A02|199901110603||01||199901110500<cr>

PID|||191919^^^GENHOS^MR^FAC1~371-
    6609256^^^USSSA^SS|253763|MASSIE^JAMES^A||19560129|M|||171
    ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925^^^GENHOS^AN|371-66-9256||

PV1||I|SICU^0001^02^GENHOS|||6N^1234^A^GENHOS|0100^ANDERSON,CARL|0148^ADDISON,JAME
    S||SUR|||||||0148^ANDERSON,CARL|S|1400|A|||||||||||||||||GENHOS|||||19950110
    2300|<cr>
```

The transfer is then repeated, this time to the correct bed: bed 2 of room 0001 in the SICU.

3.5.8 Discharge patient - event A03

```
MSH|^~\&|REGADT|MCM|IFENG||199901121005||ADT^A03|000001|P|2.4|||<cr>

EVN|A03|199901121005||01||199901121000<cr>

PID|||191919^^^GENHOS^MR~371-66-
    9256^^^USSSA^SS|253763|MASSIE^JAMES^A||19560129|M|||171
          ZOBERLEIN^^ISHPEMING^MI^49849^""^||(900)485-5344|(900)485-
    5344||S|C|10199925^^^GENHOS^AN|371-66-9256|||||||||<cr>

PV1||I|6N||||0100^ANDERSON,CARL|0148^ADDISON,JAMES||SUR|||||||0148^ANDERSON,CARL|S
    |1400|A|||||||||||||||SNF|ISH^ISHPEMING NURSING
    HOME||GENHOS|||||199901102300|199991121005<cr>
```

When James A. Massie's condition became more stable, he returned to 6N for another day (transfer not shown) and then was discharged to the Ishpeming Nursing Home.

3.5.9 Update adverse reaction info - unique identifier is provided - event A60 (where unique identifier is provided)

```
MSH|^&~\|ADT|CA.SCA|IE|199901310815-0800||ADT^A60|6757498734|P|2.4

EVN||199901310815-0800

PID|||987654321098||Smith^Alice||19530406|F
```

```
PV1||O

PV2|||||||199901310800-0800

IAM|1|DA|^Penicillin|SV^^HL70128|^rash on back|A^^HL70323|12345||AL^^HL70436|
    19990127||199901311015|Smith^John|^Husband||C^^HL70438|MLEE^Lee^Mark^^^MD||
```

3.5.10 Update adverse reaction info - allergen code provides unique identifier - event A60 (where the allergen code provides unique identifier)

```
MSH|^&~\|ADT|CA.SCA|IE|199901310815-0800||ADT^A60|6757498734|P|2.4

EVN||199901310815-0800

PID|||987654321098||Smith^Alice||19530406|F

PV1||O

PV2|||||||199901310800-0800

IAM|1|DA|PHM1345^Penicillin^local|SV^^HL70128|^rash on
    back|A^^HL70323|||AL^^HL70436| 01^Penicillins,Cephalosporins^NDDF
    DAC|19990127||199901311015|
    Smith^John|^Husband||C^^HL70438|MLEE^Lee^Mark^^^MD||
```

3.6 IMPLEMENTATION NOTES

3.6.1 Swapping a patient

Some systems may handle this as a single function. Others may require a multiple process in which:

a) patient A is assigned a temporary location

b) patient B is assigned patient A's location

c) patient A is assigned patient B's prior location

This three-step scenario requires three separate transfer messages instead of a single swap message. If all beds in a hospital are occupied, it may be necessary to use a dummy location.

3.6.2 Merging patient/person information

3.6.2.1 Definitions: Merge, move, and change identifier events

The term "identifier" is used throughout this section. An identifier is associated with a set (or sets) of data. For example, an identifier (*PID-3 - Patient identifier list*) may be a medical record number which has associated with it account numbers (*PID-18 - Patient account number*). Account number (*PID-18 - Patient account number*) is a type of identifier which may have associated with it visit numbers (*PV1-19 - Visit number*).

This section addresses the events that occur usually for the purposes of correcting errors in person, patient, account, or visit identifiers. The types of errors that occur typically fall into three categories:

1) **Duplicate identifier created**
   The registrar fails to identify an existing person, patient, account, or visit and creates a new, "duplicate" record instead of using the existing record. A "merge" operation is used to fix this type of error.

2) **Incorrect identifier selected**
   The registrar mistakenly selects the wrong person, patient, or account and creates or attaches a patient,

account, or visit underneath the incorrect person, patient, or account. A "move" operation is used to fix this type of error.

3) **Incorrect identifier assigned**
The registrar accidentally types in the wrong new identifier for a person, patient, account, or visit. This type of mistake usually occurs when identifiers are manually assigned (not system generated). A "change identifier" operation is used to fix this type of error.

3.6.2.1.1 Hierarchy of identifiers

This section was written from the perspective of one controlling MPI and does not adequately cover the implementation of peer MPIs or multiple enterprise identifiers. To avoid future problems implementors should carefully examine the inferences of multiple identifiers.

Enterprise level MPI systems may collaborate forming either peer-to-peer or hierarchical relationships. When this occurs, multiple enterprise level identifiers may be required in the context of a single HL7 message. An example of a peer-to-peer MPI relationship might be represented by a data sharing application between the US Department of Veterans Affairs and the US Department of Defense, where each have their own MPI. An example of a hierarchical MPI relationship might be required by the need for local, city, and state organizations to collaborate, where each have an MPI.

These events assume a hierarchy of identifiers exists between person, patient, account, and visit. The hierarchy is as follows:

Level 3 - Patient (identified by *PID-3 - patient identifier list*)

Level 2 - Account (identified by *PID-18 - patient account number*)

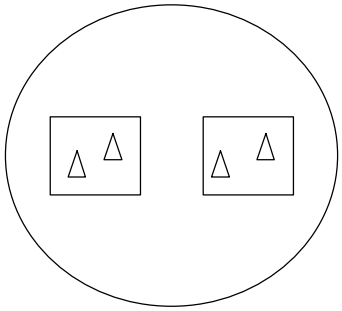
Level 1 - Visit (identified by *PV1-19 - visit number*)

The visit-level identifier *PV1-19 - visit number* is the lowest level identifier and is considered subordinate to the account-level identifier *PID-18 - patient account number*.

This means that visit identifiers are defined within the context of an account identifier, and implies that visit identifiers are unique within account identifiers. Similarly, account identifiers are subordinate to, and unique within, patient identifiers; patient identifiers are subordinate to, and unique within, person identifiers.

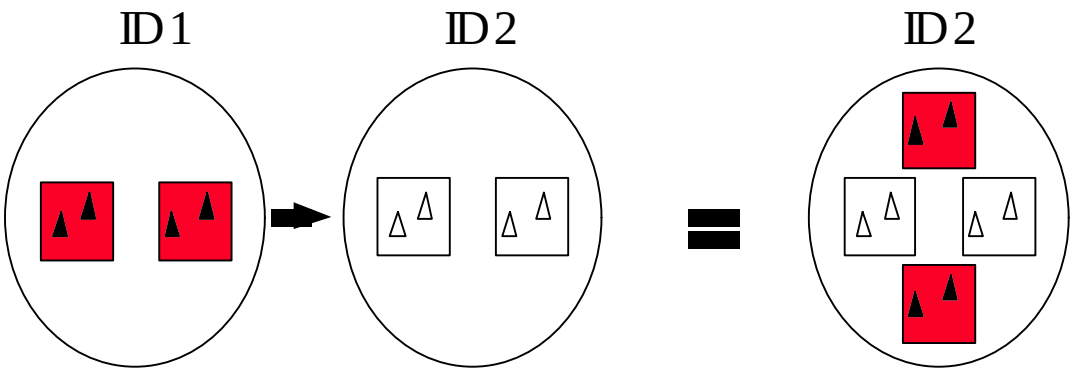
Conversely, the person-level identifier *PID-2 - patient ID* is the highest level identifier and is considered superior to the patient-level identifiers, which are superior to the account-level identifier, which is superior to any visit-level identifiers.

Note that these events will also apply to environments in which one or more of these levels do not occur. For example, some environments may not have a person (or MPI) level, or they may not have a visit level, or they may have a visit level without an account level. The hierarchy concept is depicted graphically below. For example, Bob Kelly might be assigned an MPI number at the ABC hospital network (depicted by the circle). He may have different medical records at two hospitals within the network (depicted by the squares). Associated with each of these medical records are two accounts (depicted by the triangles). Note that the environment illustrated does not support the "visit" level, although in other implementations it might.



3.6.2.1.2 Merge

A merge event signals that two distinct records have been combined together into a single record with a single set of identifiers and data surviving at the level of the merge. All records at a level subordinate to the merged identifier are combined under the surviving record. For example, an A40 (merge patient - patient identifier list) event would be sent to signal that two person records (identified by *MRG-4 - prior patient ID* and by *PID-2 - patient ID*) have been merged into a single record. All of the identifiers, accounts, and visits under the person record are not merged together - they are instead combined under the same person record. The following figure graphically depicts the merge event:



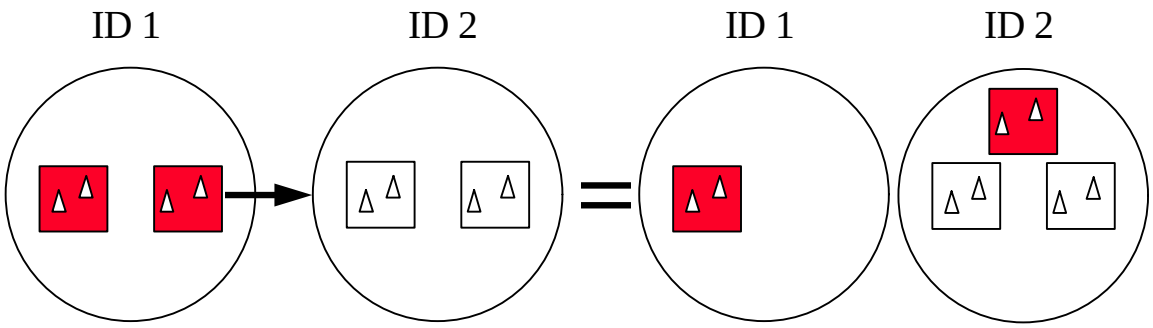
Note:	It is not the intent of the merge definition to define the application or implementation specifics of how various systems or environments define, use or handle non-surviving information. "Non-surviving" in this document implies that a data set was existing in a fashion that was incorrect. Merging it into a new data set in itself implies that where there were two datasets, there is now only one. The means by which any system or environment conveys this new data set and the absence of the previous data set to the user is application specific. It is noted that some systems may still physically keep these "incorrect" datasets for audit trail or other purposes.

3.6.2.1.3 Move

A "move" involves transferring one or more datasets (identified by a subordinate identifier) from one superior identifier at the next hierarchical level to another superior identifier at the next hierarchical level, while all identifiers involved retain their original value. An exception to retaining the original identifier value may occur if any of the subordinate source identifiers already exist under the target superior identifier. In this case the identifier value may have to be renumbered in order to be uniquely identified under the target superior identifier. (Refer to section 3.5.2.2 "A45 - Move visit information" for an illustration of this.)

A move event signals that a patient, account, or visit has been moved from one person, patient, or account, respectively, to another. All records at a subordinate level are also moved. For example, an A43 (move patient information - patient identifier list) event would be sent to signal that a medical records

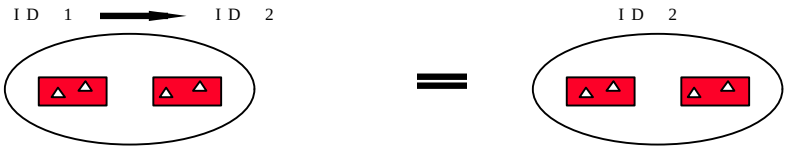
administrator has moved a medical record attached to an incorrect person to a correct person. The following figure graphically depicts the move event:



Note:	The move event implies that all data related to the incorrect source ID and its subordinate IDs (specified in the MRG segment) will be moved to the correct target ID (specified in the PID or PV1 segment). Specifying each subordinate ID in repeating PID/MRG/PV1 sets is optional but not recommended.

3.6.2.1.4 Change identifier

A change identifier event signals that a single person, patient, account, or visit identifier has been changed. It does not reflect a merge or a move, it is simply a change of an identifier. For example, a "Change Identifier" event would be sent to signal that the registrar has changed an incorrectly assigned person identifier to a correct person identifier. The following picture graphically depicts this event:



3.6.2.1.5 Source and target identifiers

Merge, move, and change events reference target and source identifiers. The incorrect source identifier is specified in the MRG segment. The correct target identifier is identified in the PID or PV1 segment. For example, when you are changing a patient account number the source would be *MRG-3 - prior patient account number*. The target is *PID-18 - patient account number*.

3.6.2.1.6 Tightly coupled relationship

When patient/person identifiers are the target in merge, move, or change events, as specified in the *PID-2 - patient ID*, *PID-3 - patient identifier list* and *PID-4 - alternate patient ID-PID*, the associated source identifiers in the *MRG-4 - prior patient ID*, *MRG-1 - prior patient identifier list*, and *MRG-2 - prior alternate patient ID*, respectively, must be "tightly coupled." Each event that is defined as a merge, move, or change message carries the "tightly" coupled relationship at the appropriate level in one of two ways. First, by virtue of positional placement in the sequence of identifiers, or second, by identifier type and

assigning authority. The methodology used to establish the definition of "tightly coupled" relationship is determined by site negotiation. The recommended definition is by virtue of positional placement in the sequence of identifiers (pairwise). In addition, HL7 allows the use of the second definition by identifier type and assigning authority as an acceptable convention to establish a "tightly coupled" relationship. In the absence of a site negotiated definition, it is assumed that the positional placement of the identifiers is the default method.

The list of identifiers can be aligned positionally in their respective segment fields and processed by the receiving system by virtue of their order. This is sometimes referred to as an "ordered pairwise" relationship and is described further in section 3.5.2.1.7.

Alternatively, the uniqueness of the identifiers included in the message is determined by the combination of identifier type and assigning authority. It is assumed that both sending system and receiving system can inspect both of these qualifiers as a message is constructed or processed to determine the "tightly coupled" relationship between the identifiers. This can be referred to as "identifier type/assigning authority" relationship and is described further in section 3.5.2.1.8.

The pairing of identifiers between the MRG segment fields and their associated identifiers in the PID or PV1 segment are defined below:

Person		
PID-2 - Patient ID	***with***	*MRG-4 - Prior patient ID*
Patient		
Pid-3 - Patient identifier list	***with***	*MRG-1 - Prior patient identifier list*
	and by	Explicit order of identifiers in the list
	or by	<*identifier type code*> and <*assigning authority*> field components
PID-4 - Alternate patient ID	***with***	*MRG-2 - Prior alternate patient ID*
Account		
PID-18 - Patient account number	***with***	*MRG-3 - Prior patient account number*
Visit		
PV1-19 - Visit number	***with***	*MRG-5 - Prior visit number*
PV1-50 - Alternate visit ID	***with***	*MRG-6 - Prior alternate visit ID*

3.6.2.1.7 Ordered pairwise relationship

In a strict sense, this type of relationship is characterized by a one-to-one association based on type (e.g., medical record number to medical record number, etc.) and the corresponding order of the element, and is typically found in list or set operations. However, for purposes of practical implementation, this relationship will be defined as a simple one-for-one pairing, as exists between the *PID-3 - patient identifier list* and the *MRG-1 - prior patient identifier list*. In other words, elements "A", "B", and "C" in the first list would directly correspond to elements "X", "Y", and "Z" in the second list. No consideration is made to the type or value of the corresponding elements, it is the explicit order of the elements which controls the association process. This scenario could be expressed as follows:

$List_1 = \{A,B,C\}$

$List_2 = \{X,Y,Z\}$

A : X
B : Y
C : Z

A second scenario may arise which deserves mention. As in the list example above, elements "A", "B", and "C" in the first list would "pair-up" with elements "X", "Y", "Z", "Q", "R", and "S" in the second list. Again, no consideration is made to the type or value of the corresponding elements, it is the order and presence which controls the association process. This scenario could be expressed as follows:

$List_1$ = {A,B,C}

$List_2$ = {X,Y,Z,Q,R,S}

A : X
B : Y
C : Z
: Q
: R
: S

In the second scenario, the last three elements "Q", "R", and "S" are not affected and their value remains as if no association had been made.

A third scenario may arise which deserves mention. As in the list example above, elements "A", "B", "C", "D", "E", and "F" in the first list would "pair-up" with elements "X", "Y", and "Z" in the second list. Again, no consideration is made to the type or value of the corresponding elements, it is the order and presence which controls the association process. This scenario could be expressed as follows:

$List_1$ = {A,B,C,D,E,F}

$List_2$ = {X,Y,Z}

A : X
B : Y
C : Z
D :
E :
F :

In the third scenario, the last three elements "D", "E", and "F" are not affected and their value remains the same as if no association had been made.

3.6.2.1.8 Identifier type / assigning authority relationship

As stated earlier, the uniqueness of the identifiers included in a message can be determined by the combination of identifier type (t) and assigning authority (a). It is assumed that both sending system and receiving system can inspect both of these qualifiers as a message is constructed or processed. This

method is used to determine the "tightly coupled" relationship between the identifiers. The implementation of this relationship exists between the *PID-3 - patient identifier list* and the *MRG-1 - prior patient identifier list*. In other words, elements "B^t2^a1", "C^t3^a1", "D^t4^a1", "A^t1^a1", "E^t5^a1", and "F^t6^a1" in the first list would be associated with elements "X^t1^a1", "Y^t2^a1", and "Z^t3^a1 in the second list. This scenario could be expressed as follows:

$List_1$ = {B^t2^a1,C^t3^a1,D^t4^a1,A^t1^a1,E^t5^a1,F^t6^a1}

$List_2$ = {X^t1^a1,Y^t2^a1,Z^t3^a1}

B^t2^a1 : Y^t2^a1
C^t3^a1 : Z^t3^a1
D^t4^a1 :
A^t1^a1 : X^t1^a1
E^t5^a1 :
F^t6^a1 :

In this scenario, the three elements which do not have corresponding identifier type and assigning authority "D^t4^a1", "E^t5^a1", and "F^t6^a1" are not affected and their value remains the same as if no association had been made.

A second scenario may arise which deserves mention. In the case of identifier type and assigning authority definition, the elements "A^t1^a1", "B^t2^a1", and "C^t3^a1" in the first list would be associated with elements "X^t4^a1", "Y^t2^a1", "Z^t3^a1", "Q^t1^a1", "R^t5^a1", and "S^t6^a1" in the second list. No consideration is made to the order of the identifiers, it is the identifier type and assigning authority of the corresponding elements which controls the association process. This scenario could be expressed as follows:

$List_1$ = {A^t1^a1,B^t2^a1,C^t3^a1}

$List_2$ = {X^t4^a1,Y^t2^a1,Z^t3^a1, Q^t1^a1,R^t5^a1,S^t6^a1}

A^t1^a1 : Q^t1^a1
B^t2^a1 : Y^t2^a1
C^t3^a1 : Z^t3^a1
: X^t4^a1
: R^t5^a1
: S^t6^a1

In the second scenario, the three elements which do not have corresponding identifier type and assigning authority "X^t4^a1", "R^t5^a1", and "S^t6^a1" are not affected and their value remains the same as if no association had been made.

3.6.2.1.9 Global merge and move message construct versus repeating segment message constructs

A flexible message construct is provided for merge trigger events. The message construct allows for a repeating set of PID, optional PD1, MRG, and optional PV1 segments as illustrated below:

```
MSH
```

```
EVN
{ PID
    [PD1]
    MRG
    [PV1]
}
```

Trigger events support the concept of a global move or merge, where all the subordinate identifiers are moved or merged. For example, the use case for A41 (merge account-patient account number) (Section 3.5.2.2.12, "A41 - merge account - patient account number (global)") illustrates a merge on the patient account number (*PID-18 - patient account number*). All subordinate identifiers (*PV1-19 - visit number*) are moved to the target *PID-18 - patient account number identifier*, even though they are not specified in the message.

A repeating segment message construct supports reporting of the subordinate identifiers using the repeating segments. This is illustrated in the use case for A40 (merge patient - patient identifier list) (Section 3.6.2.2.2, "A40 - merge patient - patient identifier list (repeating segment)," A41 (merge account - patient account number) (Section 3.6.2.2.4, "A41 - merge account - patient account number (repeating segment)"), and A45 (move visit information-visit number) (Section 3.6.2.2.9 "A45 - move visit information - visit number (repeating segment)"). Specifying each subordinate ID in repeating segments is optional but not recommended. This construct can be used when renumbering of identifiers is necessary as illustrated in Sections 3.6.2.2.2, "A40 - merge patient - patient identifier list (repeating segment)," 3.6.2.2.4, "A41 - merge account - patient account number (repeating segment)," and 3.6.2.2.9, "A45 - move visit information - visit number (repeating segment)," or to explicitly identify individual subordinate identifiers as illustrated in Section 3.6.2.2.9, "A45 - move visit information - visit number (repeating segment)."

3.6.2.1.10 Identifier renumbering

When renumbering of identifiers occurs, the repeating segment construct may be required in order to report identifier number changes. When renumbering occurs, the incorrect source identifier is specified in the MRG segment and the correct target identifier is reported in the PID or PV1 segment. Refer to the use case for A41 (merge account-patient account number) for an illustration.

3.6.2.1.11 Superior identifier reporting

When merging or moving subordinate numbers, the higher level, "superior" identifiers should be included in the message. For example, when merging an account where the target is *PID-18 - patient account number* and the source is *MRG-3 - prior patient account number*, the higher level patient identifiers (*PID-3 -patient identifier list* and *MRG-1 - prior patient identifier list*) and person identifiers (*PID-2 - patient ID* and *MRG-4 - prior patient ID*) should also be reported in the message.

3.6.2.2 Trigger events

The intent of trigger events A40 (merge patient- patient identifier list), A41 (merge account-patient account number), A42 (merge visit-visit number), A43 (move patient information-patient identifier list), A44 (move account information-patient account number), A45 (move visit information-visit number), A47 (change patient identifier list), A49 (change patient account number), A50 (change visit number), and A51 (change alternate visit ID) is to reconcile distinct sets of existing person/patient data records that have been entered under different identification numbers, either deliberately or because of errors. Ideally, following any of these trigger events, all of the person/patient data should be accessible under whatever surviving identifiers were specified in the messages. Because of substantial differences in database

architectures and system-dependent data processing requirements or limitations, the exact meaning and implementation of these events must be negotiated between systems.

3.6.2.2.1 A40 - merge patient - patient identifier list

A40 - Merge patient - patient identifier list

Use Case - During the admission process, the registrar does not find a record for patient Allison Smith in the ADT system and creates a new record with patient identifier MR2. Allison Smith has actually been to the healthcare facility several times in the past under her maiden name, Allison Evans with patient identifier MR1. The problem persists for a while. During that time, several more accounts are assigned to Allison under her newly created patient ID MR2. Finally, the problem is discovered and Medical Records merges her two charts together leaving patient identifier MR1. All the accounts (ACCT1, ACCT2) that were assigned to MR2 are combined under MR1 as a result.

Target: *PID-3 - patient identifier list* (Note: *PID-18 - patient account number* is not valued; all accounts associated with MR2 are combined under MR1). To merge *PID-18 - patient account number* data only, use event A41 (merge account-patient account number). To move *PID-18 - patient account number* data use event A44 (move account information-patient account number).

Source: *MRG-1 - prior patient identifier list*) (Note: *MRG-3 - prior patient account number* is not valued; all accounts associated with MR2 are combined under MR1.)

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A40|00000003|P|2.4<cr>
EVN|A40|199901051530<cr>
PID|||MR1^^^XYZ||EVANS^ALLISON|....<cr>
MRG|MR2^^^XYZ<cr>
```

Before Merge		After Merge
MR1	MR2	MR1
ACCT1	ACCT1	ACCT1
ACCT2	ACCT2	ACCT2
		ACCT1
		ACCT2

Implementation considerations: This scenario exists when two medical records are established for the same person.

Since there could be a discrepancy in the demographic information between the two records, reconciliation may be required. In the example above, the implementation allowed the older demographic information (in the PID) to survive. The demographics implied by the IDs in the MRG segment, did not survive. Surviving and non-surviving demographic information is application and implementation specific. An A08 (update patient information) event should be sent and/or negotiated as necessary to provide for implementation and application-specific needs.

3.6.2.2.2 A40 - merge patient - patient identifier list (repeating segment)

A40 - Merge patient - patient identifier list

Use Case - During the admission process, the registrar does not find a record for patient Allison Smith in the Patient Administration system and creates a new record with patient identifier MR2. Allison Smith has actually been to the healthcare facility several times in the past under her maiden name, Allison Evans with patient identifier MR1. The problem persists for a while. During that time, several more accounts are assigned to Allison under her newly created patient ID MR2. Finally, the problem is discovered and Medical Records merges her two charts together leaving patient identifier MR1. All the accounts (ACCT1, ACCT2) that were assigned to MR2 are combined under MR1 as a

result. Since the account numbers are not unique, they are also renumbered.

Target: *PID-3 - patient identifier list* and *PID-18 - patient account number*

Source: *MRG-1 - prior patient identifier list* and *MRG-3 - prior patient account number*

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A40|00000003|P|2.4<cr>
EVN|A40|199901051530<cr>
PID|||MR1^^^XYZ||EVANS^ALLISON||||||||||||ACCT3<cr>
MRG|MR2^^^XYZ||ACCT1<cr>
PID|||MR1^^^XYZ||EVANS^ALLISON||||||||||||ACCT4<cr>
MRG|MR2^^^XYZ||ACCT2<cr>
```

Before Merge		After Merge
MR1	MR2	MR1
ACCT1	ACCT1*	ACCT1
ACCT2	ACCT2*	ACCT2
		ACCT3*
		ACCT4*
		*accounts renumbered

Implementation considerations: This scenario exists when two medical records are established for the same person.

If the account numbers are not unique (as implied by the After Merge example above) and renumbering of the accounts is required, you must use repeating segments as illustrated in the Example Transaction. Refer to Section 3.5.2.1.9, "Global merge and move message construct versus repeating segment message constructs," for additional information regarding message construct.

Since there could be a discrepancy in the demographic information between the two records, reconciliation may be required. In the example above, the implementation allowed the older demographic information (in the PID) to survive. The demographics implied by the IDs in the MRG segment, did not survive. Surviving and non-surviving demographic information is application and implementation specific. An A08 (update patient information) event should be sent and/or negotiated as necessary to provide for implementation and application specific needs.

3.6.2.2.3 A41 - merge account - patient account number (global)

This event illustrates the concept of a global merge as defined in Section 3.5.2.1.9, "Global merge and move message construct versus repeating segment message constructs."

A41 - Merge account information - patient account number

Use Case - Mary Jones (patient identifier MR1) is a recurring outpatient at the Physical Therapy clinic at hospital XYZ with account number ACCT1. She has visited the clinic several times. When she arrives for therapy, a new registrar does not realize she already has an account and opens a new one with account number ACCT2. When the mistake is discovered, the two accounts are merged together, combining all visits under account ACCT1.

Target: *PID-18 - patient account number*

Source: *MRG-3 - prior patient account number*

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A41|00000005|P|2.4<cr>
```

```
EVN|A41|199901051530<cr>

PID|||MR1^^^XYZ||JONES^MARY||19501010|M|||123 NORTH
    STREET^^NY^NY^10021||(212)111-3333|||S||ACCT1<cr>

MRG|MR1^^^XYZ||ACCT2<cr>
```

Before Merge	After Merge
MR1	MR1
ACCT1	ACCT1
96124	96124
96126	96126
ACCT2	96128
96128	96130
96130	

Implementation considerations: This scenario exists when two accounts are established for the same patient.

The PV1 segment is not valued since this event is really a merge at the *PID-18 - patient account number* level. All identifiers below the *PID-18 - patient account number* are combined under the surviving Patient Account Number.

Since there could be a discrepancy in the demographic information between the two records, reconciliation may be required. Surviving and non-surviving demographic information is application and implementation specific. An A08 (update patient information) event should be sent and/or negotiated as necessary to provide for implementation and application-specific needs.

3.6.2.2.4 A41 - merge account - patient account number (repeating segment)

This event illustrates the concept of a repeating segment merge as defined in 3.5.2.1.7.

A41 - Merge account - patient account number

Use Case - Mary Jones (patient identifier MR1) is a recurring outpatient at the Physical Therapy clinic at hospital XYZ with account number ACCT1. She has visited the clinic several times. When she arrives for therapy, a new registrar does not realize she already has an account and opens a new one with account number ACCT2. When the mistake is discovered, the two accounts are merged together, combining all visits under account ACCT1.

Target: *PID-18 - patient account number* and *PV1-19 - Visit number*

Source: *MRG-3 - prior patient account number* and *MRG-5 - prior visit number*

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A41|00000005|P|2.4<cr>

EVN|A41|199901051530<cr>

PID|||MR1^^^XYZ||JONES^MARY||19501010|F|||123 NORTH
    STREET^^NY^NY^10021||(212)111-3333|||S||ACCT1<cr>

MRG|MR1^^^XYZ||ACCT2||VISIT1<cr>

PV1|1|I|||||||||||||||||VISIT3<cr>

PID|||MR1^^^XYZ||JONES^MARY||19501010|F|||123 NORTH
    STREET^^NY^NY^10021||(212)111-3333|||S||ACCT1<cr>

MRG|MR1^^^XYZ||ACCT2||VISIT2

PV1|1|I|||||||||||||||||VISIT4<cr>
```

Before Merge	After Merge
MR1 ACCT1 VISIT1 VISIT2 ACCT2 VISIT1* VISIT2* *Visits erroneously assigned	MR1 ACCT1 VISIT1 VISIT2 VISIT3** VISIT4** **Visits combined and renumbered as a result of merging the account
Implementation considerations: This scenario exists when two accounts and associated visits are established for the same patient. Repeating PID/MRG/PV1 segments report each Account Number and Visit Number effected. This construct is required since the visits are renumbered in this example. Since there could be a discrepancy in the demographic information between the two records, reconciliation may be required. Surviving and non-surviving demographic information is application and implementation specific. An A08 (update patient information) event should be sent and/or negotiated as necessary to provide for implementation and application-specific needs.	

3.6.2.2.5 A42 - Merge visit - visit number

A42 - Merge visit - visit number

Use Case - A42 (merge visit -visit number) - Mary Jones (patient identifier MR1) is a recurring outpatient at the Physical Therapy clinic at hospital XYZ with account number ACCT1. She has visited the clinic several times. When she arrives for therapy, two different registrars create a new visit numbers. The mistake is not discovered immediately and clinical data is recorded under both visit numbers. When the mistake is discovered, the two visits are merged together, leaving visit VISIT1.

Target: *PV1-19 - visit number*

Source: *MRG-5 - prior visit number*

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A42|00000005|P|2.4<cr>
EVN|A42|199901051530<cr>
PID|||MR1^^^XYZ||JONES^MARY||19501010|F|||123 NORTH
    STREET^^NY^NY^10021||(212)111-3333|||S||ACCT1<cr>
MRG|MR1^^^XYZ||ACCT1||VISIT2<cr>
PV1|1|I|||||||||||||||||VISIT1
```

Before Merge	After Merge
MR1 ACCT1 VISIT1 VISIT2	MR1 ACCT1 VISIT1
Implementation considerations: This scenario exists when two visits are established in error for the same patient and episode of care.	

3.6.2.2.6 A43 - move patient information - patient identifier list

A43 - Move patient information - patient identifier list

Use Case - information from ABC HMO is loaded to a repository system each month. Jane Jones is entered in January and assigned Enterprise Number 1 (E1). Jane has visited Hospital XYZ and is assigned medical record number MR1. Jayne Jones (a different person) is also a member of ABC HMO loaded to the repository and assigned Enterprise Number E2. Jayne has visited Hospital XYZ and is assigned medical record number MR1. Jayne visits Clinic DEF where she is assigned medical record number MR2 which is erroneously associated with Jane's Enterprise Number (E1). When the error is discovered MR2 is moved from Enterprise Number E1 to E2.

Target: *PID-2 - patient ID*

Source: *MRG-4 - prior patient ID*

Example transaction:

```
MSH|^~\&|REPOSITORY|ENT|RSP1P8|MCM|199901051530|SEC|ADT^A43|0000009|P|2.4<cr>
EVN|A43|199901051530<cr>
PID|1|E2|MR2^^^ABCHMO|||JONES^JAYNE|....<cr>
MRG|MR2^^^ABCHMO|||E1<cr>
```

Before Move	After Move
E1 E2	E1 E2
MR1 MR1	MR1 MR1
MR2	MR2

Implementation considerations: *PID-3 - patient identifier list* and *MRG-1 - prior patient identifier list* are the same value since the PID-3 value does not change in this scenario.

The example above would be expressed as follows. In the following example, the assigning authority ENT1 represents an Enterprise and the PE identifier type code represents the Person's Enterprise number. The MR1 identifier is omitted from the message because it is not moved.

```
MSH|^~\&|REPOSITORY|ENT|RSP1P8|MCM|199901051530|SEC|ADT^A43|0000009|P|2.4.1<cr>
EVN|A43|199901051530<cr>
PID|1||E2^^^ENT1^PE~MR2^^^ABCHMO^MR|||JONES^JAYNE|....<cr>
MRG|E1^^^ENT1^PE~MR2^^^ABCHMO^MR|. . .<cr>
```

3.6.2.2.7 A44 - move account information - patient account number

A44 - Move account information - patient account number

Use Case - During the admission process, the admitting clerk uses the Medical Record Number of William A. Jones III (MR1) instead of William A. Jones, Jr. (MR2). The Patient Administration system assigns the new admission account number ACCT2. When the mistake is discovered, account ACCT2 is moved to the correct Medical Record, MR2. The account number is not changed.

Target: *PID-3 - patient identifier list* and *PID-18 - patient account number* (Note: *PID-18 - patient account number* and *MRG-3 - prior patient account number* will be the same since the account number does not change in this scenario).

Source: *MRG-1 - prior patient identifier list* and *MRG-3 - prior patient account number* (NOTE: *MRG-3 - prior patient account number* must be valued to indicate which account to move)

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A44|00000007|P|2.4<cr>
EVN|A44|199901051530<cr>
PID|||MR2^^^XYZ||JONES^WILLIAM^A^JR||19501010|M|||123 EAST
    STREET^^NY^NY^10021|||(212)111-3333|||S||ACCT2<cr>
MRG|MR1^^^XYZ||ACCT2<cr>
```

Before Move	After Move
MR1 MR2 ACCT1 ACCT1 ACCT2	MR1 MR2 ACCT1 ACCT1 ACCT2

Implementation considerations: This scenario exists when two medical records legitimately exist for two different people and an account is incorrectly associated with the wrong medical record number.

3.6.2.2.8 A45 - move visit information - visit number (repeating segment)

A45 - Move visit information - visit number

Use Case - Mary Jones (patient identifier MR1) is a recurring outpatient at the Physical Therapy and Speech Therapy clinics at hospital XYZ. She is assigned a different account for each clinic; her account number for Physical Therapy is ACCT1 and her account number for Speech Therapy is X1. However, on two different occasions, the Speech Therapy registrar accidentally assigned her visits (96102 and 96104) to the Physical Therapy account. The problem is later discovered and the corresponding visits are moved to the correct account.

Target: *PID-18 - patient account number* and *PV1-19 - visit number*.

Source: *MRG-3 - prior patient account number* and *MRG-5 - prior visit number*.

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A45|00000005|P|2.4<cr>
EVN|A45|199901051530<cr>
PID|||MR1^^^XYZ||JONES^MARY||19501010|M|||123 NORTH
    STREET^^NY^NY^10021|||(212)111-3333|||S||X1<cr>
MRG|MR1^^^XYZ||ACCT1||96102<cr>
PV1||O|PT|||||||||||||||96102<cr>
MRG|MR1^^^XYZ||ACCT1||96104<cr>
PV1||O|PT|||||||||||||||96104<cr>
```

Before Move	After Move
MR1 ACCT1 96100 96102* 96104* X1 96101 96103 96105	MR1 ACCT1 96100 X1 96101 96102 96103 96104 96105

*Visits erroneously assigned	

In the above transaction/implementation, the application that generated the message assigns unique visit numbers.

Implementation Considerations: In this scenario the repeating MRG/PV1 construct is used to indicate which visits are moved, as illustrated in the Example Transaction. *MRG-5 - prior visit number* and *PV1-19 - visit number* are the same values because the visit numbers do not change. Refer to Section 3.6.2.1.9, "Global merge and move message construct versus repeating segment message constructs," for additional information regarding message construct.

3.6.2.2.9 A45 - move visit information - visit number (repeating segment)

A45 - Move visit information - visit number

Use Case -Mary Jones (patient identifier MR1) is a recurring outpatient at the Physical Therapy and Speech Therapy clinics at hospital XYZ. She is assigned a different account for each clinic; her account number for Physical Therapy is ACCT1 and her account number for Speech Therapy is X1. However, on two different occasions, the Speech Therapy registrar accidentally assigned her visits (VISIT2 and VISIT3) to the Physical Therapy account. The problem is later discovered and the corresponding visits are moved to the correct account.

Target: *PID-18 - patient account number* and *PV1-19 - visit number.*

Source: *MRG-3 - prior patient account number* and *MRG-5 - prior visit number*.

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A45|00000005|P|2.4<cr>
EVN|A45|199901051530<cr>
PID|||MR1^^^XYZ||JONES^MARY||19501010|M|||123 NORTH
    STREET^^NY^NY^10021||(212)111-3333|||S||X1<cr>
MRG|MR1^^^XYZ||ACCT1||VISIT2<cr>
PV1||O|PT|||||||||||||||VISIT4<cr>
MRG|MR1^^^XYZ||ACCT1||VISIT3<cr>
PV1||O|PT|||||||||||||||VISIT5<cr>
```

Before Move	After Move
MR1	MR1
ACCT1	ACCT1
VISIT1	VISIT1
VISIT2*	X1
VISIT3*	VISIT1
X1	VISIT2
VISIT1	VISIT3
VISIT2	VISIT4**
VISIT3	VISIT5**
*Visits erroneously assigned	**visits moved and renumbered

In the above transaction/implementation, the application that generated the message allows non-unique visit numbers.

Implementation Considerations: If Visit Numbers are not unique (as implied by the After Move example above) and renumbering of the visits is required, you must use a repeating MRG/PV1 construct as illustrated in the Example Transaction. Refer to 3.5.2.1.7, "A40-merge patient- patient identifier list," for additional information regarding message construct.

3.6.2.2.10 A47 - change patient identifier list

A47 - Change patient identifier list	
Use Case - The Medical Records Department of XYZ hospital uses a system of manual medical record number assignment. During the admission process, the registrar accidentally assigned the wrong Medical Record Number (MR2 instead of MR1) to John Meyers. Since the correct Medical Record has not yet been assigned to any patient, no merge takes place. The Patient Identifier List is simply changed.	
Target: *PID-3 - patient identifier list*	
Source: *MRG-1 - prior patient identifier list*	
Example Transaction: MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A47|00000002|P|2.4<cr> EVN|A47|199901051530<cr> PID|||MR1^^^XYZ||MEYERS^JOHN||19501010|M|||987 SOUTH STREET^^NY^NY^10021||(212)111-3333|||S||ACCT1<cr> MRG|MR2^^^XYZ||ACCT1<cr>	
Before Change	After Change
MR2 ACCT1	MR1 ACCT1
Implementation considerations: None.	

3.6.2.2.11 A49 - change patient account number

A49 - Change patient account number	
Use Case - Patients are automatically assigned an account number by hospital XYZ's Patient Administration system at admission. However, when the Patient Administration system is down, the admitting clerk manually assigns account numbers from a pool of downtime account numbers. John Rodriguez (patient ID MR1) was manually assigned downtime account number ACCT1. When the Patient Administration system came back up, the admitting clerk accidentally entered the wrong account number, X1, into the system. When the problem was later discovered, the account number was changed from X1 to ACCT1.	
Target: *PID-18 - patient account number*	
Source: *MRG-3 - prior patient account number*	
Example Transaction: MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A49|00000006|P|2.4<cr> EVN|A49|199901051530<cr> PID|||MR1^^^XYZ||RODRIGUEZ^JOHN||19501010|M||123 SOUTH STREET^^NY^NY^10021||(212)111-2222|||S|CAT|ACCT1<cr> MRG|MR1^^^XYZ||X1<cr>	
Before Change	After Change
MR1 X1	MR1 ACCT1

Implementation Considerations: None.

3.6.2.2.12 A50 - change visit number

A50 - Change visit number

Use Case - Patients are automatically assigned a visit number by hospital XYZ's Patient Administration system at check-in. However, when the Patient Administration system is down, the admitting clerk manually assigns visit numbers from a pool of downtime numbers. John Rodriguez (patient ID MR1) was manually assigned downtime visit number VISIT1. When the Patient Administration system came back up, the admitting clerk accidentally entered the wrong visit number, VISIT2, into the system. When the problem was later discovered, the visit number was changed from VISIT2 to VISIT1.

Target: *PV1-19 - visit number*

Source: *MRG-5 - prior visit number*

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A50|00000006|P|2.4<cr>
EVN|A50|199901051530<cr>
PID|||MR1^^^XYZ||RODRIGUEZ^JOHN||19501010|M|||123 SOUTH
    STREET^^NY^NY^10021||(212)111-2222|||S|CAT|ACCT1<cr>
MRG|MR1^^^XYZ||ACCT1||VISIT2<cr>
PV1|1|O||3|||99^BROWN^JERRY|||ONC||||1||VIP|99^BROWN^JERRY|O/P|VISIT1...<cr
    >
```

Before Change	After Change
MR1 ACCT1 VISIT2	MR1 ACCT1 VISIT1

Implementation considerations: None.

3.6.2.2.13 A51 - change alternate visit ID

A51 - Change alternate visit ID

Use Case - Patients are automatically assigned an alternate visit number by hospital XYZ's Patient Administration system at check-in. However, when the Patient Administration system is down, the admitting clerk manually assigns alternate visit numbers from a pool of downtime numbers. John Rodriguez was manually assigned downtime alternate visit number AV1. When the Patient Administration system came back up, the admitting clerk accidentally entered the wrong alternate visit number, AV2, into the system. When the problem was later discovered, the alternate visit number was changed from AV2 to AV1.

Target: *PV1-50 - alternate visit ID*

Source: *MRG-6 - prior alternate visit ID*

Example Transaction:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SECURITY|ADT^A51|00000006|P|2.4
    <cr>
EVN|A51|199901051530<cr>
```

```
PID|||MR1^^^XYZ||RODRIGUEZ^JOHN||19501010|M|||123 SOUTH
    STREET^^NY^NY^10021||(212)111-2222|||S|CAT|ACCT1<cr>

MRG|MR1^^^XYZ||ACCT1|||AV2<cr>

PV1|1|O||3|||99^BROWN^JERRY|||ONC||||1||VIP|99^BROWN^JERRY|O/P|V1|SP|||||||
    ||||||||||||A|||||19990902081010||||||AV1<cr>
```

Before Change	After Change
MR1 ACCT1 VISIT1 AV2	MR1 ACCT1 VISIT1 AV1

Implementation Considerations: None.

3.6.2.2.14 Example using multiple messages

A47 - Change patient identifier list and A49 - Change patient account number

Use Case - Patients are automatically assigned Medical Records Numbers and account numbers by hospital XYZ's Patient Administration system at admission. However, when the Patient Administration system is down, the admitting clerk manually assigns account numbers and Medical Records numbers from a pool of downtime numbers. John Rodriguez was manually assigned downtime Medical Record Number MR1 and downtime account number A1. When the Patient Administration system came back up, the admitting clerk accidentally enters the wrong Medical Record Number (MR2) and account number (X1) into the system. The error occurred because she was reading from the paperwork for a different downtime admit not yet entered into the Patient Administration system. The problem is quickly discovered, and the medical record number and account number was fixed accordingly. Since the other downtime admit had not yet been entered into the Patient Administration system, no merge was required.

Target: *PID-3 - patient identifier list* (Message 1) and *PID-18 - patient account number* (Message 2)

Source: *MRG-1 - prior patient identifier list* (Message 1) and *MRG-3 - prior patient account number* (Message 2)

Example Transaction - Message 1:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A47|00000006|P|2.4<cr>

EVN|A47|199901051530<cr>

PID|||MR1^^^XYZ^MR||RODRIGUEZ^JOHN||19501010|M|||123 SOUTH
    STREET^^NY^NY^10021||(212)111-2222|||S|CAT|X1<cr>

MRG|MR2^^^XYZ^MR|<cr>
```

Example Transaction - Message 2:

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A49|00000006|P|2.4<cr>

EVN|A49|199901051530<cr>

PID|||MR1^^^XYZ^MR||RODRIGUEZ^JOHN||19501010|M|||123 SOUTH
    STREET^^NY^NY^10021||(212)111-2222|||S|CAT|ACCT1<cr>

MRG|MR1^^^XYZ^MR||X1<cr>
```

Before Change	After Change
MR2 X1	MR1 ACCT1

Implementation considerations: Message 1 (A47) changes the patient identifier list. Message 2 (A49) changes the account number.

3.6.2.2.15 Example using multiple messages

A44 - Move account information - patient account number and A49 - Change patient account number

Use Case - During the admitting process, the admitting clerk uses the Medical Record Number of William A. Jones, III (MR1) instead of William A. Jones, Jr. (MR2). The Patient Administration system assigns the new admission account number A1. When the mistake is discovered, the account is moved to the correct Medical Record, MR2. The Patient Administration system generates a new account number as a result: number X1.

Target: *PID-3 - patient identifier list* (Message 1) and *PID-18 - patient account number* (Message 2)

Source: *MRG-1 - prior patient identifier list* (Message 1) and *MRG-3 - prior patient account number* (Message 2)

Example Transaction (Message 1):

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A44|00000007|P|2.4<cr>
EVN|A44|199901051530<cr>
PID|||MR2^^^XYZ^MR||JONES^WILLIAM^A^JR||19501010|M|||123 EAST
    STREET^^NY^NY^10021||(212)111-3333|||S||ACCT1<cr>
MRG|MR1^^^XYZ^MR||ACCT1<cr>
```

Example Transaction (Message 2):

```
MSH|^~\&|REGADT|MCM|RSP1P8|MCM|199901051530|SEC|ADT^A49|00000007|P|2.3.2<cr
    >
EVN|A49|199901051530<cr>
PID|||MR2^^^XYZ^MR||JONES^WILLIAM^A^JR||19501010|M|||123 EAST
    STREET^^NY^NY^10021||(212)111-3333|||S||X1<cr>
MRG|MR2^^^XYZ^MR||ACCT1<cr>
```

Before Change	After Change
MR1 MR2 ACCT1	MR1 MR2 X1

Implementation Considerations: Message 1, A44 (move account information-patient account number), moves the account from MR1 to MR2. Message 2, A49 (change patient account number), changes the account number.

3.6.3 Patient record links

Linking two or more patients does not require the actual merging of patient information as discussed in Section 3.6.2, "Merging patient/person information;" following a link trigger event, sets of affected patient data records should remain distinct. However, because of differences in database architectures, there may be system-dependent limitations or restrictions regarding the linking of one or more patients that must be negotiated.

There are multiple approaches for implementing Master Patient Indexes. It is useful for the purpose of MPI mediation to support two types of linkage. Explicit linkage requires a message declaring a link has been made between multiple identifiers. Implicit linkage is performed when a receiving system infers the linkage from the presence of multiple identifiers present in *PID-3 - patient identifier list*.

In an MPI setting, the A24 -link patient information message is preferred for transmitting an explicit link of identifiers whether they are in the same or different assigning authorities. The A37 unlink patient information message is preferred for transmitting the explicit unlinking of identifiers.

Implicit linkage of identifiers, sometimes called passive linking, has been implemented using various messages. An acknowledged method is inclusion of multiple identifiers in *PID-3 - patient identifier list*, which the receiving system implicitly links. An MPI or application that makes such an implicit linkage can generate an A24 - link patient information message to explicitly notify another system of this action.

3.6.4 MPI Integration - an introduction

The purpose of this section is to provide some insight into how HL7 committees have approached the area of MPI integration, as well as to provide concrete examples of how the integration could be done using messages in Version 2.4.

3.6.4.1 Definitions - what is an MPI?

There can be quite a bit of confusion as to what defines an MPI. Early definitions called it a Master Patient Index, implying only patient data would be managed. Later the definition was expanded to mean persons in general, including patients, guarantors, subscribers, and even providers; essentially any entity that could be considered a "person." Thus the current acronym MPI generally is inferred to mean Master Person Index.

An MPI is generally used to manage person identification and cross-reference across disparate systems. Healthcare organizations may have several systems handling various different data processing needs, from laboratory to billing, each with its own database of persons and person identifier numbering schemes. Each of these can be called an ID Domain. An MPI can function as a Correlation Manager between these domains, providing a cross-reference of a person's identifiers across each of the domains. Typically an MPI will also have one universal or enterprise identifier that uniquely identifies the person in the MPI itself. The domain for this identifier may or may not be the domain for clients of the MPI.

MPI functionality also typically includes methods to provide an identifier for a person, given a set of traits or demographics for that person. An example of the use of this is for a client system to query the MPI for a person given a set of demographics. The MPI uses matching algorithms to find possible matching persons, and returns to the client system the identifiers for those persons.

This section currently deals only with MPI functionality related to persons in the Version 2.4 context. It is assuming integration using Version 2.4 ADT messages, and the functionality surrounding finding and identifying a person.

3.6.4.2 HL7 and CORBAmed PIDS

There has been an effort to harmonize the modeling work that has been done in the CORBAMed Patient Identification Service (PIDS) with the HL7 message set, with an eye toward HL7 Version 3.0. You may see evidence of CORBAMed modeling in this implementation, but that should not be taken as evidence that full harmonization has taken place. There is much work left to do in this area.

3.6.4.3 MPI QUERY for person lookup and identification

Several QBP/RSP queries have been developed to aid in the integration of systems with an MPI. They consist of several Qxx/Kxx trigger/response pairs. The following table lists their functions:

Query	*Name*	*MPI Use*
Q21/K21	Get Person Demographics	Given a person identifier, return the PID and optionally the PD1 segments for the matching person.
Q22/K22	Find Candidates	Given some demographics, optionally a match threshold and algorithm, find and return a list of matching persons.
Q23/K23	Get Corresponding Identifiers	Given a person's identifier and a list of identifier domains, return the person's identifiers in those domains.
Q24/K24	Allocate Identifiers	Given a list of identifier domains, return new identifiers for those domains. Should not link to a person, just reserve and return identifiers.

MPI QBP/RSP Queries

The following sections show several scenarios involving looking up a person on a "client" system, and how it can be integrated to an MPI. The basic flow is for a user to enter person information on the client system, and the client system using services of the MPI to match the user's input to a person that exists somewhere on the two systems.

The scenarios are differentiated on two variables:

ID Creator - Which system assigns new person identifiers for the client system. This can either be the MPI or the client system.

Person Existence - On which system the person record currently exists - the client system, the MPI, or both.

3.6.4.4 Client system assigns identifier, person exists on MPI only

In this scenario, a client system (e.g. a registration system) will query an MPI for a person that does not currently exist on the client system. The MPI returns a list of one or more possible matching candidates, and one is chosen by the user on the client system. The client system assigns the person an identifier and an update is sent to the MPI to notify it of the new assigned identifier.

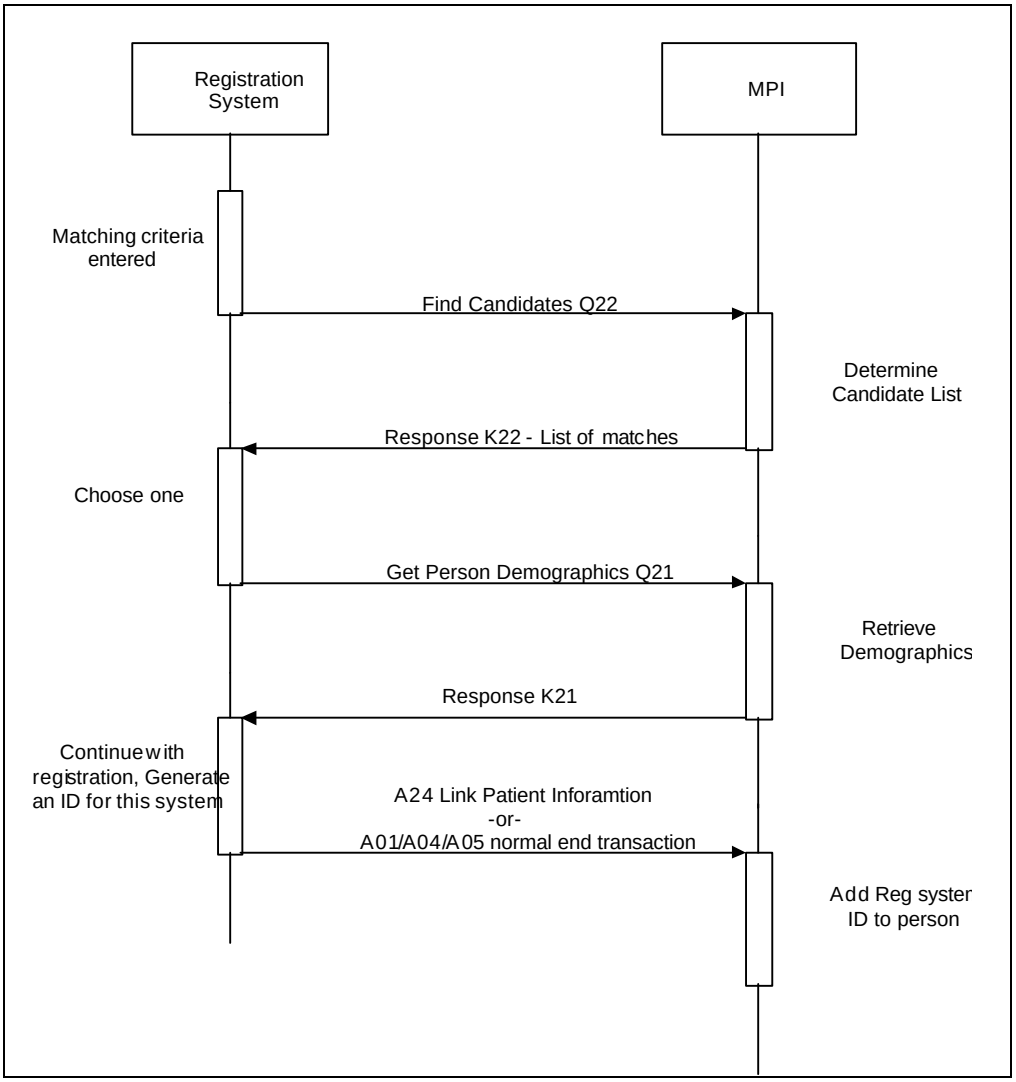


Figure 3-1 - Client system assigns identifier, person exists on MPI only

The messages are defined as follows:

Q22/K22 Find Candidates - This signals the MPI to search its database for a list of persons that match the demographic criteria sent in the query, using whatever algorithms it has at its disposal, or using the algorithm optionally specified in the query. The response includes a list of "candidates" that matched the criteria in the query, one PID segment for each candidate. The query can also specify the identifier domains to return in *PID-3 - Patient Identifier List*, so that the client system identifier and the MPI enterprise identifier could be returned for each match.

Q21/K21 Get Person Demographics - Once a candidate is chosen from the list, another query may be done to retrieve the full set of demographics for that person.

A24 or A01/A04/A05 - This transaction is to update the MPI with the new identifier the client system has created for the person. It is acceptable for systems to simply send *an A01 Admit/visit notification, A04 Register a patient or A05 Pre-admit a patient* as may have been done traditionally, with the new client system identifier and the existing MPI enterprise identifier in PID-3. However an *A24 Link patient*

information may be sent instead, with one PID segment containing the MPI enterprise identifier for the person, and the second PID segment containing the new registration system identifier.

3.6.4.5 Client system assigns identifier, person exists on both systems

In this scenario, a client system (e.g. a registration system) will query an MPI for a person, and the person record exists on both systems. The MPI returns a list of possible matching candidates, and one is chosen by the user on the client system. The client system simply asks the MPI for an updated set of demographics and does not assign an identifier since the person already exists with an identifier on the client system.

Prior to querying the MPI, the client system may query its own database to reduce network transactions. However, the full searching capabilities of the MPI may be preferred to the client system in order to prevent the selection of the wrong person.

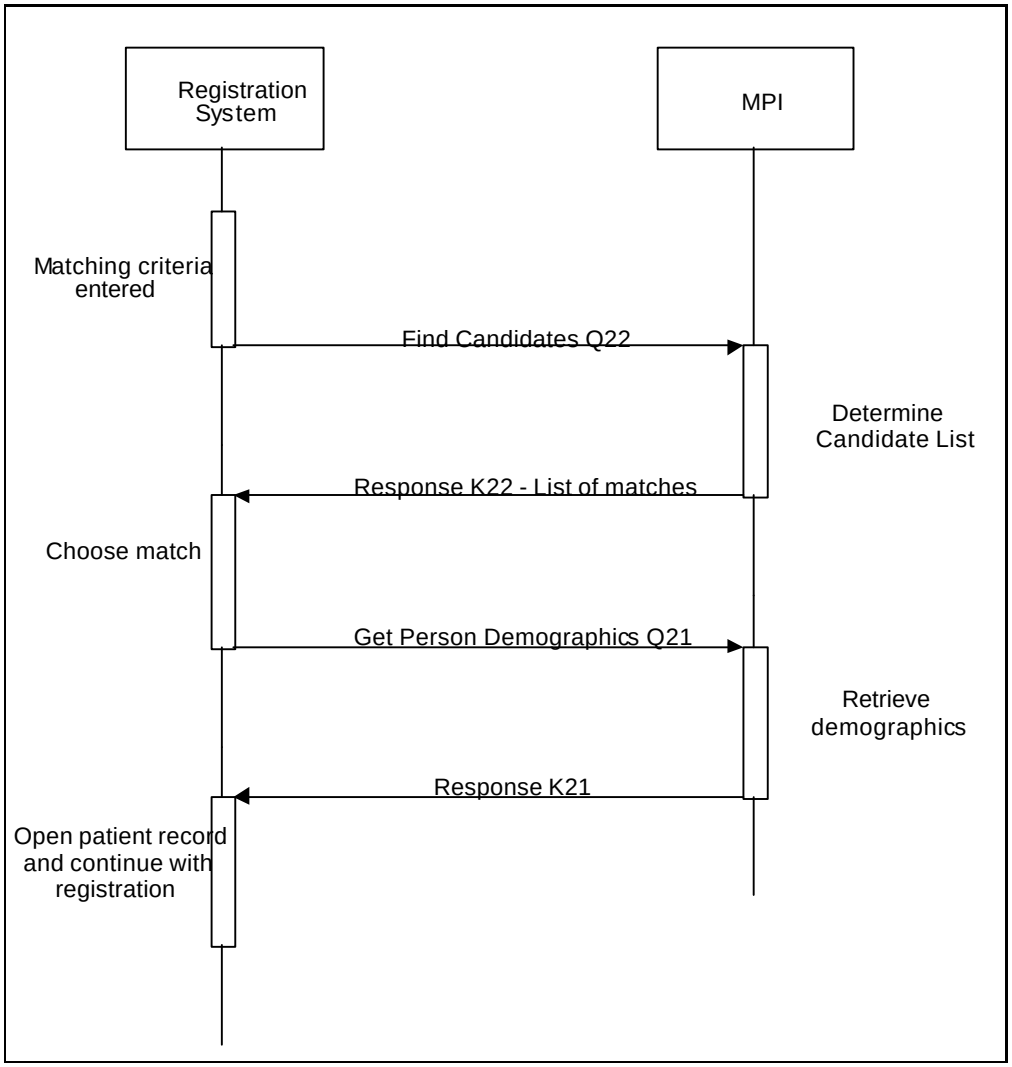


Figure 3-2 - Client system assigns identifier, person exists on both systems

The message flow is identical to the message flow in the 3.5.4.1 example, with the exception that the final update to the MPI is not needed in order to give the MPI a new identifier for the person. The MPI should already have the client system identifier from previous transactions.

An ADT event may be sent later by the client system simply to update the MPI with any demographic changes that occur.

3.6.4.6 Client system assigns identifier, person exists on neither system

In this scenario, a client system (e.g. a registration system) will query an MPI for a person, and the person does not exist on either system. The MPI returns a list of possible matching candidates, or possibly an empty list. The user does *not* choose one, and a new person record is created.

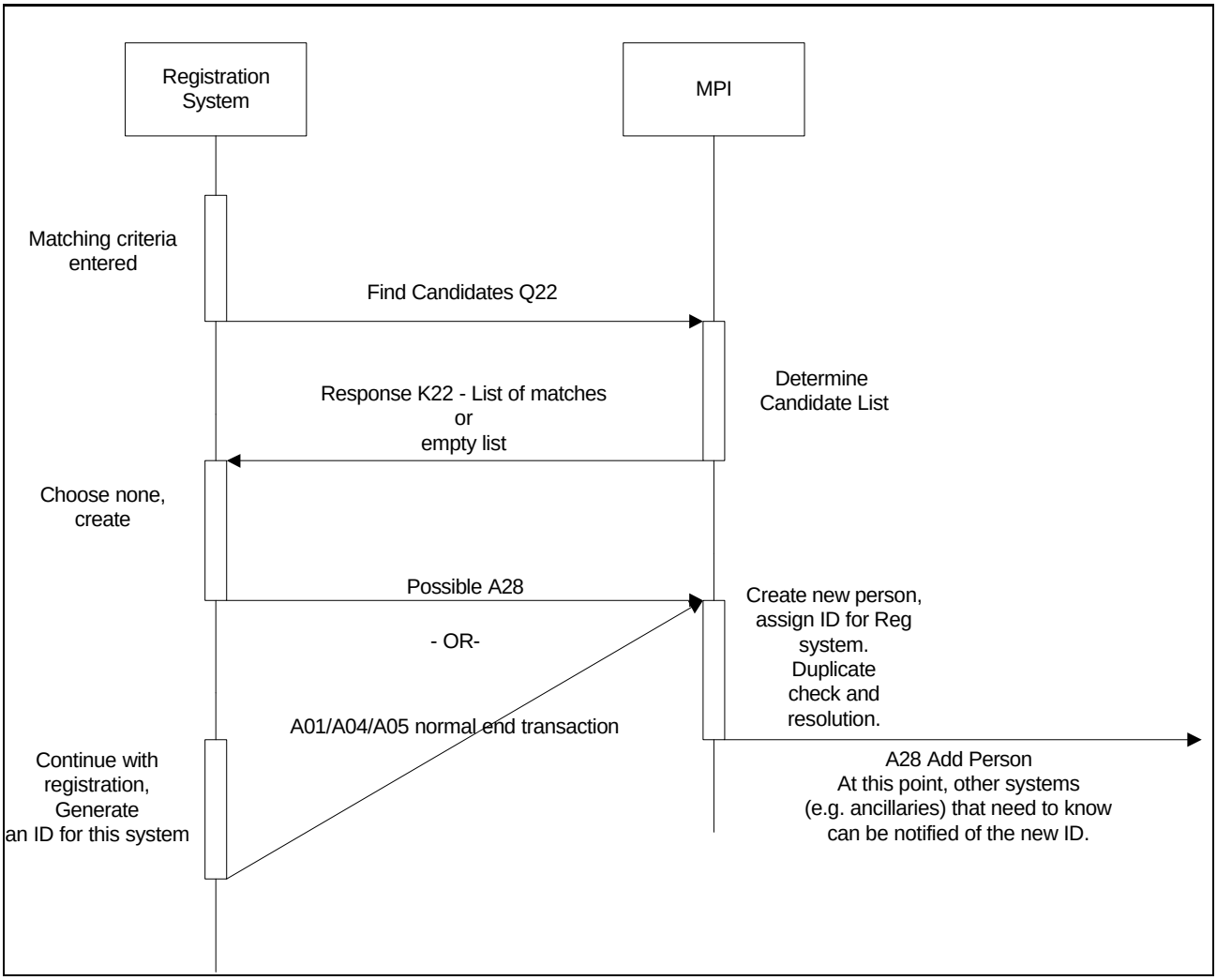


Figure 3-3 - Client system assigns identifier, does not exist on either system

The message flow again begins with a *Q22/K22 Find Candidates* query. The response may or may not contain a list of candidates.

If the client system assigns a person identifier when the record is created, an *A28 Add person information* could be sent to the MPI to notify it of the record creation. If the client system does not create an identifier until the registration is completed, the A01, A04 or A05 events could serve the purpose of notifying the MPI of an added person and identifier. The fact that the person will have an identifier unknown to the MPI, and no enterprise identifier, will allow the MPI to infer that a person record is being added.

When the person record is added to the MPI with the new identifier, an enterprise identifier is assigned, and ancillary systems may be notified of the new person record creation.

3.6.4.7 MPI assigns identifier, person exists on MPI

In the next set of three scenarios, it is assumed that a third party (ID Manager) creates identifiers for the client system, and for these examples the MPI fulfills this role. The QBP/RSP queries support this service.

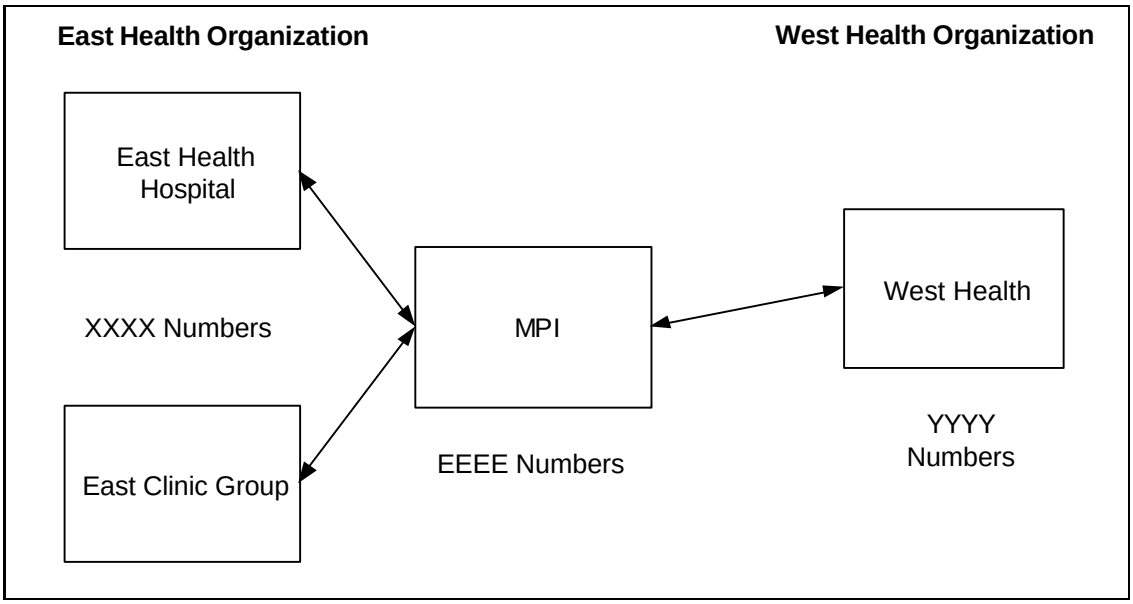


Figure 3-4 - Example of two healthcare organizations merging

Figure 3-4 shows a case where identifiers may need to be assigned by a third party. In the example, East Health Organization had one identifier domain (XXXX numbers) for both the hospital registration system and the outpatient clinic registration numbers. Coordination was done through the use of pre-printed charts for new patients, which prevented the two systems from using the same XXXX number for two patients.

Later West Health Organization is bought and merged with East. West has been using its own identifier domain (YYYY numbers). An MPI is also implemented to keep a cross-reference between the two systems, and assigns its own enterprise identifier (EEEE number) to each patient.

Because the organization is attempting to go paperless, East decides to forgo its pre-printed charts, but still keep the XXXX numbers. Since the pre-printed charts are no longer there to keep numbers from being re-used between the hospital and clinic, a third party is needed to assign the XXXX numbers.

A patient arrives at East Hospital that had never been there, but had been to West previously. To register the patient, the hospital system submits a Find Candidates Q22/K22 query to get from the MPI a list of possible matching patients. The user finds the patient since she had been to West previously. Since the patient is new to East, she must be given a new East identifier (XXXX number). An Allocate Identifiers Q24/K24 query is sent from the East Hospital to the MPI and the MPI generates an XXXX number and returns it. Later when the registration is finished, an A24 Link Person Information message is sent to notify the MPI that the allocated identifier has been assigned to a patient

In the following first scenario, the person record exists on the MPI, however it does not exist on the client system. The message flow assumes that the MPI is assigning identifiers for the client system that are not the enterprise identifiers. If this were not the case, the Allocate Identifiers Q24/K24 query would not be needed.

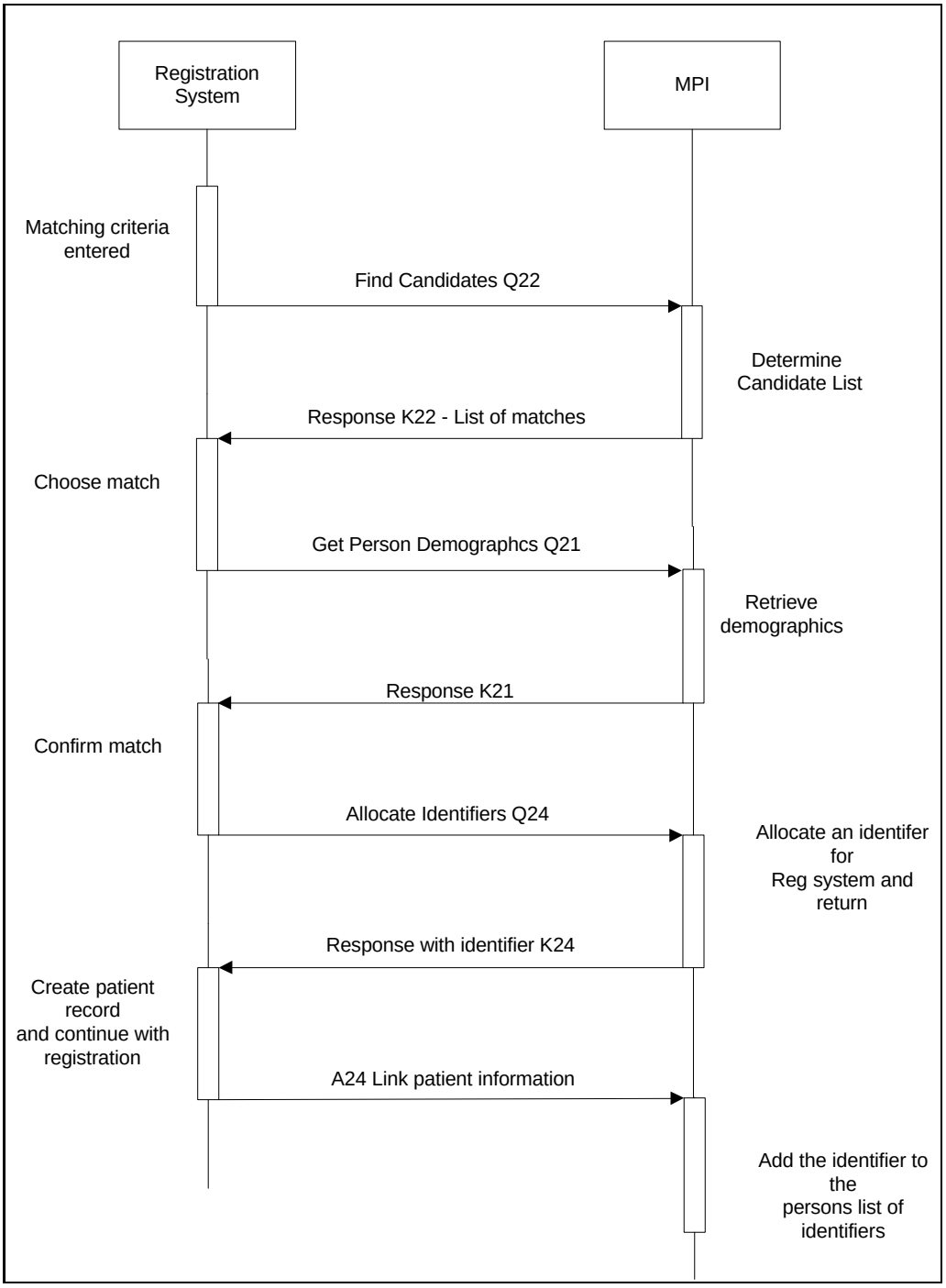


Figure 3-5 - MPI assigns identifier, person exists on MPI

The message flow is similar to previous examples, with the exception of the *Q24/K24 Allocate Identifiers* query and the final *A24 Link Patient Information* message:

Q24/K24 Allocate Identifiers - This query is for the client system to ask the MPI for an identifier in the client system's domain. It is not to assign the identifier to a particular person record, but rather just to reserve an identifier for later use.

A24 Link patient information - This message is to notify the MPI that the previously allocated identifier has been assigned to a person. The A24 should include one PID segment with the new identifier and one PID segment with the MPI enterprise identifier.

3.6.4.8 MPI assigns identifier, person exists on both systems

This scenario is identical to the scenario in 3.5.4.2 Client system assigns identifier, person exists on both systems.

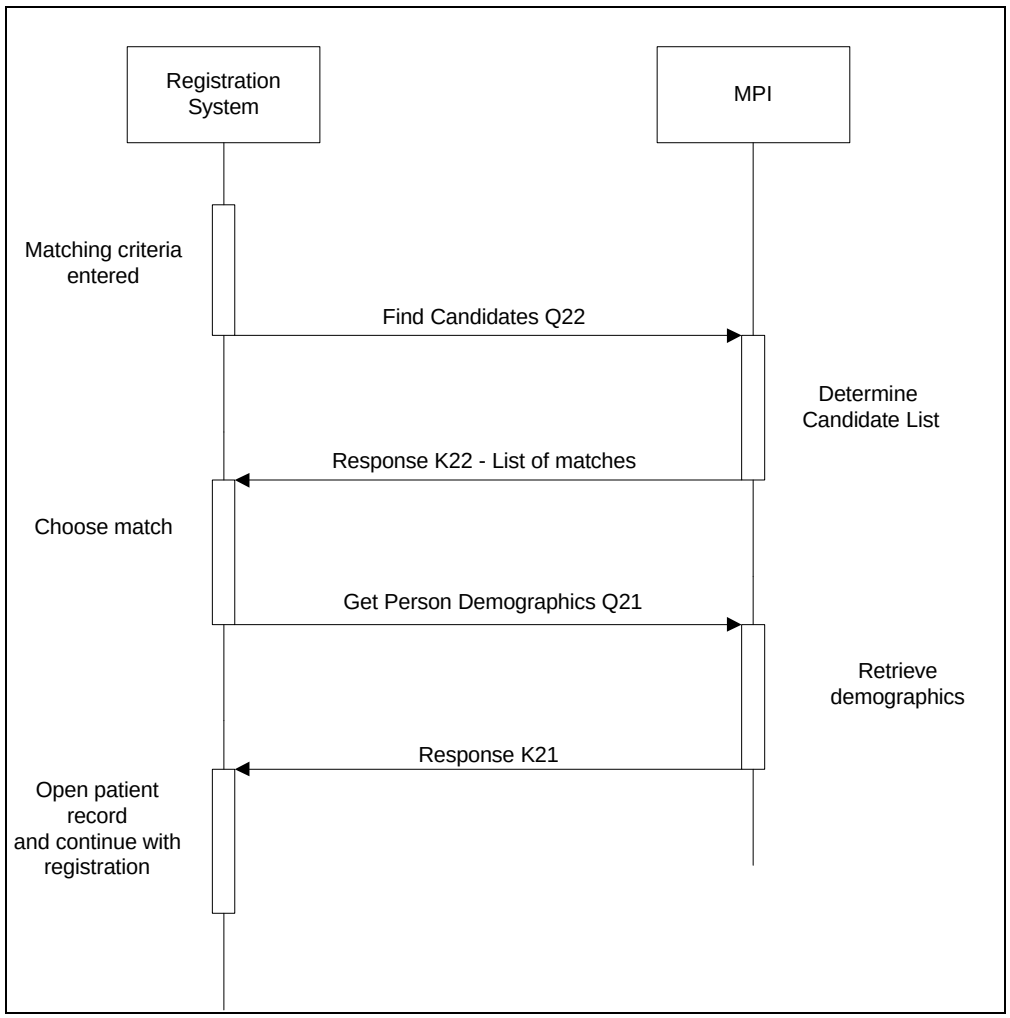


Figure 3-6 - MPI assigns identifier, person exists on both systems

3.6.4.9 MPI assigns identifier, person exists on neither system

In this scenario, the person does not exist on either system. The message flow is similar to 3.5..4.4 MPI assigns identifier, person exists on MPI, however there is no need for the *Q21/K21Get person Demographics* query as a double-check for the user since the person does not exist on the MPI. Also, after the person is registered and the identifier assigned, an *A28 Add Person Information* is sent to the MPI to have it add the person to its database and assign an enterprise identifier.

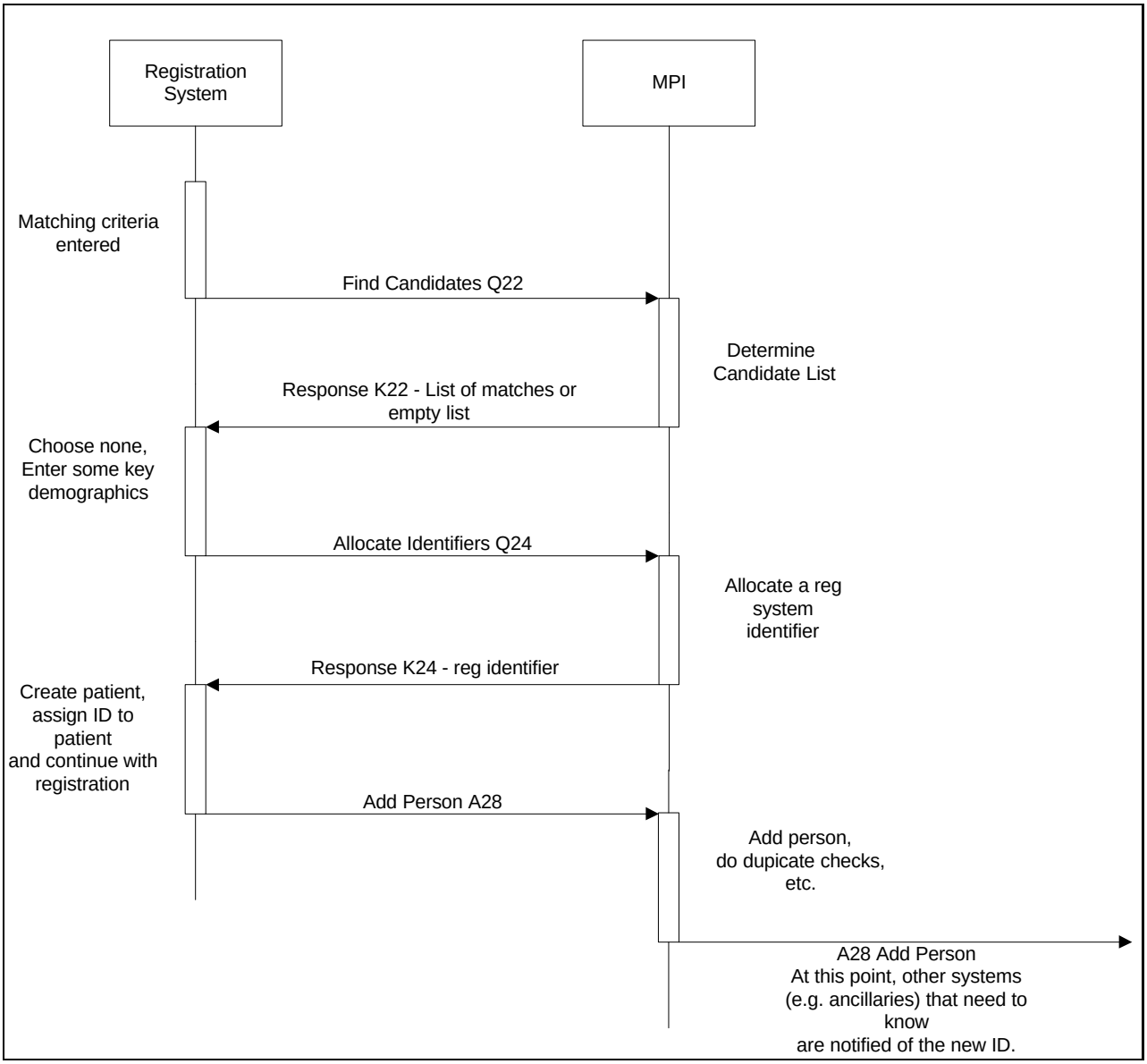


Figure 3-7 - MPI assigns identifier, person exists on neither system

3.6.5 Usage notes: Non-human PID patient identification

The species attribute is required for non-human patients. The breed and strain attributes are conditional. Thus if the strain attribute is populated, the species attribute must be populated, but the breed attribute is optional. The production class attribute is optional, but if populated the species attribute must also be populated. The name of the animal populates the PID-5 attribute, component 2. The last name of the owner may populate component 1 of PID-5. Owner information is transmitted in the NK1 segment.

Example 1: Mrs. Jones brings her 9 year old, female, spayed miniature poodle, Fluffy, into the University of California, Davis Veterinary Medical Teaching Hospital to have skin growths removed. The poodle resides with Mrs. Jones in her apartment at 1634 J St, Apt 214, in Davis, CA 95616, Yolo county;

```
MSH|^~\&||UC Davis VMTH|||199902171830||ADT^A04<cr>

PID|1||A83245^^^VMTH^MR^UCD||Jones^Fluffy^^^^^^D||19901001|S|||1634 J St^Apt
    214^Davis^CA^95616^USA^^^Yolo||||||||||||CA||||||||||||L-80700^Canine,
    NOS^SNM3|L-80832^Miniature Poodle, NOS^SNM3<cr>

PV1|1|O||R|||0045^Griffin^John^^Dr.^DVM|||||||||||||||||||||||||||||||||||1999021
    61015<cr>

NK1|1|Jones^Eunice^M^^Mrs.^^L|O|1634 J St^Apt 214^Davis^CA ^95616^USA^^^Yolo|(530)
    555-4325^^^emjones123@AOL.COM||CP|

OBX|1|NM|21611-9^Age^LN||9|yr<cr>

OBX|2|NM|3141-9^Body Weight^LN||16|lb<cr>
```

Example 2: Over the Hill Horses owns the Morgan horse mare named Breeze that is referred by Dr. Schuster of Foothill Veterinary Clinic for colic (acute abdominal pain) to the University of California, Davis Veterinary Medical Teaching Hospital. The manager of the farm and contact person is Randall "Buck" Shins, who works at the farm headquarters in Chester, CA, 96020:

```
MSH|^~\&||Foothill Veterinary Clinic||UC Davis VMTH|199902171830||ADT^A04<cr>

PID|1||N324256^^^^^Foothill Vet
    Clinic||^Breeze^^^^^^D|||F|||^^^CA^^^^^Lassen|||||||||||||||||19981123|Y|||||
    L-80400^Horse^SNM3|L-80431^Morgan horse^SNM3||BR<cr>

PV1|1|E||R|||^Schuster^^^Dr.^DVM|||||||||||||||||||||||||||||||||199903102013<c
    r>

NK1|1||||||O|||||Over the Hill Horses|||||||||||||||||~Shins^Buck^^^Mr.^^N|(530)
    555-9843^^^Buckshins@OvertheHill.com|23 West Main^Suite
    A^Chester^CA^96020^^^^Lassen<cr>
```

3.7 REFERENCED DOCUMENTS

- HCFA, Health Care Financing Administration, U.S. Dept. of Health and Human Services, USA
- ERISA: Employment Retirement Income Security Act, USA
- LOINC: Lab Observation Identifier Names and Codes, Regenstrief Institute, Indianapolis, IN, USA
- CORBAMed Person Identification Service (PIDS) - Adopted Submission. 12 February 1998.

3.8 OUTSTANDING ISSUES

None.