MASTER PATIENT INDEX (MPI)/ PATIENT DEMOGRAPHICS (PD)

HL7 INTERFACE SPECIFICATION

October 29, 2002

Documentation Revised: May 2003

Department of Veterans Affairs
VistA System Design & Development (SD&D)
Infrastructure and Security Services (ISS)

Revision History

Documentation Revisions

The following table displays the revision history for this document. Revisions to the documentation are based on patches and new versions released to the field.

Date	Revision	Description	Author
03/18/02	1.0	Create Interface Analysis document and begin process of gathering "raw materials" for specifications.	John Derderian, Albany OIFO
07/19/02	1.1	Added ADT-A01, A03, and A37 HL7 Messages.	Danny Reed, Birmingham OIFO
10/07/02	1.2	Adding MFN-M05.	Danny Reed, Birmingham OIFO
10/15/02	1.3	Final revisions, organization, and adding of CMOR Change messages and Query messages.	Chris Chesney, Oakland OIFO
10/21/02	1.4	Made some adjustments to the ADT-A19 QRD information.	Danny Reed, Birmingham OIFO
10/29/02	1.5	Made minor modifications and formatting on message examples.	Danny Reed, Birmingham OIFO
10/29/02	1.6	Formatting changes to document.	L. Hardeen, Bay Pines OIFO
02/04/03	2.0	Reformatted document to follow the ISS Technical Writers Style Guide & SOP. Also, updated broken links and clarified text/reference ambiguities.	Thom Blom, Oakland OIFO
05/14/03	2.1	No content changes; made minor format changes only (e.g., table/figure numbering scheme, format of "VistA").	Thom Blom, Oakland OIFO

Table i: Documentation revision history

Patch Revisions

For a complete list of patches related to this software, please refer to the Patch Module on FORUM.

Contents

Figures and Tables

Orientation

How to Use this Manual

Throughout this manual, advice and instructions are offered regarding the use of the Veterans Health Information Systems and Technology Architecture (VistA) Master Patient Index (MPI)/Patient Demographics (PD) Health Level Seven (HL7) specifications.

This manual uses several methods to highlight different aspects of the material:

- Various symbols are used throughout the documentation to alert the reader to special information. The following table gives a description of each of these symbols:

Symbol	Description
	Used to inform the reader of general information including references to additional reading material.
	Used to caution the reader to take special notice of critical information.

Table ii: Documentation symbol descriptions

- Descriptive text is presented in a proportional font (as represented by this font).
- Sample HL7 messages are shown in a *non*-proportional font and enclosed within a box.
- All uppercase is reserved for the representation of M code, variable names, or the formal name of options, field and file names, and security keys (e.g., the XUPROGMODE key).

How to Obtain Technical Information Online

Exported file, routine, and global documentation can be generated through the use of Kernel, MailMan, and VA FileMan utilities.

Methods of obtaining specific technical information online will be indicated where applicable under the appropriate topic. Please refer to the *Master Patient Index (MPI) VistA Technical Manual* for further information.

Help at Prompts

VistA software provides online help and commonly used system default prompts. In character-based mode, users are encouraged to enter question marks at any response prompt. At the end of the help display, you are immediately returned to the point from which you started. This is an easy way to learn about any aspect of VistA software.

To retrieve online documentation in the form of Help in any VistA character-based software:

- Enter a single question mark ("**?**") at a field/prompt to obtain a brief description. If a field is a pointer, entering one question mark ("**?**") displays the HELP PROMPT field contents and a list of choices, if the list is short. If the list is long, the user will be asked if the entire list should be displayed. A YES response will invoke the display. The display can be given a starting point by prefacing the starting point with an up-arrow ("^") as a response. For example, **^M** would start an alphabetic listing at the letter M instead of the letter A while **^127** would start any listing at the 127th entry.
- Enter two question marks ("**??**") at a field/prompt for a more detailed description. Also, if a field is a pointer, entering two question marks displays the HELP PROMPT field contents and the list of choices.
- Enter three question marks ("**???**") at a field/prompt to invoke any additional Help text stored in Help Frames.

Obtaining Data Dictionary Listings

Technical information about files and the fields in files is stored in data dictionaries. You can use the List File Attributes option on the Data Dictionary Utilities submenu in VA FileMan to print formatted data dictionaries.

For details about obtaining data dictionaries and about the formats available, please refer to the "List File Attributes" chapter in the "File Management" section of the *VA FileMan Advanced User Manual*.

Assumptions About the Reader

This manual is written with the assumption that the reader is familiar with the following:

- VistA computing environment
- VA FileMan data structures and terminology
- Microsoft Windows
- M programming language

It provides an overall explanation of the MPI/PD HL7 interface specifications contained in MPI/PD VistA software, version 1.0. However, no attempt is made to explain how the overall VistA programming system is integrated and maintained. Such methods and procedures are documented elsewhere. We suggest you look at the various VA home pages on the World Wide Web (WWW) for a general orientation to VistA. For example, go to the Veterans Health Administration (VHA) Office of Information (OI) System Design & Development (SD&D) Home Page at the following web address:

http://vista.med.va.gov/

Reference Materials

Readers who wish to learn more about the MPI/PD software should consult the following:

- *Master Patient Index (MPI) VistA Programmer Manual*
- *Master Patient Index (MPI) VistA Technical Manual*
- *Master Patient Index (MPI) VistA User Manual*
- The MPI/PD Home Page at the following web address:

  http://vista.med.va.gov/mpi_pd/Index.html

  This site contains additional information and documentation.
- The HL7 Standard documentation for current and previous versions is available at the following web address:

  http://vista.med.va.gov/messaging/HL7/hl7_specifications.htm

VistA documentation is made available online in Microsoft Word format and Adobe Acrobat Portable Document Format (PDF). The PDF documents *must* be read using the Adobe Acrobat Reader (i.e., ACROREAD.EXE), which is freely distributed by Adobe Systems Incorporated at the following web address:

http://www.adobe.com/

VistA documentation can be downloaded from the National VistA Support (NVS) anonymous directories or from the System Design and Development (SD&D) VistA Documentation Library (VDL) website:

http://www.va.gov/vdl/

For more information on the use of the Adobe Acrobat Reader, please refer to the *Adobe Acrobat Quick Guide* at the following web address:

http://vista.med.va.gov/iss/acrobat/index.asp

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Chapter 1: Introduction

Master Patient Index/Patient Demographics (MPI/PD) was developed to initialize active patients to the Master Patient Index (MPI) and to establish the framework for the sharing of patient information between sites. During the process of initialization to the Master Patient Index, each active patient receives an Integration Control Number (ICN), a Coordinating Master of Record (CMOR), and a Treating Facility List of the sites where the patient is receiving care. Your site becomes part of the network of sites that share key demographic data for patients via HL7 messaging. Master Patient Index VistA (MPI) and Patient Demographics (PD) are distributed and installed together. This manual covers the functionality in both packages.

For more information on why a patient doesn't have an ICN, please refer to "Appendix A—Why Doesn't a Patient Have a National ICN?" in this manual.

For more information on ICN assignment exceptions, please refer to "Appendix B—Exceptions that Prevent the Assignment of a National ICN" in this manual.

1.1. Purpose

This manual describes the MPI trigger events as well as the HL7 messages that help to establish and maintain the integrity of the unique identification of a patient throughout the VHA Enterprise.

Chapter 2: HL7 Information

2.1. Commit and HL7 Application Acknowledgements

Need to send both Commit and HL7 Application Acknowledgements for each ADT type message.

2.2. Background Messages

Updates to specific patient demographic data will trigger the broadcasting of a HL7 ADT-A08 message. Because there is no set way of identifying when an edit to patient information is complete, these edit events are marked as needing to be transmitted in the ADT/HL7 PIVOT file (#391.71). The background job VAFC BATCH UPDATE (scheduled TaskMan job) periodically broadcasts the HL7 ADT-A08 message, containing any changes to data, to the MPI.

The Local and Missing ICN background process looks at the Local ICN and Missing ICN cross-reference and sends batch messages to the MPI requesting an ICN. Patients can receive a Local ICN if an attempt to contact the MPI fails. The Missing ICN cross-reference is set if a package outside of Patient Information Management System (PIMS) adds a patient to the PATIENT file (#2).

For more information on why a patient doesn't have an ICN, please refer to "Appendix A—Why Doesn't a Patient Have a National ICN?" in this manual.

For more information on ICN assignment exceptions, please refer to "Appendix B—Exceptions that Prevent the Assignment of a National ICN" in this manual.

2.3. Direct Connect

The Direct Connect is a real-time Transmission Control Protocol/Internet Protocol (TCP/IP) connection to the Master Patient Index to allow for an immediate request for an ICN. It is activated during the Register A Patient, Load/Edit Patient Data, 10-10T Registration, and Electronic 10-10EZ Processing processes when:

1. A new patient is added to the system, or
2. When a patient exists but doesn't have an ICN

In addition, by utilizing the Single Patient Initialization to MPI option, the TCP/IP direct connection with the MPI will occur. This event causes creation of a VQQ-Q02 and is sent to the MPI to find out if the patient is known. If the MPI returns a message stating that the patient is not known, an ADT-A28 Add Person message is then sent to the MPI. If the patient was known or added via the ADT-A28 message, the MPI will return the known information and the patient's entry is updated.

The Display Only Query option, used to view the data the MPI knows about a patient, also utilizes the TCP/IP direct connect with the MPI. A VTQ query is sent to the MPI. If the MPI knows the patient or finds a list of potential matches, the data is displayed to the users. No data is updated at the site or the MPI. If the MPI does not know the patient, a message is displayed stating so.

2.4. VistA References

The MPI/PD software maintains the VistA ICN fields as well as the list of associated systems (TREATING FACILITY file [#391.91]) at all VistA sites. The MPI/PD software will also maintain the integrity of the patient identity at all other known systems via the HL7 ICN maintenance messages listed below. VistA software can obtain an ICN or retrieve a list of associated system via the supported VistA references listed below (more information can be obtain through the FORUM DBA menu):

Name	IA	Reference Type	Custodial Package	Description
MPIF001	2701	Supported	Master Patient Index—VistA	Function APIs to return values on the MPI node in the PATIENT file. This DBIA documents some entry points for accessing the MPI node in the PATIENT file for use by VistA packages.
MPIFAPI	2702	Supported	Master Patient Index—VistA	Functions to return the MPI node, Subscription Control Number from the MPI Node, the name of the HL7 Logical Link for the MPI and to return the next Local Integration Control Number. These APIs are provided for VistA packages.
VAFCTFU1	2990	Supported	Registration	Function API's that will return a list of systems associated with a specific ICN or DFN.
VAFCQRY	3630	Private	Registration	Function API's used to build generic PID, EVN, and PD1 segments in the new HL7 2.4 format that will include all of the Patient identifiers (ICN(s), SSN, Claim Number and DFN).

Table 2-1: MPI-related IA references

2.5. Trigger Events & Message Definitions

Doc. Ref. #	Trigger Event	Event Supported HL7 V2.4 Message	Notes
2.5.1	Query MPI for match	VQQ-Q02	The MPI will accept a query for patient information. The current search algorithm uses Name, DOB, and SSN (if available) for its search. Results are returned in an ACK/Q02 message.
2.5.2	Add new patient to the MPI	ADT-A28	The MPI will accept new patient adds via ADT-A28 (add person or patient information). The MPI will in-turn broadcast back an ADT-A24 (link patient information) message.
2.5.3	Link to an existing patient on the MPI	ADT-A24	The MPI will accept an ADT-A24 (link patient information) message for the purpose of matching a sites patient to an existing ICN. The sites current demographic values will also be stored as a result.
2.5.4 2.5.5	Update to fields on an existing MPI entry	ADT-A04, ADT-A08	The MPI will accept patient updates via ADT-A04 (register a patient) or ADT-A08 (update patient information)
2.5.6	Update Person Information outside of an event	ADT-A31	The MPI will accept an ADT-A31 (update person information) and update the appropriate entry on the MPI depending on if the message is from the CMOR (MPI VETERAN/CLIENT file [#985]) or a treating facility (ASSOCIATED FACILITY file [#985.5])
2.5.7 2.5.8 2.5.9	Update to date last treated	ADT-A01, ADT-A03, MFN-M05	The MPI will accept updates to date last treated and event reason via ADT-A01 (admit/visit notification) and/or ADT-A03 (Discharge and/or clinic checkouts). If the update changes the sites current MPI date last treated or event reason the MPI will broadcast a MFN-M05
2.5.10 2.5.3	Resolution of duplicates at the site where both entries exist on the MPI	ADT-A40 ADT-A24	The MPI will accept a resolution of a duplicate from a site via ADT-A40 (merge patient - patient identifier list). The MPI will in-turn broadcast out an ADT-A24 (link patient information).
2.5.3	Resolution of duplicates on the MPI	ADT-A24	The MPI will notify sites of a duplicate resolution via ADT-A24 (link patient information).

Doc. Ref. #	Trigger Event	Event Supported HL7 V2.4 Message	Notes
2.5.11 2.5.12	Inactivation of existing entry on the MPI	ADT-A29 or ADT-A37	The MPI will accept ADT-A37 (unlink patient information) or an ADT-A29 (Delete Patient Information) message to delete or inactivate a patient from the MPI. If a patient is shared it will be treated as an un-link, however if the patient is not shared the demographic data as well as the treating facility information will be deleted/purged from the MPI. The A29 won't inactivate if there is another treating facility associated with the ICN.
2.5.13	Identification and resolution of a mismatched patient	ADT-A43	The MPI will notify sites of a mismatched patient via ADT-A43 (move patient - patient identifier list)
2.5.14	Change of CMOR assignment	ADT-A31	The MPI will accept a change in CMOR assignment via an ADT-A31 from the current CMOR via ADT-A31 (update person information)
2.5.15	Patient Query	QRY/ADR-A19	The sending site is requesting patient demographic information to be returned for a specific ICN via the QRY-A19 (patient query) message. The data is returned in an ADR message to the requesting site.

Table 2-2: Trigger events and message definitions

2.5.1. Query for Patient Matches—VQQ

The purpose of this message is to query the Master Patient Index (MPI) to see if the patient in question exists or potentially exists. The query is utilized in three different ways:

1. Via the real-time connection with the MPI where the query is just seeing what the MPI has for display only purposes.
2. Via the real-time connection with the MPI where the query is being used to see if the patient in question is known.
3. Via the background process as part of a batch message to see if the patient is known on the MPI and if the patient is not known (no matches, not even potential matches), is added to the MPI.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

VQQ^Q02	Message	Chapter
MSH	Message Header	2
VTQ	Virtual Table Query	2
RDF	Table Row Definition	2

ACK^Q02	Message	Chapter
MSH	Message Header	2
MSA	Message Acknowledgement	2
QAK	Query Acknowledgement	2
RDF	Table Row Definition	2
{RDT}	Table Row Data	2

Real-Time Connection Query Message Example:

Sent to the MPI:

```
MSH|^~\&|MPI_LOAD|500|MPI-ICN||||VTQ^Q02|100000082-1|
VTQ|100000082|T|VTQ_PID_ICN_NO_LOAD|ICN|@00108.1^EQ^FRIDAY^AND~@00122^EQ^454564567^A
ND~@00108.2^EQ^INDIANA^AND~@00110^EQ^19780303
RDF|17|@00108.1^ST^20~@00122^ST^9~@00110^ST^8~@00756^ST^3~@00105^ST^19~@00108.2^ST^2
0~@00169^ST^99~@00740^ST^8~@00108.3^ST^16~@00111^ST^1~@00126.1^ST^30~@00126.2^ST^3~@
00108.5^ST^15~@00108.4^ST^10~@00109.1^ST^20~@ZEL6^ST^9~@CASE#^ST^69
```

Figure 2-1: Real-Time Connection Query message example: Sent to the MPI

Returned from the MPI:

```
MSH|^~\&|MPI|MPI|MPI_LOAD|500|||ADT^A31|100000082-1|P|2.3
MSA|AA|100000082-1
QAK|100000082|OK
RDF|17|@00108.1^ST^20~@00122^ST^9~@00110^ST^8~@00756^ST^3~@00105^ST^19~@00108.2^ST^2
0~@00169^ST^99~@00740^ST^8~@00108.3^ST^16~@00111^ST^1~@00126.1^ST^30~@00126.2^ST^3~@
00108.5^ST^15~@00108.4^ST^10~@00109.1^ST^20~@ZEL6^ST^9~@CASE#^ST^69
RDT|FRIDAY|454564567|19780203|998|1001170560V235869|INDY|998~||E|M|JASPER|AL|||PUPPY
|
```

Figure 2-2: Real-Time Connection Query message example: Returned from the MPI

When the VQQ is part of a batch message (i.e., the Local/Missing ICN Resolution Job):

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

VQQ^Q02	Message	Chapter
BHS	Batch Message Header	2
{MSH	Message Header	2
VTQ	Virtual Table Query	2
RDF}	Table Row Definition	2
BTS	Batch Trailer Segment	2

ACK^Q02	Message	Chapter
BHS	Batch Message Header	2
{MSH	Message Header	2
MSA	Message Acknowledgement	2
QAK	Query Acknowledgement	2
RDF	Table Row Definition	2
{RDT}}	Table Row Data	2
BTS	Batch Trailer Segment	2

Sent to the MPI:

```
BHS^~|\&^MPIF-STARTUP^500^MPIF MPI^^20020913111339-
0500^^~T~VQQ|Q02~2.3~AL~NE^^500149126^
MSH^~|\&^MPIF-STARTUP^500^^^^^VQQ~Q02^500152422-1^^2.3^^^AL^NE
VTQ^100000042^T^VTQ_PID_ICN_LOAD_1^ICN^@00108.1~EQ~NEW~AND|@00108.2~EQ~PATIENT~AND|@
00110~EQ~19400203~AND|@00111~EQ~M~AND|@00108.4~EQ~ATWE~AND|@00108.3~EQ~FOR
RDF^17^@00108.1~ST~20|@00122~ST~9|@00110~ST~8|@00756~ST~3|@00105~ST~19|@00108.2~ST~2
0|@00169~ST~99|@00740~ST~8|@00108.3~ST~16|@00111~ST~1|@00126.1~ST~30|@00126.2~ST~3|@
00108.5~ST~15|@00108.4~ST~10|@00109.1~ST~20|@ZEL6~ST~9|@CASE#~ST~69
BTS^1
```

Figure 2-3: Real-Time Connection Query batch message example: Sent to the MPI

Returned from the MPI:

```
BHS^~|\&^MPIF MPI^MPI^MPIF-STARTUP^500^20020913111358-
0500^^~D~ACK|Q02~2.3~NE~NE^AA~^20049759^500149126
MSH^~|\&^MPI^MPI^MPIF-STARTUP^500^^^ACK^500152422-1^P^2.3
MSA^AA^500152422-1
QAK^100000042^OK
RDF^17^@00108.1~ST~20|@00122~ST~9|@00110~ST~8|@00756~ST~3|@00105~ST~19|@00108.2~ST~2
0|@00169~ST~99|@00740~ST~8|@00108.3~ST~16|@00111~ST~1|@00126.1~ST~30|@00126.2~ST~3|@
00108.5~ST~15|@00108.4~ST~10|@00109.1~ST~20|@ZEL6~ST~9|@CASE#~ST~69
RDT^NEW^^^500^1001170233V211078^PATIENT^500|^^FOR^^^^^^^
BTS^1
```

Figure 2-4: Real-Time Connection Query batch message example: Returned from the MPI

2.5.2. ADT/ACK—Add Person or Patient Information (event A28)

The purpose of this message is to establish a patient on the Master Patient Index so that the patient record can be viewed across the enterprise and to allow 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 enterprise. To the enterprise systems, the person may be a current patient, a potential future patient, or never be needed. These events can be used to also maintain another MPI (master patient index) or enterprise database.

The person whose data is being sent should be identified in the PID segment using the PID-3 - patient identifier list. An A28 establishes person identifiers (e.g., social security number, claim#, or other unique

identifiers) and contains a person identifier in the PID-3 - patient identifier list. Other identifiers such as depreciated identifiers (i.e., local ICN) can be sent in the PID-4 -alternate patient identifier list, which will also be stored as an alternate id on the MPI for that system to be included in subsequent communicates from the MPI. Each new system will need to register their identifier list and assigning authority with the MPI development group.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A28^ADT_A28	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^A28^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

Sample Message Sent to the MPI:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021003100450-0500^^ADT~A28^500167546^T^2.4^^^AL^AL^
EVN^^^^^12556~LINK~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^^500000558V314240~~~USVHA&&0363~NI~VA FACILITY
ID&500&L~~20021003|878768765~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000088~~~USVHA&&0363~PI~VA FACILITY
ID&500&L^^SECONDTHUR~CHRIS~L~~~~L^""^19230807^F^^^""~""~""~""~""~~P~""|~~""~""~~~N^"
"^""^""^^""^""^^^^^^^^^^^^^^""^^
PD1^^^ALBANY~D~500
```

Figure 2-5: A28—Add Person or Patient Information message example: Sent to the MPI

2.5.3. 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. 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.

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 "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

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
PID	Patient (2) Identification	3
[PD1]	Patient (2) Additional Demographics	3
[PV1]	Patient (2) Visit	3

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

Sent from the MPI to the site to assign an ICN, this was a result of an A28 Add Patient message:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20020921203833-0500^^ADT~A24^500167165^T^2.4^^^AL^AL^
EVN^^^^^12556~LINK~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^^1001170560V235869~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|454564567~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000082~~~USVHA&&0363~PI~VA FACILITY
ID&500&L|1001170560V235869~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020921202424-
0500^^FRIDAY~INDIANA~~~~~L^SPOTTY~~~~~~M^19780303^M^^^876 TIGER
DRIVE~""~BIRMINGHAM~AL~35209~~P~""|~~TUSCALOOSA~AL~~~N^073^(876)987-
9987^""^^M^0^^^^^^^^^^^^""^^
PID^2^^1001170560V235869~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|454564567~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000082~~~USVHA&&0363~PI~VA FACILITY
ID&500&L|1001170560V235869~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020921202424-
0500^^FRIDAY~INDIANA~~~~~L^SPOTTY~~~~~~M^19780303^M^^^876 TIGER
DRIVE~""~BIRMINGHAM~AL~35209~~P~""|~~TUSCALOOSA~AL~~~N^073^(876)987-
9987^""^^M^0^^^^^^^^^^^^""^^
PD1^^^BPMARION~D~998
```

Figure 2-6: A24—Link Patient Information message example: Sent from the MPI

Application Level Acknowledgement Returned:

```
MSH^~|\&^MPIF TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020921203840-0500^^ACK~A24^200100069^T^2.4^^^AL^NE^
MSA^AA^500167165^^^^DFN=100000082
```

Figure 2-7: A24—Link Patient Information message example: Application level acknowledgement returned

2.5.4. ADT/ACK—Register a Patient (event A04)

An A04 event signals that the patient has been registered via the Register a Patient option [DG REGISTER A PATIENT]. It does not indicate that the person actually had a treatment session at that time, just that the registration event happened.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A04^ADT^A04	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Patient Additional Demographics	3
[{ NK1 }]	Next of Kin / Associated Parties (NOT USED)	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info. (NOT USED)	3
[{ OBX }]	Observation/Result (NOT USED)	7
[ZPD]	VA Specific Patient Information Segment (NOT USED)	
[ZSP]	VA Specific Service Period Segment (NOT USED)	
[ZEL]	VA Specific Patient Eligibility Segment (NOT USED)	
[ZCT]	VA Specific Emergency Contact Segment (NOT USED)	
[ZEM]	VA Specific Employment Information Segment (NOT USED)	
[ZFF]	VA Specific File/Field Segment (NOT USED)	

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

Message sent:

```
MSH^~|\&^RG ADT^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021015084748-0500^^ADT~A04^500168673^T^2.4^^^AL^AL^US
EVN^^^^^12564~CHESNEY~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^^1001169886V995666~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|036994344~~~USSSA&&0363~SS~VA FACILITY ID&500&L|7169971~~~USVHA&&0363~PI~VA
FACILITY ID&500&L|036994344~~~USVBA&&0363~PN~VA FACILITY
ID&500&L|500000373V383422~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20011005120510-
0500|1001169143V626477~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020611130452-
0500|1001169878V490521~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020611152848-
0500^^CHESNEY~CHRISTINE~MCKEE~~~~L^TESTING~~~~~~M^19690303^F^^^881 PINE VALLLEY
ROAD~NOT USED~JACKSONVILLE~NC~28546~~P~NOT USED|~~PROVIDENCE~RI~~~N^""^555-555-
5555^""^^""^""^^^^^^^^^^^^^20020506^^
PD1^^^ALBANY~~500^""
PV1^1^O^""^^^^^^^^^^^^^^^SC VETERAN^^^^^^^^^^^^^^^^^^^^^500A^^^^^^^^^^15403
OBX^1
ZPD^1^^PROVIDENCE^RI^""^MCKEE,DAVID^MCKEE,JUDITH^""^20020506^""^0^""^""^6^""^""^""^0
^""^""^""
ZSP^1^1^^""^""^""^""^""
ZEL^1^3^036-99-4344~~^4344^""^036994344^""^1^SC
VETERAN^""^""^""^""^""^""^""^""^""^""^""^""^""^""
ZCT^1^1^CHESNEY,ANDREW^""^""^""^""^""^""
ZEM^1^1^""^""^""^""^""^""
ZFF^2^
```

Figure 2-8: A04—Register a Patient message example: Sent

Application Level Acknowledgement Received (Error returned as an example):

```
MSH^~|\&^RG ADT^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021015084805-0500^^ACK~A04^200103324^T^2.4^^^AL^NE^USA
MSA^AA^500168673^-1^No CMOR for ICN 1001169886 in MPI VETERAN/CLIENT (#985) file.
```

Figure 2-9: A04—Register a Patient message example: Application level acknowledgement received

2.5.5. 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 "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A08^ADT_A08	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Patient Additional Demographics	3
[{ NK1 }]	Next of Kin / Associated Parties (NOT USED)	3
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info. (NOT USED)	3
[{ OBX }]	Observation/Result (NOT USED)	7
[ZPD]	VA Specific Patient Information Segment (NOT USED)	
[ZSP]	VA Specific Service Period Segment (NOT USED)	
[ZEL]	VA Specific Patient Eligibility Segment (NOT USED)	
[ZCT]	VA Specific Emergency Contact Segment (NOT USED)	
[ZEM]	VA Specific Employment Information Segment (NOT USED)	
[ZFF]	VA Specific File/Field Segment (NOT USED)	

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

Message sent:

```
MSH^~|\&^RG ADT^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20020921133629-0500^^ADT~A08^500167099^T^2.4^^^AL^AL^US
EVN^A1^20020913112211-0500^^A1^12584~REED~DANNY~~~~~~USVHA&&0363~L~~~NI~VA FACILITY
ID&500&L^20020913112211-0500^500
PID^1^^1001170555V~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|040345123~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000050~~~USVHA&&0363~PI~VA FACILITY ID&500&L|5678923~~~USVBA&&0363~PN~VA
FACILITY ID&500&L|500000524V103809~~~USVHA&&0363~NI~VA FACILITY
ID&500&L~~20020913110104-0500|1001170419V238836~~~USVHA&&0363~NI~VA FACILITY
ID&500&L~~20020920181506-0500^^JOSEPH~TEST~FIRST~~~~L^WONDER
BREAD~~~~~~M^19450403^M^^^""~~""~ALABAMA~""~~P|~~MOBILE~ALABAMA~~~N^"""^"""^"""^^S^9^^^
^^^^^^^^^""^^
PD1^^^DETROIT~~553^""
PV1^1^I^11E REHAB~1102~10^^^""~""~""^623~BAKER~ROY^^^15^^^^^^^^NON-VETERAN
(OTHER)^^^12^^^^^^^^^^^^^^^^^500A^^^^^20020913112211-0500^""
OBX^1^CE^~SECURITY LEVEL^""^0^"""^"""^"""^"""^F^"""^""
^20020918095831-0500^""^""^""
ZPD^1^""^YES^AL^""^"""^"""^"""^"""^0^"""^"""^"""^9^"""^"""^0^"""^"""^""
ZSP^1^0^""^"""^"""^"""^"""^""
ZEL^1^""^"""^"""^"""^"""^5678923^""^0^NON-VETERAN
OTHER)^""^"""^"""^"""^"""^"""^"""^"""^"""^"""^"""^""
ZCT^1^1^""^"""^"""^"""^"""^"""^""
ZEM^1^1^""^"""^"""^"""^"""^""
ZFF^2^.08;
```

Figure 2-10: A08—Update Patient Information message example: Sent

Application Level Acknowledgement Received:

```
MSH^~|\&^RG ADT^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020921133639-0500^^ACK~A08^20099963^T^2.4^^^AL^NE^USA
MSA^AA^500167099^0
```

Figure 2-11: A08—Update Patient Information message example: Application level acknowledgement received

2.5.6. 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 A31 can also be used for back loading MPI information for the person, or for back loading person and historical information.

To maintain backward compatibility with previous releases, the PV1 segment is required.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A31^ADT_A31	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Patient Additional Demographics	3
PV1	Patient Visit (NOT USED)	3
[PV2]	Patient Visit - Additional Info. (NOT USED)	3

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

Message sent to the MPI:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021015081501-0500^^ADT~A31^500168669^T^2.4^^^AL^AL^
EVN^^^^^12564~CHESNEY~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^^1001169302V994394~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|101070268P~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|7169807~~~USVHA&&0363~PI~VA FACILITY
ID&500&L|1000646385V533117~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20001018084852-
0500|1001167924V553278~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20011204073044-
0500|500000408V225760~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20011204073244-
0500|1001169280V855646~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020403080806-
0500|500000410V905380~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020109133053-
0500^^CHESNEY~ANDREW~~~~~L^""^19680702^M^^^""~""~""~""~""~~P~""|~~""~""~~~N^""^""^""
^^M^0^^^^^^^^^^^^""^^
PD1^^^SAN FRANCISCO~D~662
```

Figure 2-12: A31—Update Person Information message example: Sent to the MPI

Application Level Acknowledgment Received:

```
MSH^~|\&^MPIF TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021015081512-0500^^ACK~A31^200103314^D^2.4^^^AL^NE^
MSA^AA^500168669^^^^DFN=7169807
```

Figure 2-13: A31—Update Person Information message example: Application level acknowledgment received

2.5.7. 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. It signals the beginning of a patient's stay in a healthcare facility. This information is entered in the primary Patient Administration system (VistA PIMS Admit a Patient option [DG ADMIT PATIENT])**.** It includes short stay and "John Doe" (e.g., patient name is unknown) admissions. It will be sent to the MPI to update the Patient Master File fields date last treated and event reason.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A01^ADT_A01	**ADT Message**	**Chapter**
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Additional Demographics	3
PV1	Patient Visit	3
[{ OBX }]	Observation/Result (NOT USED)	7
[{ AL1 }]	Allergy Information (NOT USED)	3
[PDA]	Patient Death and Autopsy (NOT USED)	3

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

Message sent:

```
MSH^~|\&^RG ADT^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021004111252-0500^^ADT~A01^500167926^T^2.4^^^AL^AL^US
EVN^A1^20021004111123-0500^^A1^12564~CHESNEY~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA
FACILITY ID&500&L^20021004111123-0500^500
PID^1^^1001170714V~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|012367845~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000093~~~USVHA&&0363~PI~VA FACILITY
ID&500&L|500000564V890138~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20021004105118-
0500^^CHESNEY~FRIDAY
WEEK~TWO~~~~L^SMITHE~~~~~~M^19540430^F^^^""~""~""~""~""~~P~""|~~PROVIDENCE~RI~~~N^""
^""^""^^M^0^^^^^^^^^^^^""^^
PD1^^^ALBANY~D~500
PV1^1^I^10B MED~""~""~&500^^^""~""~""^623~BAKER~ROY^^^2^^^^^^^^SC
VETERAN^^^2^^^^^^^^^^^^^^^^^^500A^^^^^20021004111123-0500^""
```

Figure 2-14: A01—Admit/Visit Notification message example: Sent

Application Level Acknowledgement Received:

```
MSH^~|\&^RG ADT^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021004111258-0500^^ACK~A01^200101854^T^2.4^^^AL^NE^USA
MSA^AA^500167926^0
```

Figure 2-15: A01—Admit/Visit Notification message example: Application level acknowledgement received

2.5.8. 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. (VistA PIMS Discharge a Patient option [DG DISCHARGE PATIENT]). It is also captured when the patient checks out of a non-stop code clinic. (VistA PIMS Appointment Check-in/Check-out option [SDAM APPT CHECK IN/OUT]—checkout action.) The MPI will capture this event in order to update the Patient Master File fields date last treated and event reason.

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.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A03^ADT_A03	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. (NOT USED)	3
[{ OBX }]	Observation/Result (NOT USED)	7
[PDA]	Patient Death and Autopsy (NOT USED)	3

ACK^A03^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

Message Sent:

```
MSH^~|\&^RG ADT^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^RGADT^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021003121509-0500^^ADT~A03^500167794^T^2.4^^^AL^AL^US
EVN^A2^20021003121048-0500^^A2^12564~CHESNEY~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA
FACILITY ID&500&L^20021003121048-0500^500
PID^1^^1001170703V~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|425789992~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000091~~~USVHA&&0363~PI~VA FACILITY
ID&500&L|500000561V641849~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20021003113450-
0500|500000562V707794~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20021003120852-
0500^^TESTING~CHRISTMAS~~TST~~~L^""^19370525^M^^^""~""~""~""~""~~P~""|~~""~""~~~N^""
^""^""^^""^""^^^^^^^^^^^^^^^""^^
PD1^^^ALBANY~D~500
PV1^1^I^10B MED~""~""~&500^^^10B MED~""~""^623~BAKER~ROY^^^2^^^^^^^^SC
VETERAN^^^2^^^^^^^^^^^^^^^17^^^^^^^^20021003120920-0500^20021003121048-0500
```

Figure 2-16: A03—Discharge/End Visit message example: Sent

Application Level Acknowledgement Received:

```
MSH^~|\&^RG ADT^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021003121526-0500^^ACK~A03^200101662^T^2.4^^^AL^NE^USA
MSA^AA^500167794^0
```

Figure 2-17: A03—Discharge/End Visit message example: Application level acknowledgement received

2.5.9. MFN—Update Treating Facility

The treating facility list is a list of systems that know a specific Integration Control Number (ICN). The list can contain systems that are not VAMC like FHIE or HDR. The list is built and updated as a result of systems identifying the system knows a particular ICN either via the MPI approved query and subsequent ADT-A28 Add patient or ADT-A24 Link HL7 message.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

MFN^M05	Master File update	Chapter
MSH	Message Header	2.24.1
MFI	Master File Identification Segment	8.4.1
{MFE	Master File Entry Segment	8.4.2
ZET}	ZET is the event reason for date of last treatment	N/A

MFK^M05	Master File update Acknowledgment	Chapter
MSH	Message Header	2.24.1
MFI	Master File Identification Segment	8.4.1
{MFE	Master File Entry Segment	8.4.2
MFA}	Master File Acknowledgement Segment	8.4.3

Message Received from the MPI:

```
MSH^~|\&^VAFC TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020916085620-0500^^MFN~M05^20096036^T^2.4^^^AL^AL^US
MFI^TFL^^UPD^^^NE^500~ALBANY
MFE^MUP^500^20020913112211-0500^500~ALBANY~VA~1001170419~ICN~VA
ZET^A1
MFE^MUP^553^^553~DETROIT,MI~VA~1001170419~ICN~VA
ZET^
MFE^MUP^998^^998~BPMARION~VA~1001170419~ICN~VA
ZET^
```

Figure 2-18: MFN—Update Treating Facility message example: Received from the MPI

Application Level Acknowledgement:

```
MSH^~|\&^VAFC TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020916085613-0500^^MFK~M05^20096030^T^2.4^^^AL^NE^US
MSA^AA^500164930^0
```

Figure 2-19: MFN—Update Treating Facility message example: Application level acknowledgement

2.5.10. ADT/ACK—Merge Patient - Patient Identifier List (event A40)

A merge has been done at the patient identifier list level (i.e., on the Associated System). 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.

The result of the ADT-A40 message received, an ADT-A24 Link Patient message sent to each site in the treating facility list with the "FROM" ICN to change the ICN to the "TO" ICN.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A40^ADT_A40	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^A40^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

Message Sent to the MPI:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021015094425-0500^^ADT~A40^500168695^T^2.4^^^AL^AL^
EVN^^^^^12564~CHESNEY~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^^1001169886V995666~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|036994344~~~USSSA&&0363~SS~VA FACILITY ID&500&L|7169971~~~USVHA&&0363~PI~VA
FACILITY ID&500&L|036994344~~~USVBA&&0363~PN~VA FACILITY
ID&500&L|500000373V383422~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20011005120510-
0500|1001169143V626477~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020611130452-
0500|1001169878V490521~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20020611152848-
0500^^CHESNEY~CHRISTINE~MCKEE~~~~L^TESTING~~~~~~M^19690303^F ^^^881 PINE VALLLEY
ROAD~NOT USED~JACKSONVILLE~NC~28546~~P~NOT USED|~~PROVIDENCE~RI~~~N^""^555-555-
5555^""^^""^""^^^^^^^^^^^^20020506^^
PD1^^^ALBANY~D~500
MRG^1001170164V~~~USVHA&&0363~NI~VA FACILITY ID&500&L^^^^^^CHESNEY~JAMES~D~~~~L
```

Figure 2-20: A40—Merge Patient - Patient Identifier List message example: Sent to the MPI

Application Level Acknowledgement Received:

```
MSH^~|\&^MPIF TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021015094438-0500^^ACK~A40^200103350^D^2.4^^^AL^NE^
MSA^AA^500168695^^^^DFN=7169971
```

Figure 2-21: A40—Merge Patient - Patient Identifier List message example: Application level acknowledgement received

2.5.11. 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, one wants to purge (disconnect) the person from the database. When this event occurs, all demographic and treating facility data for this person is also purged.

It should be noted that this can only happen if the ICN is not known at any other treating facility and is initiated at the Coordinating Master of Record site.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A29^ADT_A29	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^A29^ACK	General Acknowledgment	Chapter
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

Message Sent:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021004123225-0500^^ADT~A29^500168121^T^2.4^^^AL^AL^
EVN^^^^^12555~DAVIS~PAULETTE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^^1001170722V~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|417938474~~~USSSA&&0363~SS~VA FACILITY
ID&500&L|100000097~~~USVHA&&0363~PI~VA FACILITY
ID&500&L|500000568V163072~~~USVHA&&0363~NI~VA FACILITY ID&500&L~~20021004120817-
0500^^ZZNEWCASTLE~JANET~M~~~~L^""^19300303^F^^^""~""~""~""~""~~P~""|~~""~""~~~N^""^"
"^""^^""^""^^^^^^^^^^^^^^""^^
PD1^^^ALBANY~D~500
```

Figure 2-22: A29—Delete Person Information message example: Sent

Application Level Acknowledgement Received:

```
MSH^~|\&^MPIF TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021004123231-0500^^ACK~A29^200102107^D^2.4^^^AL^NE^
MSA^AA^500168121^^^^DFN=100000097
```

Figure 2-23: A29—Delete Person Information message example: Application level acknowledgement received

2.5.12. ADT/ACK—Unlink Patient Information (event A37)

The A37 event unlinks two patient identifiers. An A37 event can be used to unlink a systems patient from an existing entry on the MPI. This event is used when a patient is shared at multiple sites.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A37^ADT_A37	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
PID	Patient (2) Identification	3
[PD1]	Patient (2) Additional Demographics	3
[PV1]	Patient (2) Visit	3

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

Message Sent:

```
MSH^~|\&^MPIF TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020921202421-0500^^ADT~A37^200100057^T^2.4^^^AL^AL^
EVN^A37^20020921202421-0500^20020921202421-0500^^USER NAME
PID^1^^""~~~USVHA&&0363~NI~VA FACILITY ID&500&L|454564567~~~USSSA&&0363~SS~VA
FACILITY
ID&500&L^^FRIDAY~INDY~E~~~~L^PUPPY~~~~~~M^2780203^M^^^^^^^^^^454564567^^^^^^^^^^^
PID^2^^1001170560V235869~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|454564567~~~USSSA&&0363~SS~VA FACILITY
ID&500&L^^FRIDAY~INDY~E~~~~L^PUPPY~~~~~~M^2780203^M^^^^^^^^^^454564567^^^^^^^^^^^
```

Figure 2-24: A37—Unlink Patient Information message example: Sent

Application Level Acknowledgement Received:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20020921202425-0500^^ACK~A37^500167161^T^2.4^^^AL^NE^
MSA^AA^200100057^
```

Figure 2-25: A37—Unlink Patient Information message example: Application level acknowledgement received

2.5.13. ADT/ACK—Move Patient Information - Patient Identifier List (event A43)

A move has been done at the patient identifier list level (i.e., on the MPI). 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. 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 (VistA DFN) 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.

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.

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

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

Message Sent:

```
MSH^~|\&^MPIF TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020921204232-0500^^ADT~A43^200100101^T^2.4^^^AL^AL^
EVN^A43^20020921204232-0500^20020921204232-
0500^^12556~LINK~CHRISTINE~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&&L
PID^1^^""~~~USVHA&&0363~NI~VA FACILITY ID&500&L|454564567~~~USSSA&&0363~SS~VA
FACILITY
ID&500&L^^FRIDAY~INDY~E~~~~L^PUPPY~~~~~~M^2780203^M^^^^^^^^^^454564567^^^^^^^^^^^
MRG^1001170560V235869~~~USVHA&&0363~NI~VA FACILITY
ID&500&L|454564567~~~USSSA&&0363~SS~VA FACILITY ID&500&L^^^^^^FRIDAY~INDY~E~~~~L
```

Figure 2-26: A43—Move Patient Information - Patient Identifier List message example: Sent

Application Level Acknowledgement Received:

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20020921204250-0500^^ACK~A43^500167189^T^2.4^^^AL^NE^
MSA^AA^200100101^
```

Figure 2-27: A43—Move Patient Information - Patient Identifier List message example: Application level acknowledgement received

2.5.14. 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. For this particular instance of A31, it is being used to request a change of CMOR, approve/disapprove a change of CMOR and actually change the CMOR.

To maintain backward compatibility with previous releases, the PV1 segment is required.

Message Sent Requesting Change of CMOR from non-CMOR site:

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A31^ADT_A31	ADT Message	Chapter
MSH	Message Header	2
PID	Patient Identification	2
NTE	Notes and Comments segment	3
EVN	Event Type	3

```
MSH^~|\&^RG CIRN^500^RG CIRN^500^20021015131109-
0500^^ADT~A31^500168699^T^2.3^^^AL^NE^USA
PID^1^1001169749V410755^100000017~2~M10^3124^PATIENT~NEW~J~JR^""^19240601^M^^^""~""~
""~""~""~~~""~""^^""^""^^""^29^^060123124^^^^^^^^^
NTE^^P^555-555-5555^CAPTURES OF MESSAGES^^500-39^500
EVN^A31^3021015^^^CHESNEY,CHRISTINE M
```

Figure 2-28: A31—Update Person Information message example: Sent requesting CMOR change

Message Received Approving/Disapproving CMOR Change:

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A31^ADT_A31	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
NTE	Notes and Comments segment	3
PID	Patient Identification	2

```
MSH^~|\&^MPIF CMOR CHNG^999^MPIF CMOR
CHNG^999^20021015133724^^ADT~A31^99978507^T^2.3^^^AL^NE^
EVN^A31^3021015^^^CHESNEY,CHRISTINE M
NTE^^P^910-353-7455^OKAY^4^500-39
PID^1^1001169749V410755^57295~8~M10^3124^PATIENT~NEW~J~JR^""^19240601^M^^^""~""~""~""
"~""~~~""~""^^""^""^^""^29^^060123124^^^^^^^^^^
```

Figure 2-29: A31—Update Person Information message example: Received regarding CMOR change

Message Sent Changing CMOR:

The "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

ADT^A31^ADT_A31	ADT Message	Chapter
MSH	Message Header	2
EVN	Event Type	3
PID	Patient Identification	2
PV1	Patient Visit	3

```
MSH^~|\&^MPIF CMOR RSLT^999^MPIF CMOR
RSLT^999^20021015133722^^ADT~A31^99978505^T^2.3^^^AL^NE^USA
EVN^A31^3021015^^^Automatic Processing
PID^1^1001169749V410755^57295~8~M10^^PATIENT~NEW~J~JR^""^19240601^M^^^""~""~""~""~""
~~~""~""^^""^""^^""^29^^060123124^^^^^^^^^^
PV1^^^500^^^999
```

Figure 2-30: A31—Update Person Information message example: Sent changing CMOR

2.5.15. 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 "Chapter" reference below refers to the HL7 Standard Version 2.4 documentation.

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 (NOT USED)	2
EVN	Event Type	3
PID	Patient Identification	3
[PD1]	Patient Additional Demographics	3
PV1	Patient Visit (NOT USED)	3
[PV2]	Patient Visit - Additional Info. (NOT USED)	3

Message Sent:

```
MSH^~|\&^VAFC TRIGGER^200M~MPI.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021002160803-0500^^QRY~A19^200101031^T^2.4^^^AL^AL^US
QRD^20021002160803-
0500^R^I^1001170555^^^RD~1^1001170555~~~~~~~~USVHA&&0363~NI~~~~~VA FACILITY
ID&500&L|040345123~~~~~~~~USSSA&&0363~SS~~~~~VA FACILITY ID&500&L^DEM^^^
```

Figure 2-31: A19—Patient Query message example: Sent

Query Results Received:

```
MSH^~|\&^VAFC TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^200M~MPI.FO-
ALBANY.MED.VA.GOV~DNS^20021002160814-0500^^ADR~A19^500167426^T^2.4^^^AL^NE^US
MSA^AA^200101031^
QRD^20021002160803-
0500^R^I^1001170555^^^RD~1^1001170555~~~~~~~~USVHA&&0363~NI~~~~~VA FACILITY
ID&500&L|040345123~~~~~~~~USSSA&&0363~SS~~~~~VA FACILITY ID&500&L^DEM^^^
EVN^A1^20020913112211-0500^^A1^.5~POSTMASTER~~~~~~~USVHA&&0363~L~~~NI~VA FACILITY
ID&500&L^20020913112211-0500^500
PID^1^^1001170555V898030~~~USVHA&&0363~NI~VA FACILITY
ID&500&L^^JOSEPH~TEST~FIRST~~~~L^WONDER BREAD~~~~~~M^19450403^M^^^123
TEST~LINE2~PELHAM~AL~34124~~P~LINE3|~~BIRMINGHAM~AL~~~N^117^""^""^^S^9^^^^^^^^^^^^""
^^
PD1^^^DETROIT~D~553
```

Figure 2-32: A19—Patient Query message example: Query results received

2.6. Message Segments

2.6.1. BHS—Batch Header Segment

The BHS segment defines the start of a batch.

SEQ	LEN	DT	OPT	RP/#	TBL #	ITEM #	ELEMENT NAME
1	1	ST	R			00081	Batch Field Separator
2	3	ST	R			00082	Batch Encoding Characters
3	15	ST	O			00083	Batch Sending Application
4	20	ST	O			00084	Batch Sending Facility
5	15	ST	O			00085	Batch Receiving Application
6	20	ST	O			00086	Batch Receiving Facility
7	26	TS	O			00087	Batch Creation Date/Time
8	40	ST	O			00088	Batch Security *(not used)*
9	20	ST	O			00089	Batch Name/ID/Type
10	80	ST	O			00090	Batch Comment
11	20	ST	O			00091	Batch Control ID
12	20	ST	O			00092	Reference Batch Control ID

Table 2-3: HL7 Attribute Table, BHS—Batch Header

2.6.1.1. BHS field definitions

2.6.1.2. BHS-1 Batch field separator (ST) 00081

Definition: This field contains the separator between the segment ID and the first real field, BHS-2 Batch encoding characters (ST) 00082. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Recommended value is |, (ASCII 124).

2.6.1.3. BHS-2 Batch encoding characters (ST) 00082

Definition: This field contains the four characters in the following order:

- Component separator—Recommended values are ^ (ASCII 94).
- Repetition Separator—Recommended values are ~(ASCII 126).
- Escape Characters—Recommended values are \ (ASCII 92).
- Subcomponent Separator—Recommended values are **&** (ASCII 38).

2.6.1.4. BHS-3 Batch sending application (ST) 00083

Definition: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. Entirely site-defined.

When the sites initiate the message, MPIF-STARTUP is used. When the message is initiated by the MPI, MPI is used.

2.6.1.5. BHS-4 Batch sending facility (ST) 00084

Definition: This field contains the address of one of several occurrences of the same application within the sending system. Absent other considerations, the Medicare Provider ID might be used with an appropriate sub-identifier in the second component. Entirely user-defined.

When the sites initiate the message, site's station number is used. When the message is initiated by the MPI, 200M is used.

2.6.1.6. BHS-5 Batch receiving application (ST) 00085

Definition: This field uniquely identifies the receiving applications among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. Entirely site-defined.

When the sites initiate the message, MPIF-STARTUP is used. When the message is initiated by the MPI, MPI is used.

2.6.1.7. BHS-6 Batch receiving facility (ST) 00086

Definition: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations.

For more information, please refer to the comments in the "BHS-4 Batch sending facility (ST) 00084" topic in this manual. Entirely site-defined.

When the sites initiate the message, site's station number is used. When the message is initiated by the MPI, 200M is used.

2.6.1.8. BHS-7 Batch creation date/time (TS) 00087

Definition: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone.

2.6.1.9. BHS-8 Batch security (ST) 00088

Definition: **This field is not used.**

2.6.1.10. BHS-9 Batch name/ID/type (ST) 00089

Definition: This field can be used by the application processing the batch. It can have extra components if needed.

Component 1: Not Used

Component 2: P

Component 3:

Subcomponent 1: message type

Subcomponent 2: Event type

Component 4: 2.3

2.6.1.11. BHS-10 Batch comment (ST) 00090

Definition: This field is a comment field that is not further defined in the HL7 protocol.

2.6.1.12. BHS-11 Batch control ID (ST) 00091

Definition: This field is used to uniquely identify a particular batch. It can be echoed back in BHS-12 Reference batch control ID (ST) 00092, if an answering batch is needed.

Automatically generated by the VistA HL7 application.

2.6.1.13. BHS-12 Reference batch control ID (ST) 00092

Definition: This field contains the value of BHS-11 Batch control ID (ST) 00091 when this batch was originally transmitted. Not present if this batch is being sent for the first time.

For more information, please refer to the definition in the "BHS-11 Batch control ID (ST) 00091" topic in this manual.

2.6.2. BTS—Batch Trailer Segment

The BTS segment defines the end of a batch.

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME
1	10	ST			0093	Batch Message Count
2	80	ST			0094	Batch Comment *(not used)*
3	100	CM		Y	0095	Batch Totals *(not used)*

Table 2-4: HL7 Attribute Table, BTS—Batch Trailer

2.6.2.1. BTS-1 Batch message count (ST) 00093

Definition: This field contains the count of the individual messages contained within the batch.

2.6.2.2. BTS-2 Batch comment (ST) 00090

Definition: **This field is not used.**

2.6.2.3. BTS-3 Batch totals (NM) 00095

Definition: **This field is not used.**

2.6.3. MSH—Message Header Segment

The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	1	ST	R			00001	Field Separator
2	4	ST	R			00002	Encoding Characters
3	180	HD	O		0361	00003	Sending Application
4	180	HD	O		0362	00004	Sending Facility
5	180	HD	O		0361	00005	Receiving Application
6	180	HD	O		0362	00006	Receiving Facility
7	26	TS	R			00007	Date/Time Of Message
8	40	ST	O			00008	Security
9	13	CM	R			00009	Message Type
10	20	ST	R			00010	Message Control ID

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
11	3	PT	R			00011	Processing ID
12	60	VID	R		0104	00012	Version ID
13	15	NM	O			00013	Sequence Number
14	180	ST	O			00014	Continuation Pointer
15	2	ID	O			00015	Accept Acknowledgment Type
16	2	ID	O			00016	Application Acknowledgment Type
17	3	ID	O		0399	00017	Country Code
18	16	ID	O	Y		00692	Character Set *(not used)*
19	250	CE	O			00693	Principal Language Of Message *(not used)*
20	20	ID	O			01317	Alternate Character Set Handling Scheme *(not used)*
21	10	ID	O	Y		01598	Conformance Statement ID *(not used)*

Table 2-5: HL7 Attribute Table, MSH—Message Header

2.6.3.1. MSH field definitions

2.6.3.2. MSH-1 Field separator (ST) 00001

Definition: This field contains the separator between the segment ID and the first real field, *MSH-2-encoding characters*. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Recommended value is |, (ASCII 124).

2.6.3.3. MSH-2 Encoding characters (ST) 00002

Definition: This field contains the four characters in the following order:

- Component separator—Recommended values are ^ (ASCII 94).
- Repetition Separator—Recommended values are ~(ASCII 126).
- Escape Characters—Recommended values are \ (ASCII 92).
- Subcomponent Separator—Recommended values are **&** (ASCII 38).

2.6.3.4. MSH-3 Sending application (HD) 00003

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

Definition: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. Entirely site-defined.

The User-defined Table 0361—Sending/Receiving Application (Table 2-6 in this manual) is used as the user-defined table of values for the first component, as shown below:

Value	Description
MPIF TRIGGER	This will be used when sending ADT-A28, ADT-A24, ADT-A31 (MPI update message), ADT-A40, and ADT-A43.
VAFC TRIGGER	This will be used when sending MFN-M05 Treating Facility Master file update message.
RG ADT	This will be used when sending ADT-A01, ADT-A03, ADT-A04, and ADT-A08 messages.
RG CIRN	This will be used when sending a change of CMOR ADT-A31 message.
MPIF CMOR RSLT	This will be used when communicating a CMOR Change via ADT-A31.
MPIF LOC/MIS	This will be used when communicating with the MPI for assignment of an ICN during the batch messaging triggered by the Local/Missing ICN resolution job.
MPIF MPI	This will be used when communicating an ADT-A29 message to inactivate an ICN.
MPIF CMOR COMP	This will be used when communicating a CMOR change via ADT-A31 message.
MPIF A29 SERVER	This will be used when communicating an ADT-A29 message to inactivate an ICN.
MPIF-STARTUP	This will be used when communicating with the MPI during a query for ICN information/assignment.

Table 2-6: User-defined Table 0361—Sending/Receiving Application

2.6.3.5. MSH 4 -Sending Facility (HD) 00004

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

Definition: This field further describes the sending application, MSH-3-sending application. With the promotion of this field to an HD data type, the usage has been broadened to include not just the sending facility but also other organizational entities (entirely site-defined), such as:

a. The organizational entity responsible for sending application.

b. The responsible unit.

c. A product or vendor's identifier, etc.

The User-defined Table 0362—Sending/Receiving Facility (Table 2-7 in this manual) is used as the HL7 identifier for the user-defined table of values for the first component, as shown below:

Value	Description
MPIF TRIGGER	No suggested values defined

Table 2-7: User-defined Table 0362—Sending/Receiving Facility

2.6.3.6. MSH-5 Receiving application (HD) 00005

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

Definition: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise. Entirely site-defined.

The User-defined Table 0361—Sending/Receiving Application (Table 2-6 in this manual) is used as the HL7 identifier for the user-defined table of values for the first component.

2.6.3.7. MSH-6 Receiving facility (HD) 00006

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

Definition: This field identifies the system that is communicating the event. The User-defined Table 0362—Sending/Receiving Facility (Table 2-7 in this manual) is used as the HL7 identifier for the user-defined table of values for the first component. Entirely site-defined.

2.6.3.8. MSH-7 Date/time of message (TS) 00007

Definition: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone.

This field was made required in Version 2.4. Messages with versions prior to 2.4 are *not* required to value this field. This usage supports backward compatibility.

2.6.3.9. MSH-8 Security (ST) 00008

Definition: In some applications of HL7, this field is used to implement security features. Its use is not yet further specified.

2.6.3.10. MSH-9 Message type (CM) 00009

Components: <message type (ID)> ^ <trigger event (ID)> ^ <message structure (ID)>

Definition: This field contains the message type, trigger event, and the message structure ID for the message.

The first component is the message type code defined by HL7 Table 0076—Message Type. The second component is the trigger event code defined by HL7 Attribute Table 0003, EVN—Event Type. The third component is the abstract message structure code defined by HL7 Table 0354—Message Structure. This table has two columns. The first column contains the value of this code, which describes a particular HL7 "abstract message structure definition" in terms of segments. The second column of Table 0354 lists the various HL7 trigger events that use the particular abstract message definition.

For more information on the HL7 Table 0076—Message Type and HL7 Table 0354—Message Structure, please refer to the HL7 Standard Version 2.4 documentation.

The receiving system uses this field to recognize the data segments, and possibly, the application to which to route this message. The second component is not required on response or acknowledgment messages.

2.6.3.11. MSH-10 Message control ID (ST) 00010

Definition: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA).

2.6.3.12. MSH-11 Processing ID (PT) 00011

Components: <processing ID (ID)> ^ <processing mode (ID)>

Definition: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. The first component defines whether the message is part of a production, training, or debugging system. The second component is not currently used.

For a list of valid values, please refer to Table 2-8 in this manual, "HL7 Table 0103—Processing ID."

Value	Description
P	Production

Table 2-8: HL7 Table 0103—Processing ID

2.6.3.13. MSH-12 Version ID (VID) 00012

Components: <version ID (ID)> ^ <internationalization code (CE)> ^ <internal version ID (CE)>

Definition: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. Beginning with Version 2.3.1, it has two additional "internationalization" components, for use by HL7 international affiliates. The <internationalization code> is CE data type (using the ISO country codes where appropriate), which represents the HL7 affiliate. The <internal

version ID> is used if the HL7 Affiliate has more than a single 'local' version associated with a single US version. The <internal version ID> has a CE data type, since the table values vary for each HL7 Affiliate.

Value	Description	Date
2.3	Release 2.3	March 1997
2.4	Release 2.4	November 2000

Table 2-9: HL7 Table 0104—Version ID

2.6.3.14. MSH-13 Sequence number (NM) 00013

Definition: A non-null value in this field implies that the sequence number protocol is in use. This numeric field is incremented by one for each subsequent value.

2.6.3.15. MSH-14 Continuation pointer (ST) 00014

Definition: This field is used to define continuations in application-specific ways.
Only the sender of a fragmented message values this field.

2.6.3.16. MSH-15 Accept acknowledgment type (ID) 00015

Definition: This field identifies the conditions under which accept acknowledgments are required to be returned in response to this message. Required for enhanced acknowledgment mode.

For a list of valid values, please refer to Table 2-10 in this manual, "HL7 Table 0155—Accept/Application Acknowledgment Conditions."

2.6.3.17. MSH-16 Application acknowledgment type (ID) 00016

Definition: This field contains the conditions under which application acknowledgments are to be returned in response to this message. Required for enhanced acknowledgment mode.

The following table contains the possible values for MSH-15-accept acknowledgment type and MSH-16-application acknowledgment type:

Value	Description
AL	Always
NE	Never
ER	Error/reject conditions only
SU	Successful completion only

Table 2-10: HL7 Table 0155—Accept/Application Acknowledgment Conditions

If MSH-15-accept acknowledgment type and MSH-16-application acknowledgment type are omitted (or are both null), the original acknowledgment mode rules are used.

2.6.3.18. MSH-17 Country code (ID) 00017

Definition: This field contains the country of origin for the message. It will be used primarily to specify default elements, such as currency denominations. The values to be used are those of ISO 3166, which are reprinted here upon written approval from ANSI.[1]. The ISO 3166 table has three separate forms of the country code: HL7 specifies that the 3-character (alphabetic) form be used for the country code.

For the 3-character codes as defined by ISO 3166 table, please refer to Table 2-11 in this manual, "HL7 Table 0399—Country Code."

Value	Description
USA	UNITED STATES

Table 2-11: HL7 Table 0399—Country Code

2.6.4. EVN—Event Type Segment

The EVN segment is used to communicate necessary trigger event information to receiving applications.

The valid event types for all chapters are contained in Table 2-12 in this manual, "HL7 Attribute Table 0003, EVN—Event Type."

[1] Available from ISO 1 Rue de Varembe, Case Postale 56, CH 1211, Geneve, Switzerland

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 *(not used)*
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

Table 2-12: HL7 Attribute Table 0003, EVN—Event Type

2.6.4.1. EVN field definitions

2.6.4.2. 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).

For a list of valid values, please refer to Table 2-12 in this manual, "HL7 Attribute Table 0003, EVN—Event Type."

2.6.4.3. EVN-2 Recorded date/time (TS) 00100

Definition: This field contains the patient date/time of last treatment. This value is also stored on the local VistA system in the TREATING FACILITY file (#391.91) and can be obtained via the VistA supported API TFL^VAFCTFU1 (IA #2990).

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

Definition: **The data being past in this segment is based on past events, not planned, so for that reason this field is not used.**

2.6.4.5. EVN-4 Event reason code (IS) 00102

Definition: This field contains the date last treated event reason. Below is a list of the currently supported values.

Value	Description
A1	Patient Admission
A2	Patient Discharge
A3	Patient Clinic Checkout

Table 2-13: User-defined Table 0062—Event Reason

2.6.4.6. 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.

Example value:

```
Internal VistA ien from File
#200~lastname~firstname~middlename~~~~~"USVHA"&&"0363"~"L"~~~"NI"~"VA FACILITY
ID"&station#&"L"
12584~LASTNAME~FIRSTNAME~~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L
```

Figure 2-33: EVN—Event Type Segment example

2.6.4.7. 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. Same as field EVN-2.

2.6.4.8. 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 occurred 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.

2.6.5. 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.

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. 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

For more information on the HD data type, please refer to Section 2.9 of HL7 Standard Version 2.4 documentation.

Additionally, CX data types support the use of assigning facility (HD) as the sixth component.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00104	Set ID - PID
2	20	CX	B			00105	Patient ID *(not used)*
3	250	CX	R	Y		00106	Patient Identifier List
4	20	CX	B	Y		00107	Alternate Patient ID - PID *(not used)*
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		00113	Race
11	250	XAD	O	Y		00114	Patient Address
12	4	IS	B		0289	00115	County Code *(not used)*
13	250	XTN	O	Y		00116	Phone Number - Home *(not used)*
14	250	XTN	O	Y		00117	Phone Number - Business *(not used)*
15	250	CE	O		0296	00118	Primary Language *(not used)*
16	250	CE	O			00119	Marital Status *(not used)*
17	250	CE	O			00120	Religion (not used)
18	250	CX	O			00121	Patient Account Number *(not used)*
19	16	ST	B			00122	SSN Number - Patient *(not used)*
20	25	DLN	O			00123	Driver's License Number - Patient *(not used)*
21	250	CX	O	Y		00124	Mother's Identifier *(not used)*
22	250	CE	O	Y	0189	00125	Ethnic Group *(not used)*
23	250	ST	O			00126	Birth Place *(not used)*
24	1	ID	O		0136	00127	Multiple Birth Indicator *(not used)*
25	2	NM	O			00128	Birth Order *(not used)*
26	250	CE	O	Y	0171	00129	Citizenship *(not used)*
27	250	CE	O		0172	00130	Veterans Military Status *(not used)*
28	250	CE	B		0212	00739	Nationality *(not used)*
29	26	TS	O			00740	Patient Death Date and Time
30	1	ID	O		0136	00741	Patient Death Indicator *(not used)*
31	1	ID	O		0136	01535	Identity Unknown Indicator *(not used)*
32	20	IS	O	Y	0445	01536	Identity Reliability Code *(not used)*
33	26	TS	O			01537	Last Update Date/Time *(not used)*
34	40	HD	O			01538	Last Update Facility *(not used)*
35	250	CE	C		0446	01539	Species Code *(not used)*

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
36	250	CE	C		0447	01540	Breed Code *(not used)*
37	80	ST	O			01541	Strain (not used)
38	250	CE	O	2	0429	01542	Production Class Code *(not used)*

Table 2-14: HL7 Attribute Table, PID—Patient Identification

2.6.5.1. PID field definitions

2.6.5.2. 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.

2.6.5.3. PID-2 Patient ID (CX) 00105

Definition: **This field is not used.**

2.6.5.4. 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., VistA internal ID [DFN], Claim Number, VHA MPI Integration Control Number [ICN], Social Security Number, unique individual identifier, etc.).

For a list of valid values, please refer to "HL7 Table 0061—Check Digit Scheme" in the HL7 Standard Version 2.4 documentation. The arbitrary term of "internal ID" has been removed from the name of this field for clarity.

Also please refer to Table 2-15 in this manual, "HL7 Table 0203—Identifier Type" and "User-defined Table 0363—Assigning Authority" in the HL7 Standard Version 2.4 documentation.

The currently supported values are listed below:

Identifier	Assigning Authority	Identifier type	Assigning Location	Expiration date
National ICN	USVHA	NI	unique station# id	
SSN	USSSA	SS	unique station# id	
VistA ID (DFN)	USVHA	PI	unique station# id	
CLAIM#	USVBA	PN	unique station# id	
Deprecated ICN (resolved duplicate pair or local ICN)	USVHA	NI	unique station# id	Replacement date/time

Table 2-15: VA patient identifiers

2.6.5.5. PID-4 Alternate patient ID - PID (CX) 00107

Definition: **This field is not used.**

2.6.5.6. 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."

For a list of valid values, please refer to Table 2-16 in this manual, "HL7 Table 0200—Name Type."

Repetition of this field is allowed for representing the same name in different character sets. The "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.

Value	Description
L	Legal Name
M	Maiden Name

Table 2-16: HL7 Table 0200—Name Type

2.6.5.7. 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.

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

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

2.6.5.9. PID-8 Administrative sex (IS) 00111

Definition: This field contains the patient's sex.

For a list of suggested values, please refer to Table 2-17 in this manual, "User-defined Table 0001—Administrative Sex."

Value	Description
F	Female
M	Male

Table 2-17: User-defined Table 0001—Administrative Sex

2.6.5.10. PID-9 Patient alias (XPN) 00112

Definition: **This field is not used.**

2.6.5.11. PID-10 Race (CE) 00113

Definition: **This field is not used.**

2.6.5.12. 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 in 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.

For more information on HL7 Table 0190—Address Type. , please refer to the HL7 Standard Version 2.4 documentation.

2.6.5.13. PID-12 County code (IS) 00115

Definition: **This field is not used.**

2.6.5.14. PID-13 Phone number–home (XTN) 00116

Definition: **This field is not used.**

2.6.5.15. PID-14 Phone number–business (XTN) 00117

Definition: **This field is not used.**

2.6.5.16. PID-15 Primary language (CE) 00118

Definition: **This field is not used.**

2.6.5.17. 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 is not used.**

2.6.5.18. PID-17 Religion (CE) 00120

Definition: **This field is not used.**

2.6.5.19. PID-18 Patient account number (CX) 00121

Definition: **This field is not used.**

2.6.5.20. PID-19 SSN number–patient (ST) 00122

Definition: **This field is not used.**

2.6.5.21. PID-20 Driver's license number–Patient (DLN) 00123

Definition: **This field is not used.**

2.6.5.22. PID-21 Mother's identifier (CX) 00124

Definition: **This field is not used.**

2.6.5.23. PID-22 Ethnic group (CE) 00125

Definition: **This field is not used.**

2.6.5.24. PID-23 Birth place (ST) 00126

Definition: **This field is not used.**

2.6.5.25. PID-24 Multiple birth indicator (ID) 00127

Definition: **This field is not used.**

2.6.5.26. PID-25 Birth order (NM) 00128

Definition: **This field is not used.**

2.6.5.27. PID-26 Citizenship (CE) 00129

Definition: **This field is not used.**

2.6.5.28. PID-27 Veterans military status (CE) 00130

Definition: **This field is not used.**

2.6.5.29. PID-28 Nationality (CE) 00739

Definition: **This field is not used.**

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

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

2.6.6. PD1—Patient Additional Demographic Segment

The patient additional demographic segment contains demographic information that is likely to change about the patient.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	2	IS	O	Y	0223	00755	Living Dependency (*Not used*)
2	2	IS	O		0220	00742	Living Arrangement (*Not used*)
3	250	XON	O	Y		00756	Patient Primary Facility
4-21							(Not used)

Table 2-18: HL7 Attribute Table, PD1—Patient Additional Demographic

2.6.6.1. PD1 field definitions

2.6.6.2. PD1-1 Living dependency (IS) 00755

Definition: This field is not used

2.6.6.3. PD1-2 Living arrangement (IS) 00742

Definition: This field is not used

2.6.6.4. 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 or Coordinating Master of Record (CMOR) site selected by the software or requests from the facilities. In the future this will more than likely transition to the OneVHA demographic database (EDB), OneVA demographic database or some central patient demographic database.

2.6.7. 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. 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.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00131	Set ID - PV1
2	1	IS	R		0004	00132	Patient Class
3	80	PL	O			00133	Assigned Patient Location
4 -52							Not used

Table 2-19: HL7 Attribute Table, PV1—Patient Visit

2.6.7.1. PV1 field definitions

2.6.7.2. 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.

2.6.7.3. 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.

For a list of suggested values, please refer to Table 2-20 in this manual, "User-defined Table 0004—Patient Class"

Value	Description
I	Inpatient
O	Outpatient
U	Unknown

Table 2-20: User-defined Table 0004—Patient Class

2.6.7.4. 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 location of the event. The first two components are blank and the third includes the unique station # of the system that is currently identified as the where the master copy of this patients record can be found.

2.6.8. VTQ—Virtual Table Query Request Segment

The VTQ segment is used to define queries that are responded to with the Tabular Data Message (TBR). The VTQ query message is an alternate method to the EQQ query message that some systems may find easier to implement, due to its use of HL7 delimiters that separate components of the selection definition, and its limited selection criteria. Queries involving complex selection criteria (nested operators, etc.) may need to be formatted as an EQL segment.

As with the other query methods, the functional chapters define specific queries supported as VTQ messages. Please refer to the functional chapters in the HL7 Version 2.4 documentation for the lists of HL7-defined virtual tables, selection lists, and criteria.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	32	ST	O			00696	Query Tag
2	1	ID	R		0106	00697	Query/Response Format Code
3	60	CE	R			00698	VT Query Name
4	60	CE	R			00699	Virtual Table Name
5	256	QSC	O	Y		00700	Selection Criteria

Table 2-21: HL7 attributes (VTQ)

2.6.8.1. VTQ field definitions

2.6.8.2. Query tag (ST) 00696

Definition: This field may be valued by the initiating system to identify the query, and may be used to match response messages to the originating query. If it is valued, the responding system is required to echo it back as the first field in the query acknowledgment segment (QAK). This field differs from MSA-2-message control ID in that its value remains constant for each message (i.e., all continuation messages) associated with the query, whereas MSA-2-message control ID may vary with each continuation message, since it is associated with each individual message, not the query as a whole.

2.6.8.3. Query/response format code (ID) 00697

Definition: This field refers to HL7 Table 0106—Query/Response Format Code (Table 2-43 in this manual), which lists valid values. At this point in time the only value used is T.

2.6.8.4. VT query name (CE) 00698

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

Definition: This field contains the name of the virtual table query.

Name	Function
VTQ_PID_ICN_LOAD_1	Used to tell MPI that this is in initialization phase
VTQ_PID_ICN	Used to inquire to the MPI without any addition to MPI

2.6.8.5. Virtual table name (CE) 00699

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

Definition: This field contains the name of the virtual table being referenced. This table name may refer to an HL7-defined segment, an HL7 virtual table, or a site-specific "Z table."

For more information HL7 virtual tables, please refer to the functional chapters in the HL7 Standard Version 2.4 documentation.

2.6.8.6. Selection criteria (QSC) 00700

Components: <segment field name (ST)> ^ <relational operator (ID)> ^ <value (ST)> ^ <relational conjunction (ID)>

Definition: Each repetition of this field defines a column in the RDT segment: the first repetition defines the first column of the RDT segment; the second repetition defines the second column of the RDT segments, etc.

This field indicates the conditions that qualify the rows to be returned in the query response. (This field conveys the same information as the "WHERE" clause in the corresponding SQL expression of the query, but is formatted differently.) It is comprised of the following components:

- A relational operator.
- The value to which the field will be compared.

For a list of relational operators, please refer to Table 2-22 in this manual, "Table 0209—Relational Operator."

Relational Operator	Value
EQ	Equal
NE	Not Equal
LT	Less than
GT	Greater than
LE	Less than or equal
GE	Greater than or equal
CT	Contains
GN	Generic

Table 2-22: Table 0209—Relational Operator

If more than one comparison is to be made to select qualifying rows, a conjunction relating this repetition of the field to the next.

For a list of relational conjunctions, please refer to Table 2-23 in this manual, "Table 0210—Relational Conjunction"

Relational Conjunction	Note
AND	Default
OR	

Table 2-23: Table 0210—Relational Conjunction

Hence, the segment:

```
VTQ|TAG001|T|VT_QUERY_NAME|PID|@00108.1^EQ^EVANS^AND~@00108.2^EQ^CAROLYN <cr>
```

causes a response to be generated from the virtual table defined by the PID segment. All rows containing the name field subcomponents defined in the selection criteria field (last name = "Evans," first name = "Carolyn") will be selected for the response. The RDF segment will define the columns returned from each selected row.

Notes:

- As previously stated, the VTQ segment does not, and is not intended to, provide as robust selection function as native EQQ query. It is offered as a simpler alternative.
- When applied to strings, the relational operators LT, GT, LE, and GE imply an alphabetic comparison.
- A "generic" comparison selects a record for inclusion in the response if the beginning of the designated field matches the select string.
- Where a repeating field is specified as an operand, a match on any instance of that field qualifies the row for inclusion in the response message.
- AND takes precedence over OR. More sophisticated precedence rules require that the query be expressed as an SQL message, or a stored procedure for the query may be written and referenced with the SPR segment.

2.6.9. RDF—Table Row Definition Segment

The RDF segment defines the content of the row data segments (RDT) in the Tabular Data Response Message (TBR). It is used in two ways:

1. As an optional segment in the SPQ message (Stored Procedure Request) or the VQQ (Virtual Table Query) message, this segment can be used to limit the number of columns returned and to specify what column positions the fields occupy (where supported, these features can be used to override the defaults for the particular query). If omitted, all fields defined for the query are returned in their default column order.
2. As a required segment on the tabular data response message (TBR), this segment defines the contents of the table row data (RDT) segments that follow.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3	NM	R			00701	Number of Columns per Row
2	40	RCD	R	Y		00702	Column Description

Table 2-24: RDF attributes

2.6.9.1. RDF field definitions

2.6.9.2. Number of columns per row (NM) 00701

Definition: This field specifies the number of data columns (and therefore the number of fields) contained within each row of returned data.

2.6.9.3. Column description (RCD) 00702

Components: <Segment field name (ST)> ^ <HL7 data type (ST)> ^ <maximum column width (NM)>

Definition: Each repetition of this field consists of three components: component 1: HL7 field number, component 2: data type, component 3: maximum length.

2.6.10. RDT—Table Row Data Segment

The RDT segment contains the row data of the tabular data response message (TBR).

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1-n	Variable	Variable	R			00703	Column Value

Table 2-25: RDT attributes

2.6.10.1. RDT field definitions

2.6.10.2. Column value (Variable) 00703

Definition: This field is a requested field. Fields occur in the position order defined for the query or table, (unless overridden by an optional RDF segment on a stored procedure request or virtual table query message), separated by field delimiters.

2.6.11. MFI—Master File Identification Segment

A treating facility list identifies the systems that know a particular Integration Control Number (ICN). This list is maintained on the MPI and synchronized as systems are added, updated, or deleted from the list. The MFI segment is used to identify the type master file, in this case Treating Facility (TFL).

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	250	CE	R		0175	00658	Master File Identifier
2	180	HD	O			00659	Master File Application Identifier *(not used)*
3	3	ID	R		0178	00660	File-Level Event Code
4	26	TS	O			00661	Entered Date/Time *(not used)*
5	26	TS	O			00662	Effective Date/Time *(not used)*
6	2	ID	R		0179	00663	Response Level Code

Table 2-26: HL7 Attribute Table, MFI—Master File Identification

2.6.11.1. MFI field definitions

2.6.11.2. MFI-1 Master file identifier (CE) 00658

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 a CE data type that identifies a standard HL7 master file. The table below (Table 2-27) was extended by local agreement to include "TFL."

For a list of valid values, please refer to Table 2-27 in this manual, "HL7 Table 0175—Master File Identifier Code."

Value	Description
TFL	Treating Facility list master file

Table 2-27: HL7 Table 0175—Master File Identifier Code

2.6.11.3. MFI-2 Master files application identifier (HD) 00659

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

Definition: This message is intended to update many different systems and therefore is not applicable.

2.6.11.4. MFI-3 File-level event code (ID) 00660

Definition: This field defines the file-level event code.

For a list of valid values, please refer to Table 2-28 in this manual, "HL7 Table 0178—File Level Event Code."

Value	Description
REP	Replace current version of this master file with the version contained in this message
UPD	Change file records as defined in the record-level event codes for each record that follows

Table 2-28:HL7 Table 0178—File Level Event Code

2.6.11.5. MFI-4 Entered date/time (TS) 00661

Definition: **This field is not used.**

2.6.11.6. MFI-5 Effective date/time (TS) 00662

Definition: **This field is not used.**

2.6.11.7. MFI-6 Response level code (ID) 00663

Definition: These codes specify the application response level defined for a given Master File Message at the MFE segment level as defined in HL7 Table 0179—Response Level (Table 2-29 in this manual). Required for MFN-Master File Notification message. Specifies additional detail (beyond MSH-15 - Accept acknowledgment type and MSH-16 - Application acknowledgment type) for application-level acknowledgment paradigms for Master Files transactions. MSH-15 - Accept acknowledgment type and MSH-16 - Application acknowledgment type operate as defined in Chapter 2 in the HL7 Standard Version 2.4 documentation.

Value	Description
AL	Always. All MFA segments (whether denoting errors or not) must be returned via the application-level acknowledgment message

Table 2-29: HL7 Table 0179—Response Level

2.6.12. MFE—Master File Entry Segment

The Technical Steward for the MFE segment is CQ.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3	ID	R		0180	00664	Record-Level Event Code
2	20	ST	C			00665	MFN Control ID
3	26	TS	O			00662	Effective Date/Time
4	200	Varies	R	Y		00667	Primary Key Value - MFE
5	3	ID	N	Y	0355	01319	Primary Key Value Type *(not used)*

Table 2-30: HL7 Attribute Table, MFE—Master File Entry

2.6.12.1. MFE field definitions

2.6.12.2. MFE-1 Record-level event code (ID) 00664

Definition: This field defines the record-level event for the master file record identified by the MFI segment and the primary key field in this segment.

For a list of valid values, please refer to Table 2-31 in this manual, "HL7 Table 0180—Record-level Event Code."

Value	Description
MAD	Add record to master file
MDL	Delete record from master file
MUP	Update record for master file

Table 2-31: HL7 Table 0180—Record-level Event Code

If the file-level event code is "REP" (replace file), then each MFE segment must have a record-level event code of "MAD" (add record to master file).

2.6.12.3. MFE-2 MFN control ID (ST) 00665

Definition: A number or other identifier that uniquely identifies this change to this record from the point of view of the originating system. When returned to the originating system via the MFA segment, this field allows the target system to precisely identify which change to this record is being acknowledged. This field will contain a unique identifier, which will be VHA's STATION NUMBER (#99) of the INSTITUTION file (#4). The assumption is that prior to subscribing to the MPI for patient identification management that there will be a formal process of setting up the necessary communication and uniquely identification of the new system.

This segment does not contain a Set ID field. The MFE-2 - MFN control ID implements a more general concept than the Set ID. It takes the place of the SET ID in the MFE segment.

2.6.12.4. MFE-3 Effective date/time (TS) 00662

Definition: This field contains the date of last treatment if the system is a system that would contain that type of data.

2.6.12.5. MFE-4 Primary key value - MFE (Varies) 00667

<STATION#> ^ <INSTITUTION NAME> ^ <"VA"> ^ <ICN> ^ <"ICN"> ^ <"VA"> ^

Definition: This field will contain the unique identifier from MFE-2, the name of the unique system, the system (VA), the VHA unique identifier or ICN, and the system again.

2.6.12.6. MFE-5 Primary key value type (ID) 01319

Definition: **This field is not used.**

2.6.13. MFA—Master File Acknowledgment Segment

The Technical Steward for the MFA segment is CQ.

The MFA segment contains the following fields as defined in Table 2-32 in this manual, "HL7 Attribute Table - MFA - Master File Acknowledgment:"

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3	ID	R		0180	00664	Record-Level Event Code
2	20	ST	C			00665	MFN Control ID
3	26	TS	O			00668	Event Completion Date/Time *(not used)*
4	250	CE	R		0181	00669	MFN Record Level Error Return
5	250	CE	N	Y	9999	01308	Primary Key Value - MFA *(not used)*
6	3	ID	N	Y	0355	01320	Primary Key Value Type - MFA *(not used)*

Table 2-32: HL7 Attribute Table, MFA—Master File Acknowledgment

2.6.13.1. MFA field definitions

2.6.13.2. MFA-1 Record-level event code (ID) 00664

Definition: This field defines record-level event for the master file record identified by the MFI segment and the primary key in this segment.

For a list of valid values, please refer to Table 2-31 in this manual, "HL7 Table 0180—Record-level Event Code."

2.6.13.3. MFA-2 MFN control ID (ST) 00665

Definition: This field uniquely identifies the particular record (identified by the MFE segment) being acknowledged by this MFA segment. When returned to the originating system via the MFA segment, this field allows the target system to precisely identify which change to this record is being acknowledged.

2.6.13.4. MFA-3 Event Completion date/time (TS) 00668

Definition: **This field is not used.**

2.6.13.5. MFA-4 MFN Record Level error return (CE) 00669

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

For a list of suggested values, please refer to Table 2-33 in this manual, "User-defined Table 0181—MFN Record-level Error Return."

All such tables will have at least the following two return code values:

Value	Description
S	Successful posting of the record defined by the MFE segment
U	Unsuccessful posting of the record defined by the MFE segment

Table 2-33: User-defined Table 0181—MFN Record-level Error Return

2.6.13.6. MFA-5 Primary key value - MFA (CE) 01308

Definition: **This field is not used.**

2.6.13.7. MFA-6 Primary key value type - MFA (ID) 01320

Definition: **This field is not used.**

2.6.14. ZET—Event Reason for Date of Last Treatment

This is a VA defined segment used to transmit event reason for date of last treatment.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	2	CE			ZZ011		Event Reason Code Name
2	90	XON	O				Patient Primary Facility

Table 2-34: VA Attribute Table, ZET—Event Reason for Date of Last Treatment

2.6.14.1. ZET field definitions

2.6.14.2. ZET-1 Event Reason Code Name

Definition: This field defines the corresponding event that has occurred. The possible values are:

A1: Admission

A2: Discharge

A3: Clinic check-out

2.6.14.3. ZET-2 Patient Primary Facility

Definition: This field defines the facility at which the event has taken place.

Component 1: Name

Component 2: Station Number

2.6.15. 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 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 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.

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 *(not used)*
5	250	CX	O			01279	Prior Visit Number *(not used)*
6	250	CX	O			01280	Prior Alternate Visit ID *(not used)*
7	250	XPN	O	Y		01281	Prior Patient Name

Table 2-35: HL7 Attribute Table, MRG—Merge Patient Information

2.6.15.1. MRG field definitions

2.6.15.2. 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.

For a list of valid values, please refer to "HL7 Table 0061—Check Digit Scheme" in the HL7 Standard Version 2.4 documentation.

The assigning authority and identifier type code are strongly recommended for all CX data types.

2.6.15.3. 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.

For a list of valid values, please refer to "HL7 Table 0061—Check Digit Scheme" in the HL7 Standard Version 2.4 documentation.

The assigning authority and identifier type code are strongly recommended for all CX data types.

2.6.15.4. MRG-3 Prior patient account number (CX) 00213

Definition: **This field is not used.**

2.6.15.5. MRG-4 Prior patient ID (CX) 00214

Definition: **This field is not used.**

2.6.15.6. MRG-5 Prior visit number (CX) 01279

Definition: **This field is not used.**

2.6.15.7. MRG-6 Prior alternate visit ID (CX) 01280

Definition: **This field is not used.**

2.6.15.8. 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.

For a list of valid values, please refer to Table 2-16 in this manual, "HL7 Table 0200—Name Type."

2.6.16. NTE—Notes and Comments Segment

The NTE segment is defined here for inclusion in messages defined in other chapters. It is commonly used for sending notes and comments.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	4	SI	O			00096	Set ID - NTE
2	8	ID	O		0105	00097	Source of Comment
3	65536	FT	O	Y		00098	Comment
4	250	CE	O		0364	01318	Comment Type *(not used)*

Table 2-36: HL7 Attribute Table, NTE—Notes and Comments

2.6.16.1. NTE field definitions

2.6.16.2. NTE-1 Set ID–NTE (SI) 00096

Definition: This field may be used where multiple NTE segments are included in a message. Their numbering must be described in the application message definition.

2.6.16.3. NTE-2 Source of comment (ID) 00097

Definition: This field is used when source of comment must be identified. This table may be extended locally during implementation.

For a list of valid values, please refer to Table 2-37 in this manual, "HL7 Table 0105—Source of Comment."

Value	Description
L	Ancillary (filler) department is source of comment
P	Orderer (placer) is source of comment
O	Other system is source of comment

Table 2-37: HL7 Table 0105—Source of Comment

2.6.16.4. NTE-3 Comment (FT) 00098

Definition: This field contains the comment contained in the segment.

In the current HL7 version, this is a FT rather than a TX data type. Since there is no difference between a FT data type without any embedded formatting commands, and a TX data type, this change is compatible with the previous version.

2.6.16.5. NTE-4 Comment type (CE) 01318

Definition: **The field is not used.**

2.6.17. MSA—Message Acknowledgment Segment

The MSA segment contains information sent while acknowledging another message.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	2	ID	R		0008	00018	Acknowledgment Code
2	20	ST	R			00010	Message Control ID
3	80	ST	O			00020	Text Message
4	15	NM	O			00021	Expected Sequence Number *(not used)*
5	1	ID	B		0102	00022	Delayed Acknowledgment Type *(not used)*
6	250	CE	O		0357	00023	Error Condition

Table 2-38: HL7 Attribute Table, MSA—Message Acknowledgment

2.6.17.1. MSA field definitions

2.6.17.2. MSA-1 Acknowledgment code (ID) 00018

Definition: This field contains an acknowledgment code.

For more information, please refer to the message processing rules in the HL7 Version 2.4 documentation.

For a list of valid values, please refer to Table 2-39 in this manual, "HL7 Table 0008—Acknowledgment Code."

Value	Description
AA	Original mode: Application Accept - Enhanced mode: Application acknowledgment: Accept
CA	Enhanced mode: Accept acknowledgment: Commit Accept
CE	Enhanced mode: Accept acknowledgment: Commit Error
CR	Enhanced mode: Accept acknowledgment: Commit Reject

Table 2-39: HL7 Table 0008—Acknowledgment Code

2.6.17.3. MSA-2 Message control ID (ST) 00010

Definition: This field contains the message control ID of the message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended.

2.6.17.4. MSA-3 Text message (ST) 00020

Definition: This optional field further describes an error condition. This text may be printed in error logs or presented to an end user.

Use of MSA-3-text message and MSA-6-error condition are deprecated.

2.6.17.5. MSA-4 Expected sequence number (NM) 00021

Definition: **This field is not used.**

2.6.17.6. MSA-5 Delayed acknowledgment type (ID) 00022

Definition: **This field is not used.**

2.6.17.7. MSA-6 Error condition (CE) 00023

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 allows the acknowledging system to use a user-defined error code to further specify the error text sent in MSA-3.

Error Condition Code	Error Condition Text	Description/Comment
Success		
0	Message accepted	Success. Optional, as the AA conveys success. Used for systems that must always return a status code.
200	Unsupported message type	The Message Type is not supported.
201	Unsupported event code	The Event Code is not supported.
202	Unsupported processing id	The Processing ID is not supported.
203	Unsupported version id	The Version ID is not supported.
204	Unknown key identifier	The ID of the patient, order, etc., was not found. Used for transactions *other than* additions (e.g., transfer of a non-existent patient).
205	Duplicate key identifier	The ID of the patient, order, etc., already exists. Used in response to addition transactions (Admit, New Order, etc.).
206	Application record locked	The transaction could not be performed at the application storage level (e.g., database locked).
207	Application internal error	A catchall for internal errors not explicitly covered by other codes.

Table 2-40: HL7 Table 0357—Message Error Condition Codes

2.6.18. ERR—Error Segment

The ERR segment is used to add error comments to acknowledgment messages.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	80	CM	R	Y		00024	Error Code and Location

Table 2-41: HL7 Attribute Table, ERR—Error

2.6.18.1. ERR field definitions

ERR-1 Error code and location (CM) 00024

Components: <segment ID (ST)> ^ <sequence (NM)> ^ <field position (NM)> ^ <code identifying error (CE)>

Definition: This field identifies an erroneous segment in another message. The second component is an index if there is more than one segment of type <segment ID>. For systems that do not use the HL7

Encoding Rules, the data item number may be used for the third component. The fourth component (which references HL7 Table 0357—Message Error Condition Codes, (as a CE data type) is restricted from having any subcomponents as the subcomponent separator is now the CE's component separator.

For a listing of HL7 Table 0357—Message Error Condition Codes (Table 2-40 in this manual), please refer to section 2.6.17.7, "MSA-6 Error condition (CE) 00023."

2.6.19. QRD—Original-style Query Definition Segment

The QRD segment is used to define a query.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	26	TS	R			00025	Query Date/Time
2	1	ID	R		0106	00026	Query Format Code
3	1	ID	R		0091	00027	Query Priority
4	10	ST	R			00028	Query ID
5	1	ID	O		0107	00029	Deferred Response Type *(not used)*
6	26	TS	O			00030	Deferred Response Date/Time *(not used)*
7	10	CQ	R		0126	00031	Quantity Limited Request
8	250	XCN	R	Y		00032	Who Subject Filter
9	250	CE	R	Y	0048	00033	What Subject Filter
10	250	CE	R	Y		00034	What Department Data Code *(not used)*
11	20	CM	O	Y		00035	What Data Code Value Qual. *(not used)*
12	1	ID	O		0108	00036	Query Results Level *(not used)*

Table 2-42: HL7 Attribute Table, QRD—Original-Style Query Definition

2.6.19.1. QRD field definitions

2.6.19.1.1. QRD-1 Query date/time (TS) 00025

Definition: This field contains the date the query was generated by the application program.

2.6.19.1.2. QRD-2 Query format code (ID) 00026

Definition: This field refers to valid values in the HL7 Table 0106—Query/Response Format Code (Table 2-43 in this manual), as shown below:

Value	Description
R	Response is in record-oriented format
T	Response is in tabular format

Table 2-43: HL7 Table 0106—Query/Response Format Code

2.6.19.1.3. QRD-3 Query priority (ID) 00027

Definition: This field contains the time frame in which the response is expected.

For a list of valid values, please refer to Table 2-44 in this manual, "HL7 Table 0091—Query Priority." Table values and subsequent fields specify time frames for response.

Value	Description
I	Immediate

Table 2-44: HL7 Table 0091—Query Priority

2.6.19.1.4. QRD-4 Query ID (ST) 00028

Definition: This field contains a unique identifier for the query. Assigned by the querying application. Returned intact by the responding application.

2.6.19.1.5. QRD-5 Deferred response type (ID) 00029

Definition: **This field is not used.**

2.6.19.1.6. QRD-6 Deferred response date/time (TS) 00030

Definition: This field is not used.

2.6.19.1.7. QRD-7 Quantity limited request (CQ) 00031

Components: <quantity (NM)> ^ <units (CE)>

Definition: This field contains the maximum length of the response that can be accepted by the requesting system. Valid responses are numerical values (in the first component) given in the units specified in the second component.

For a list of valid entries for the second component, please refer to Table 2-45 in this manual, "HL7 Table 0126—Quantity Limited Request." Default is LI (lines).

Value	Description
RD	Records

Table 2-45: HL7 Table 0126—Quantity Limited Request

2.6.19.1.8. QRD-8 Who subject filter (XCN) 00032

Components: <ID number (ST)> ^ <family name (FN)> ^ <given name (ST)> ^ <second and further given names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^ <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)> ^ < name assembly order (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 list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient (e.g., VistA Internal ID [DFN], Claim Number, VHA MPI Integration Control Number [ICN], Social Security Number [SSN], unique individual identifier, etc.).

For a list of valid values, please refer to "HL7 Table 0061—Check Digit Scheme" in the HL7 Standard Version 2.4 documentation. The arbitrary term of "internal ID" has been removed from the name of this field for clarity.

Also please refer to Table 2-15 in this manual, "HL7 Table 0203—Identifier Type," and "User-defined Table 0363—Assigning Authority" in the HL7 Standard Version 2.4 documentation.

The currently supported values are listed below:

Identifier	Assigning Authority	Identifier type	Assigning Location	Expiration date
National ICN	USVHA	NI	unique station# id	
SSN	USSSA	SS	unique station# id	
VistA ID (DFN)	USVHA	PI	unique station# id	

Table 2-46: VA Patient identifiers

This field should *not* have been a required field. However, for backwards compatibility it remains a required field. There are some queries in the standard that have not required this field.

2.6.19.1.9. QRD-9 What subject filter (CE) 00033

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 the kind of information that is required to satisfy the request. Valid values define the type of transaction inquiry and may be extended locally during implementation. DEM is the only value currently being utilized.

Value	Description
DEM	Demographics

Table 2-47: HL7 Table 0048—What Subject Filter

For detailed examples of use of various query filter fields, please refer to the "*HL7 Implementation Guide*."

2.6.19.1.10. QRD-10 What department data code (CE) 00034

Definition: **This field is not used.**

2.6.19.1.11. QRD-11 What data code value qual (CM) 00035

Definition: **This field is not used.**

2.6.19.1.12. QRD-12 Query results level (ID) 00036

Definition: **This field is not used.**

2.6.20. QAK—Query Acknowledgment Segment

The QAK segment contains information sent with responses to a query. Although the QAK segment is required in the responses to the enhanced queries it may appear as an optional segment placed after the (optional) ERR segment in any query response (message) to any original mode query.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	32	ST	C			00696	Query Tag
2	2	ID	O		0208	00708	Query Response Status
3	250	CE	O			01375	Message Query Name *(not used)*
4	10	NM	O			01434	Hit Count (not used)
5	10	NM	O			01622	This payload *(not used)*
6	10	NM	O			01623	Hits remaining *(not used)*

Table 2-48: HL7 Attribute Table, QAK—Query Acknowledgment

2.6.20.1. QAK field definitions

2.6.20.2. QAK-1 Query tag (ST) 00696

Definition: This field may be valued by the initiating system to identify the query, and may be used to match response messages to the originating query. If it is valued, the responding system is required to echo it back as the first field in the query acknowledgment segment (QAK). This field differs from *MSA-2-message control ID* in that its value remains constant for each message (i.e., all continuation messages) associated with the query, whereas *MSA-2-Message control ID* may vary with each continuation message, since it is associated with each individual message, not the query as a whole. *QAK-1-Query tag* is not conditional on the presence of the *QRD-1-Query ID* field in the original mode queries: in the original mode queries *QAK-1-Query tag* is not used.

2.6.20.3. QAK-2 Query response status (ID) 00708

Definition: This field allows the responding system to return a precise response status. It is especially useful in the case where no data is found that matches the query parameters, but where there is also no error. It is defined with HL7 Table 0208—Query Response Status (Table 2-49 in this manual), as shown below:

Value	Description
OK	Data found, no errors (this is the default)
NF	No data found, no errors
AE	Application error
AR	Application reject

Table 2-49: HL7 Table 0208—Query Response Status

2.6.20.4. QAK-3 Message query name (CE) 01375

Definition: **This field is not used.**

2.6.20.5. QAK-4 Hit count total (NM) 01434

Definition: **This field is not used.**

2.6.20.6. QAK-5 This payload (NM) 01622

Definition: **This field is not used.**

2.6.20.7. QAK-6 Hits remaining (NM) 01623

Definition: **This field is not used.**

Glossary

AAC	**A**ustin **A**utomation **C**enter.
ACK	General **Ack**nowledgment message. The ACK message is used to respond to a message where there has been an error that precludes application processing or where the application does not define a special message type for the response.[2]
ACKNOWLEDGMENT - ACCEPT LEVEL	The receiving system commits the message to safe storage in a manner that releases the sending system from any obligation to resend the message. A response is returned to the initiator indicating successful receipt and secure storage of the information.[2]
ACKNOWLEDGMENT - APPLICATION LEVEL	The appropriate application on the receiving system receives the transaction and processes it successfully. The receiving system returns an application-dependent response to the initiator.[2]
ADPAC	**A**utomated **D**ata **P**rocessing **A**pplication **C**oordinator.
ADT	**A**dmission, **D**ischarge, and **T**ransfer (ADT) message.[2]
ANSI	**A**merican **N**ational **S**tandards **I**nstitute.
API	**A**pplication **P**rogramming **I**nterface.
APPLICATION	VistA software and documentation that supports the automation of a service (e.g., Laboratory or Pharmacy) within the Veterans Health Administration (VHA).
APPLICATION PROGRAM INTERFACE (API)	Program calls provided for use by application programmers. APIs allow programmers to carry out standard computing activities without needing to duplicate utilities in their own software. APIs also further DBA goals of system integration by channeling activities, such as adding new users, through a limited number of callable entry points.
ARRAY	An arrangement of elements in one or more dimensions. An M array is a set of nodes referenced by subscripts that share the same variable name.
BULLETINS	Electronic mail messages that are automatically delivered by VistA MailMan under certain conditions. For example, a bulletin can be set up to "fire" when database changes occur, such as adding a new Institution in the INSTITUTION file (#4). Bulletins are fired by bulletin-type cross-references.

[2] Glossary description taken from the Health Level Seven, Version 2.3.1 documentation © 1999, Final Standard 05/999. Editor: Don A. Kruse, Atomic Moving Images™.

CALLABLE ENTRY POINT	Authorized program call that may be used in any VistA application software. The DBA maintains the list of DBIC-approved entry points.
CE	**C**oded **E**lement data type. This data type transmits codes and the text associated with the code. This type has six components, as follows: identifier, text, name of coding system, alternate identifier, alternate text, and name of alternate coding system.[2]
CHUI	**CH**aracter-based **U**ser **I**nterface (i.e., roll-and-scroll).
CM	**C**o**m**posite data type. A field that is a combination of other meaningful data fields. Each portion is called a component.[2]
CO	**C**entral **O**ffice.
COMPONENT SEPARATOR	The component separator is used to separate adjacent components of some data fields. Its use is described in the descriptions of the relevant data fields. The character that represents the component separator is specified for each message as the first character in the Encoding Characters data field of the MSH segment. Absent other considerations it is recommended that all sending applications use "^"as the component separator. However, all applications are required to accept whatever character is included in the Message Header and use it to parse the message.[2]
COORDINATING MASTER OF RECORD (CMOR)	The CMOR site is the designated "owner" of the patient's descriptive and clinical data. A patient has only one CMOR at a time, but the CMOR can change. Initially, the MPI assigns the Coordinating Master of Record based upon the first site at which the MPI encounters the patient. The designation of a site as the CMOR for a patient does not provide "workload credit" or any other distinction. This is a field in the PATIENT file (#2).
CONTROLLED SUBSCRIPTION INTEGRATION AGREEMENT	This applies where the IA describes attributes/functions that must be controlled in their use. The decision to restrict the IA is based on the maturity of the custodian package. Typically, these IAs are created by the requesting package based on their independent examination of the custodian package's features. For the IA to be approved, the custodian grants permission to other VistA packages to use the attributes/functions of the IA; permission is granted on a one-by-one basis where each is based on a solicitation by the requesting package. An example is the extension of permission to allow a package (e.g., Spinal Cord Dysfunction) to define and update a component that is supported within the Health Summary package file structures.
CQ	**C**omposite **Q**uantity with Units data type. The first component is a quantity and the second is the units in which the quantity is expressed.[2]

CROSS REFERENCE	There are several types of cross-references available. Most generally, a VA FileMan cross-reference specifies that some action be performed when the field's value is entered, changed, or deleted. For several types of cross-references, the action consists of putting the value into a list; an index used when looking-up an entry or when sorting. The regular cross-reference is used for sorting and for lookup; you can limit it to sorting only.
DATA	A representation of facts, concepts, or instructions in a formalized manner for communication, interpretation, or processing by humans or by automatic means. The information you enter for the computer to store and retrieve. Characters that are stored in the computer system as the values of local or global variables. VA FileMan fields hold data values for file entries.
DATA DICTIONARY (DD)	The **D**ata **D**ictionary is a global containing a description of what kind of data is stored in the global corresponding to a particular file. VA FileMan uses the data internally for interpreting and processing files. A Data Dictionary contains the definitions of a file's elements (fields or data attributes); relationship to other files; and structure or design. Users generally review the definitions of a file's elements or data attributes; programmers review the definitions of a file's internal structure.
DBA	**D**ata**b**ase **A**dministrator, oversees software development with respect to VistA Standards and Conventions (SAC) such as namespacing. Also, this term refers to the Database Administration function and staff.
DBIA	**D**ata**b**ase **I**ntegration **A**greement, see Integration Agreements (IA).
DEFAULT	Response the computer considers the most probable answer to the prompt being given. It is identified by double slash marks (//) immediately following it. This allows you the option of accepting the default answer or entering your own answer. To accept the default you simply press the Enter (or Return) key. To change the default answer, type in your response.
DELIMITER	Special character used to separate a field, record, or string. VA FileMan uses the caret character ("^") as the delimiter within strings.
DEPARTMENT OF VETERANS AFFAIRS	The Department of **V**eterans **A**ffairs, formerly called the **V**eterans **A**dministration.
DIRECT MODE UTILITY	A program call that is made when working in direct programmer mode. A direct mode utility is entered at the MUMPS prompt (e.g., >D ^XUP). Calls that are documented as direct mode utilities *cannot* be used in application software code.
DoD	**D**epartment **o**f **D**efense.

DT	**D**ata **T**ype or **D**a**t**e data type. Always in the format YYYYMMDD.[2]
ENTRY	VA FileMan record. An internal entry number (IEN, the .001 field) uniquely identifies an entry in a file.
EXTRINSIC FUNCTION	Extrinsic function is an expression that accepts parameters as input and returns a value as output that can be directly assigned.
FACILITY	Geographic location at which VA business is performed.
FIELD	HL7: An HL7 field is a string of characters defined by one of the HL7 data types.[2] VistA: In a record, a specified area used for the value of a data attribute. The data specifications of each VA FileMan field are documented in the file's data dictionary. A field is similar to blanks on forms. It is preceded by words that tell you what information goes in that particular field. The blank, marked by the cursor on your terminal screen, is where you enter the information.
FIELD COMPONENTS	A field entry may also have discernable parts or components. For example, the patient's name is recorded as last name, first name, and middle initial, each of which is a distinct entity separated by a component delimiter (sub-subfield in astm e1238-94).[2]
FIELD SEPARATOR	The HL7 field separator separates two adjacent data fields within an HL7 segment. It also separates the segment ID from the first data field in the segment. The value that represents the field separator may be defined differently for each message. Whatever character is the fourth character of the MSH segment serves as the field separator for all segments in the message. Absent other considerations, it is recommended that all sending applications use "|" as the field separator. However, all receiving applications are required to accept whatever character is included in this position and use it to parse the message.[2]
FILE	Set of related records treated as a unit. VA FileMan files maintain a count of the number of entries or records.
FILE MANAGER (VA FILEMAN)	VistA's Database Management System (DBMS). The central component of Kernel that defines the way standard VistA files are structured and manipulated.
FORM	Please refer to the Glossary entry for "ScreenMan Forms."
FORUM	The central E-mail system within VistA. Developers use FORUM to communicate at a national level about programming and other issues. FORUM is located at the OI Field Office—Washington, DC (162-2).
FREE TEXT	A DATA TYPE that can contain any printable characters.

FT	**F**ormatted **T**ext data type. This data type is derived from the string data type by allowing the addition of embedded formatting instructions. These instructions are limited to those that are intrinsic and independent of the circumstances under which the field is to be displayed, FT supports width-independent and device-independent text display.[2]
GAL	**G**lobal **A**ddress **L**ist.
GLOBAL VARIABLE	Variable that is stored on disk (M usage).
GUI	**G**raphical **U**ser **I**nterface.
HD	**H**ierarchic **D**esignator data type.[2]
HEC	**H**ealth **E**ligibility **C**enter.
HEALTH LEVEL SEVEN (HL7)	National level standard for data exchange in all healthcare environments regardless of individual computer application systems.
HEALTH LEVEL SEVEN (HL7) VISTA	Messaging system developed as a VistA software that follows the HL7 Standard for data exchange.
HIPAA	**H**ealth **I**nsurance **P**ortability and **A**ccountability **A**ct
ID	Coded Value data type. The value of such a field follows the formatting rules for a ST field except that it is drawn from a table of legal values. Examples of ID fields include religion and sex.[2]
INPUT TEMPLATE	A pre-defined list of fields that together comprise an editing session.
INSTITUTION	A Department of Veterans Affairs (VA) facility assigned a number by headquarters, as defined by Directive 97-058. An entry in the INSTITUTION file (#4) that represents the Veterans Health Administration (VHA).
INTEGRATION AGREEMENTS (IA)	**I**ntegration **A**greements (IA) define agreements between two or more VistA software applications to allow access to one development domain by another. Any software developed for use in the VistA environment is required to adhere to this standard; as such it applies to vendor products developed within the boundaries of DBA assigned development domains (e.g., MUMPS AudioFax). An IA defines the attributes and functions that specify access. All IAs are recorded in the Integration Agreement database on FORUM. Content can be viewed using the DBA menu or the System Design & Development's web page.

INTEGRATION CONTROL NUMBER (ICN)	The **I**ntegration **C**ontrol **N**umber is a unique identifier assigned to patients when they are added to the Master Patient Index. The ICN follows the ASTM E1714-95 standard for a universal health identifier. ICNs link patients to their records across VA systems.
INTERNAL ENTRY NUMBER (IEN)	The number used to identify an entry within a file. Every record has a unique internal entry number.
IRA	**I**nitial **R**equest **A**nalysis.
IRM	**I**nformation **R**esource **M**anagement. A service at VA medical centers responsible for computer management and system security.
IS	Coded value for user defined tables data type.[2]
ISO	**I**nformation **S**ecurity **O**fficer.
ISS	**I**nfrastructure and **S**ecurity **S**ervices.
ITAC	**I**nformation **T**echnology **A**pproval **C**ommittee was established as an advisory committee to the Chief Information Officer to ensure that the Information Technology (IT) program supports VHA goals and to provide guidance concerning priorities for IT initiatives.
IV&V	**I**ndependent **V**alidation and **V**erification team acts to ensure the functional integrity and technical correctness of SD&D software, processes, and documentation.
KERNEL	Kernel is VistA software that functions as an intermediary between the host operating system and other VistA software applications (e.g., Laboratory, Pharmacy, IFCAP, etc.). Kernel provides a standard and consistent user and programmer interface between software applications and the underlying M implementation.
LAN	**L**ocal **A**rea **N**etwork.
LDAP	**L**ightweight **D**irectory **A**ccess **P**rotocol.
LINK	Non-specific term referring to ways in which files may be related (via pointer links). Files have links into other files.
MAILMAN	VistA software that provides a mechanism for handling electronic communication, whether it's user-oriented mail messages, automatic firing of bulletins, or initiation of server-handled data transmissions.
MASTER FILES	A set of common reference files used by one or more application systems. These common reference files need to be synchronized across the various applications at a given site. The Master Files Notification transactions provide a way of maintaining this synchronization.[2]

MASTER PATIENT INDEX —VISTA	**M**aster **P**atient **I**ndex. This software resides in VistA and supports the Austin side of the MPI, as well as the CMOR (Coordinating Master Of Record) change requests. MPI VistA enables sites to query the MPI (Austin) for the: • Assignment of ICN (i.e., Integration Control Number) and CMOR. • Inactivation of an ICN for a patient. • Known data on the MPI (Austin). Any updates to patient data are then sent to the MPI (Austin) and to sites where a patient has been seen. MPI VistA also manages incoming and outgoing Change CMOR requests.
MASTER PATIENT INDEX (AUSTIN)	The **M**aster **P**atient **I**ndex is the master index of all VHA patients. The MPI assigns and maintains unique national patient identifiers (i.e., Integration Control Numbers or ICNs) that link patients to their records across VHA systems. The MPI also assigns the initial CMOR (first site to identify the patient to the MPI). It contains patient's identifying descriptive information (e.g., name, SSN, date of birth, mother's maiden name, place of birth state, and place of birth city).
MENU	List of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word "Select" and followed by the word "option" as in Select Menu Management option: (the menu's select prompt).
MENU SYSTEM	The overall Menu Manager logic as it functions within the Kernel framework.
MENU TEXT	The descriptive words that appear when a list of option choices is displayed. Specifically, the Menu Text field of the OPTION file (#19). For example, User's Toolbox is the menu text of the XUSERTOOLS option. The option's synonym is TBOX.
MESSAGE	A message is the atomic unit of data transferred between systems. It is comprised of a group of segments in a defined sequence. Each message has a message type that defines its purpose. For example, the ADT Message type is used to transmit portions of a patient's ADT data from one system to another. A three-character code contained within each message identifies its type.[2]
MESSAGE DELIMITERS	In constructing a message certain characters are used. These include the Segment Terminator, the Field Separator, the Component Separator, the Sub-Component Separator, Repetition Character, and the Escape Character.[2]

MESSAGE TYPE	Each message has a message type that defines its purpose. For example, the ADT Message Type is used to transmit portions of a patient's ADT data from one system to another. A 3-character code contained within each message identifies its type.[2]
MFN	**M**aster **F**iles Change **N**otification message.
NAMESPACING	Convention for naming VistA software elements. The DBA assigns unique two to four character string prefix for software developers to use in naming routines, options, and other software elements so that software can coexist. The DBA also assigns a separate range of file numbers to each software application.
NM	**Num**eric data type. A number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits, and an optional decimal point.[2]
NVS	**N**ational **V**istA **S**upport.
OBX	Observation/result message. OBX is intended to cover all types of patient specific observation reports except pharmacy.[2]
OIFO	**O**ffice of **I**nformation **F**ield **O**ffice.
OPTION	An entry in the OPTION file (#19). As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options may also be scheduled to run in the background, non-interactively, by TaskMan.
OPTION NAME	Name field in the OPTION file (e.g., XUMAINT for the option that has the menu text "Menu Management"). Options are namespaced according to VistA conventions monitored by the DBA.
PACKAGE	Please refer to the Glossary entry for "Software."
PL	**P**atient **L**ocation data type.[2]
PN	**P**erson **N**ame data type. A name includes multiple free text components: family name, given name, middle initial or name, suffix, prefix, and degree.[2]
POINTER	The address at which a data value is stored in computer memory. A relationship between two VA FileMan files, a pointer is a file entry that references another file (forward or backward). Pointers can be an efficient means for applications to access data by referring to the storage location at which the data exists.

PRIMARY KEY	A Data Base Management System construct, where one or more fields uniquely define a record (entry) in a file (table). The fields are required to be populated for every record on the file, and are unique, in combination, for every record on the file.
PRIVATE INTEGRATION AGREEMENT	Where only a single application is granted permission to use an attribute/function of another VistA software application. These IAs are granted for special cases, transitional problems between versions, and release coordination. A Private IA is also created by the requesting software application based on their examination of the custodian software application's features. An example would be where one software application distributes a patch from another software application to ensure smooth installation.
PROMPT	The computer interacts with the user by issuing questions called prompts, to which the user issues a response.
QRY	**Q**ue**ry** message.[2]
RECORD	Set of related data treated as a unit. An entry in a VA FileMan file constitutes a record. A collection of data items that refer to a specific entity (e.g., in a name-address-phone number file, each record would contain a collection of data relating to one person).
REPEATED VALUE	Some fields may contain many repeat fields. For example, the diagnoses field may contain many different diagnoses.[2]
REPETITION SEPARATOR	The repetition separator is used in some data fields to separate multiple occurrences of a field. It is used only where specifically authorized in the descriptions of the relevant data fields. The character that represents the repetition separator is specified for each message as the second character in the Encoding Characters data field of the MSH segment. Absent other considerations it is recommended that all sending applications use "~" as the repetition separator. However, all applications are required to accept whatever character is included in the Message Header and use it to parse the message.[2]
REQUIRED FIELD	A mandatory field, one that must not be left blank. The prompt for such a field will be repeated until the user enters a valid response.
REVERSE VIDEO	The reversal of light and dark in the display of selected characters on a video screen. For example, if text is normally displayed as black letters on a white background, reverse video presents the text as white letters on a black background or vice versa.
ROUTINE	Program or a sequence of instructions called by a program that may have some general or frequent use. M routines are groups of program lines, which are saved, loaded, and called as a single unit via a specific name.

SAC	**S**tandards **a**nd **C**onventions. Through a process of quality assurance, all VistA software is reviewed with respect to SAC guidelines as set forth by the Standards and Conventions Committee (SACC).
SACC	VistA's **S**tandards **a**nd **C**onventions **C**ommittee. This Committee is responsible for maintaining the SAC.
SCREEN EDITOR	VA FileMan's Screen-oriented text editor. It can be used to enter data into any WORD-PROCESSING field using full-screen editing instead of line-by-line editing.
SCREENMAN FORMS	Screen-oriented display of fields, for editing or simply for reading. VA FileMan's Screen Manager is used to create forms that are stored in the FORM file (#.403) and exported with a software application. Forms are composed of blocks (stored in the BLOCK file [#.404]) and can be regular, full screen pages or smaller, "pop-up" pages.
SCREEN-ORIENTED	A computer interface in which you see many lines of data at a time and in which you can move your cursor around the display screen using screen navigation commands. Compare to Scrolling Mode.
SCROLLING MODE	The presentation of the interactive dialog one line at a time. Compare to Screen-oriented.
SD&D	**S**ystem **D**esign and **D**evelopment.
SEGMENT	An HL7 segment is a logical grouping of data fields. Segments of a message may be required or optional. They may occur only once in a message or they may be allowed to repeat. Each segment is identified by a unique three-character code known as the Segment ID.[2]
SEGMENT (RECORD)	A typed aggregate of fields (fields) describing one complete aspect of a message. For example, the information about one order is sent as type of segment (OBR), the information related to an observation is sent as another segment (OBX). The segment in a message is analogous to a record in a database, and in previous versions of the standard we used record in place of the word segment. We have changed the nomenclature to be consistent with HL7 and other standards organizations in this version.[2]
SEGMENT TERMINATOR	The segment terminator is the last character of every segment. It is always the ASCII CR character (hex 0D).[2]
SEPG	**S**oftware **E**ngineering **P**rocess **G**roup.
SI	**S**equence **I**D data type. A positive integer in the form of a NM field.[2]

SOFTWARE	The set of programs, files, documentation, help prompts, and installation procedures required for a given application (e.g., Laboratory, Pharmacy, and PIMS). A VistA software environment is composed of elements specified via the PACKAGE file (#9.4). Elements include files, associated templates, namespaced routines, and namespaced file entries from the OPTION, HELP FRAME, BULLETIN, and FUNCTION files. As public domain software, VistA software can be requested through the Freedom of Information Act (FOIA).
ST	String data type. String Data is left justified with trailing blanks optional. Any printable ASCII characters are allowed.[2]
SUBCOMPONENT SEPARATOR	The subcomponent separator is used to separate adjacent subcomponents of some data fields. Its use is described in the descriptions of the relevant data fields. The character that represents the subcomponent separator is specified for each message as the fourth character in the Encoding Characters data field of the MSH segment. Absent other considerations it is recommended that all sending applications use "**&**" as the subcomponent separator. However, all applications are required to accept whatever character is included in the Message Header and use it to parse the message.[2]
SUPPORTED REFERENCE INTEGRATION AGREEMENT	This applies where any VistA application may use the attributes/functions defined by the IA (these are also called "**Public**"). An example is an IA that describes a standard API such as DIE or VADPT. The software that creates/maintains the Supported Reference must ensure it is recorded as a Supported Reference in the IA database. There is no need for other VistA software applications to request an IA to use these references; they are open to all by default.
TCP/IP	**T**ransaction **C**ontrol **P**rotocol/**I**nternet **P**rotocol. A set of protocols for Layers 3 (Network) and 4 (Transfer) of the OSI network model. TCP/IP has been developed over a period of 15 years under the auspices of the Department of Defense. It is a de facto standard, particularly as higher-level layers over Ethernet. Although it builds upon the OSI model, TCP/IP is not OSI-compliant.[2]
TEMPLATE	Means of storing report formats, data entry formats, and sorted entry sequences. A template is a permanent place to store selected fields for use at a later time. Edit sequences are stored in the INPUT TEMPLATE file (#.402), print specifications are stored in the PRINT TEMPLATE file (#.4), and search or sort specifications are stored in the SORT TEMPLATE file (#.401).

TOOLKIT	Toolkit (or Kernel Toolkit) is a robust set of tools developed to aid the VistA development community, and Information Resources Management (IRM), in writing, testing, and analysis of code. They are a set of generic tools that are used by developers, technical writers, software quality assurance (SQA) personnel, and software applications to support distinct tasks. Toolkit provides utilities for the management and definition of development projects. Many of these utilities have been used by the OI Field Office–Oakland for internal management and have proven valuable. Toolkit also includes tools provided by other OI Field Offices based on their proven utility.
TRIGGER EVENT	The event that initiates an exchange of messages is called a trigger event. The HL7 Standard is written from the assumption that an event in the real world of health care creates the need for data to flow among systems. The real-world event is called the trigger event. For example, the trigger event "a patient is admitted" may cause the need for data about that patient to be sent to a number of other systems. There is a one-to-many relationship between message types and trigger event codes. The same trigger event code may not be associated with more than one message type.[2]
TS	**T**ime **S**tamp data type. Contains the exact time of an event, including the date and time.[2]
TX	Text data type. String data meant for user display on a terminal or printer.[2]
VA	The Department of **V**eterans **A**ffairs.
VA FILEMAN	Set of programs used to enter, maintain, access, and manipulate a database management system consisting of files. A software application of online computer routines written in the M language, which can be used as a standalone database system or as a set of application utilities. In either form, such routines can be used to define, enter, edit, and retrieve information from a set of computer stored files.
VAMC	**V**eterans **A**ffairs **M**edical **C**enter.
VARIABLE	Character, or group of characters, that refer(s) to a value. M (previously referred to as MUMPS) recognizes 3 types of variables: local variables, global variables, and special variables. Local variables exist in a partition of main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays. The term "global" may refer either to a global variable or a global array. A special variable is defined by systems operations (e.g., $TEST).
VDSI	**V**istA **D**ata **S**ystems & **I**ntegration.

VHA	**V**eterans **H**ealth **A**dministration.
VISN	**V**eterans **I**ntegrated **S**ervice **N**etwork.
VISTA	**V**eterans Health **I**nformation **S**ystems and **T**echnology **A**rchitecture (VistA) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). VistA software, developed by the VA, is used to support clinical and administrative functions at VHA sites nationwide. Server-side code is written in M, and, via Kernel, runs on all major M implementations regardless of vendor. VistA is composed of software that undergoes a quality assurance process to ensure conformity with namespacing and other VistA standards and conventions.
WAN	**W**ide **A**rea **N**etwork.
XCN	E**x**tended **C**omposite ID **N**umber and **N**ame data type. In version 2.3, use instead of the CN datatype.[2]
XON	Extended composite name and ID number for organizations data type.[2]
XPN	Extended person name data type. In version 2.3, replaces the PN data type.[2]
XTN	Extended telecommunications number data type. In version 2.3, replaces the TN data type.[2]
Z SEGMENTS	All message type and trigger event codes beginning with Z are reserved for locally defined messages. No such codes will be defined within the HL7 Standard.[2]

Appendix A—Why Doesn't a Patient Have a National ICN?

The patient has No ICN (national or local):

- Patient wasn't part of the initial seeding process (no activity in last three fiscal years from point of initial seeding).
- Patient has been "inactivated" from the MPI via a manual process (via the Inactivate Patient from MPI option, either locally or remotely from the MPI).
- Patient has been deemed a "Test" Patient (EEE patients, ZZ'd patients, patients with SSNs that contain 5 leading zeros.).
- Stop MPI/PD Messaging field set to 0.

The patient has a Local ICN (how that happens):

- Can't communicate with the MPI (i.e., MPI down).
- Communication lost before ICN returned from the MPI.
- Exception generated.

For more information on ICN assignment exceptions, please refer to "Appendix B—Exceptions that Prevent the Assignment of a National ICN" in this manual.

Appendix B—Exceptions that Prevent the Assignment of a National ICN

The following is a list of exceptions that prevent the assignment of a national ICN (creates a Local ICN if one didn't already exist):

- Missing required fields – name and date of birth (SSN is not required)
- Mismatched SSN
- Mismatched Name
- Potential Matches found (which could include duplicates on the MPI)
- Potential duplicated on local system (ICN has already been assigned to another patient in the site's local database)

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