



**MASTER PATIENT INDEX/PATIENT  
DEMOGRAPHICS (MPI/PD)  
HL7 INTERFACE SPECIFICATIONS**

Version 2.21

April 1999

Revised December 2007



# 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, Birmingham 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 SS 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
08/01/03	2.2	Updated PID segment.	Chris Chesney, Birmingham OIFO
10/30/03	2.3	ZPD segments added to messages. Segments sent with messages updated to include all Z-Segments.	Chris Chesney, Birmingham OIFO
10/27/04	2.4	Updated to include PIMS segments (i.e. AL1, NK1, OBX & Z* (ZCT, ZEL, ZEM, ZFF, ZPD, ZSP), including sequence translations for each. (Changes still pending.)	Susan Strack, Oakland OIFO
10/28/04	2.5	Review and update	Danny Reed, Birmingham OIFO

Revision History

Date	Revision	Description	Author
12/17/04	2.6	Incorporated all feedback from developers (Danny Reed and Chris Chesney) and make final edits for release to the VistA Documentation Library (VDL).	Susan Strack, Oakland OIFO
02/04/05	2.7	Accepted past updates. In section 2.0 added hyperlinks to the messages. Also change the heading on the different ADT-A31 message constructs so that each implementation can be easily identified.	Danny Reed, Birmingham OIFO
04/13/05	2.8	Updated sequences 2, 3, and 4 in the ZEL—VA Specific Patient Eligibility segment.	Susan Strack, Oakland OIFO
04/13/05	2.9	Incorporated the dfn changes to the ADT-A43 messaging	Danny Reed, Birmingham OIFO
04/15/05	2.10	Updated the ZCT, ZEL, ZEM, and ZPD segments, and corrected the patient DFN to "271" in the QPD^Q22 sequence of <a href="#">Figure 2-31</a> .	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO
05/06/05	2.11	Updated the QPD segment table to include sequence QPD-6.	Susan Strack, Oakland OIFO; Danny Reed, Oakland OIFO
05/31/05	2.12	Included ADT-A24 examples of the resolution of an MPI duplicate: <ul style="list-style-type: none"> <li>• First form w/top level ICN value</li> <li>• Second form w/all identifiers</li> </ul> Also corrected the A28 Add Patient msg example to delete some repeated ICNs in the PID^1 and PID^2 segments.	Susan Strack, Oakland OIFO; Danny Reed, Birmingham OIFO
06/01/05	2.13	Updated references of the national ICN to use the MPI's station# of 200M. Also removed the repeatable symbols off of the ADT-A43 message.	Danny Reed, Birmingham OIFO
06/10/05	2.14	Update the ADT-A24 messages figure 2.9, 2.13 and 2.14 to move the PD1 segment between PID1 and PID2 This correction was made as part of the MPI*1*35 patch Modified the MFN-M05 figure 2-37 to pass the AL instead of NE in the MFI segment. Also updated Figure 1-1 "A24—Link Patient Information message example" to include the ICN history entries with the date (not the time) that ICN became inactive.	Danny Reed, Birmingham OIFO; Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO

Date	Revision	Description	Author
09/26/05	2.15	Add Section 2.16 and to the trigger events table ADT-A37 to support the Unlink of the MyHealthVet project Removed the sections column in the messages and trigger events table in section 2.	Danny Reed, Birmingham OIFO
11/18/05	2.16	Updated all examples for messaging. Added appendix for subscribing applications. Updated section 1.1 Edits to grammar, punctuation, and formatting.	Chris Chesney, Birmingham OIFO; Susan Strack, Oakland OIFO
01/23/06	2.16v2	Updating PID segment for inclusion of bad address indicator, foreign address, confidential address and category, alias SSN, and change assigning authority on national ICNs. Add Pager #, cell phone #, and e-mail address and work phone into PID-13. These are related to the MPI Changes 3 project.	Chris Chesney, Birmingham OIFO
03/31/06	2.17	Updating PID Segment for inclusion of SSN Verification Status, Pseudo SSN Reason. Including a note about encoding characters and HL7 delimiters being included in the HL7 messages. Updating examples to ensure that Place of Birth State and the State address fields are shown as the state code and not completely spelt out, to be in line with the standard. 200M is listed as the authoritative source when the National ICN is passed in the PID segment. Updating PID to include field 32 for Identity Reliability Code.	Chris Chesney, Birmingham OIFO
04/04/06	2.17	Updated OBX segment field 5 Observed Value for changes to SSN Verification Status values.	Chris Chesney, Birmingham OIFO
04/04/06	2.17	Section 2.4 1. Updated Example 3 ADT-A24 description to include reference to the local ID and ICN in the captured message Section 2.6 1. Updated the A40 Capture to include the DFN in the MRG segment as well as 200M when referencing a National ICN. Section 2.8 1. Updated the A04 captured with 200M when referencing National ICN	Danny Reed, Birmingham OIFO

Revision History

Date	Revision	Description	Author
		<p>Section 2.9</p> <p>1. Updated the A08 captured with 200M when referencing National ICN</p> <p>Section 2.12</p> <p>1. Updated the A31 captured with 200M when referencing National ICN</p> <p>Section 2.14</p> <p>1. Updated the A40 captured with 200M when referencing National ICN</p> <p>2. Updated Example 1 and 2 to include a valid ICN, it appeared that the ICN that was in the capture had been scrubbed erroneously.</p> <p>Section 3.10</p> <p>1. Removed note on MSA-3</p> <p>2. Updated description on MSA-1 to include when an AA, AE and AR should be passed.</p> <p>Section 3.13</p> <p>1. Replaced OBX-5 table description t reference to the VUID to internal value</p> <p>Section 3.15</p> <p>1. Updated the PID-3 table to separate Deprecated ICN reference to local and national</p> <p>2. Updated table PID-11 to include VAB4 in the table listing.</p>	
04/24/06	2.17	<p>Implemented feedback based on a review of the VA HL7 Tables (Chapter 4 in the documentation) by HSD&amp;D Message Administration, M&amp;IS. Also, general edits to grammar, punctuation, formatting, captions, and reindexed the manual.</p>	<p>Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Donald Creaven, Message Administration, M&amp;IS, Oakland OIFO; Dan Soraoka, Project Manager, Oakland OIFO</p>
05/15/06	2.18	<p>Q22 query updated to include additional parameters for searching</p>	<p>Chris Chesney, Birmingham OIFO</p>
07/27/06	2.19	<p>Making changes to support primary view: EVN segment for A31 messages will have Seq #2 be the date last updated from 985 or 985.5 depending upon the type of update (primary view or correlation)</p> <p>OBX segment added to A31 message for the sending of the SSN Verification Status field.</p> <p>PID segment, adding ID State for the ICN will be passed in PID 3 by populating the</p>	<p>Chris Chesney, Birmingham OIFO</p>

Date	Revision	Description	Author
		effective date to indicate Permanent, by populating the expiration date to indicate Deactivated and with neither effective or expiration date to indicate that the ID State is Temporary.	
11/13/06	2.19	Adding HLO differences to the MSH segment. Providing HLO examples for the A43, A24 and A31 messages	Chris Chesney, Birmingham OIFO
01/19/07	2.20	Updating Chapter 2 table and examples of messages.	Chris Chesney, Birmingham OIFO
06/22/07	2.20	In Chapter 2, Trigger Events and Definitions, item "Update to fields on an existing MPI entry" (4 <sup>th</sup> row in the first table), please change (RSA will still get the A08 message for there processes) to (RSA will still get the A08 message for <b>their</b> processes)	Danny Reed
06/22/07	2.20	Section 2.12 has Example 2, then Example 3, but no Example 1 preceding them. Changed Example 2 to be 1 and 3 to be 2	Danny Reed
06/22/07	2.20	Adding the following statement to the introduction paragraph. There are references in this document to the VistA HL7 package enhancement known as HLO which stands for HL7 Optimized, so from this point forward this will be referenced with the acronym HLO.	Danny Reed
06/22/07	2.20	Changed the following references: In section 2.4 example #5 and in section 2.7 example #2 changed the reference to HLO to be via HLO instead of HLO Message. Example: <b>Message FROM the MPI TO PSIM via HLO</b>	Danny Reed
06/22/07	2.20	Added additional information in the table of identifiers in Section 3.15 PID-3 to identify the Temporary, Permanent and Deactivated ICN ID State difference based on effective and expiration dates	Danny Reed, Birmingham OIFO
06/25/07	2.20	Added PID example. Re-introduced pink font to show changes. Previously content marked for deletion was deleted as per Danny Reed. Reformatted examples. Recompiled TOC and Index entries. Made other content changes based on feedback from Cindy Heuer.	Danny Reed, Birmingham OIFO; and Thom Blom and Susan Strack, both from Oakland OIFO

## Revision History

<b>Date</b>	<b>Revision</b>	<b>Description</b>	<b>Author</b>
07/20/07	2.20	Updated the OBX segment, sequence #2 and the PV2 segment, sequences #8, #14, and #46. Also added field definition for PV2, sequence #46.	Chris Chesney, Birmingham OIFO; Susan Strack, Oakland OIFO
8/7/07	2.20	Updated the MSA and ERR segments to note PSIM difference. Including an example A31 application ack with an ERR segment.	Chris Chesney, Birmingham OIFO; Susan Strack, Oakland OIFO
10/12/07	2.20	Updated PID segment, Seq 32 to reflect that "N" is mapped to "R" before sending to PSIM	Chris Chesney, Birmingham OIFO
12/13/07	2.21	Updated A08 description to show PV1 as a required segment. Update PV1 description to show that VistA sends no value to patient class but MPI will send N. Update examples for A19 and A31 to show PV1 segment being sent. QRD, seq 7 in A19 (RD and 1) were reversed.	Chris Chesney, Birmingham OIFO; Susan Strack, 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

Revision History .....	iii
Orientation .....	xxi
<b>Chapter 1: Introduction.....</b>	<b>1-1</b>
1.1. HL7 Commit Acknowledgement and Application Level Acknowledgements Requirements ..	1-2
1.2. HL7 Delimiter(s) Included Data in Field Value .....	1-2
1.3. Background Jobs .....	1-3
1.4. Direct Connect.....	1-4
1.5. VistA References.....	1-4
<b>Chapter 2: Trigger Events &amp; Message Definitions.....</b>	<b>2-1</b>
2.1. ADT/ACK—Add Person or Patient Information (Event A28) .....	2-4
2.2. ADT/ACK—Admit/Visit Notification (Event A01) .....	2-6
2.3. ADT/ACK—Discharge/End Visit (Event A03) .....	2-8
2.4. ADT/ACK—Link Patient Information (Event A24).....	2-10
2.5. QBP/RSP—Find Candidates (QBP) and Response (RSP) (events Q22 and K22).....	2-17
2.6. ADT/ACK—Merge Patient—Patient Identifier List (Event A40).....	2-22
2.7. ADT/ACK—Move Patient Information—Patient Identifier List (Event A43).....	2-24
2.8. ADT/ACK—Register a Patient (Event A04) .....	2-27
2.9. ADT/ACK—Update Patient Information (Event A08).....	2-29
2.10. ADT/ACK—Update Person Information (Event A31) .....	2-32
2.11. ADT/ACK—Update CMOR (Event A31) .....	2-36
2.12. ADT/ACK—Enterprise Update Person Information (Event A31).....	2-39
2.13. MFN—Update Treating Facility (Event M05).....	2-42
2.14. QRY/ADR—Patient Query (Event A19) .....	2-44
2.15. VQQ—Query for Patient Matches (Event Q02) .....	2-48
2.16. VQQ-Q02 in Batch Format (i.e., the Local/Missing ICN Resolution Job) .....	2-50
2.17. ADT/ACK—Unlink Patient Information (Event A37) .....	2-52
<b>Chapter 3: Message Segments .....</b>	<b>3-1</b>
3.1. BHS—Batch Header Segment.....	3-2
3.2. BTS—Batch Trailer Segment.....	3-7
3.3. DSC—Continuation Pointer Segment .....	3-8

Contents

3.4.	ERR—Error Segment .....	3-9
3.5.	EVN—Event Type Segment .....	3-10
3.6.	MFA—Master File Acknowledgement Segment .....	3-14
3.7.	MFE—Master File Entry Segment.....	3-17
3.8.	MFI—Master File Identification Segment .....	3-19
3.9.	MRG—Merge Patient Information Segment .....	3-21
3.10.	MSA—Message Acknowledgement Segment .....	3-24
3.11.	MSH—Message Header Segment .....	3-28
3.12.	NTE—Notes and Comments Segment .....	3-38
3.13.	OBX—Observation/Result, HL7 Segment.....	3-40
3.14.	PD1—Patient Additional Demographic Segment .....	3-43
3.15.	PID—Patient Identification Segment .....	3-45
3.16.	PV1—Patient Visit Segment .....	3-60
3.17.	PV2—Patient Visit Segment – Additional Information .....	3-65
3.18.	QAK—Query Acknowledgement Segment .....	3-68
3.19.	QPD—Query Parameter Definition Segment.....	3-71
3.20.	QRD—Original-Style Query Definition Segment.....	3-75
3.21.	RCP—Response Control Parameter Segment .....	3-80
3.22.	RDF—Table Row Definition Segment .....	3-84
3.23.	RDT—Table Row Data Segment .....	3-87
3.24.	VTQ—Virtual Table Query Request Segment.....	3-89
3.25.	ZCT—VA Specific Emergency Contact Segment .....	3-93
3.26.	ZEL—VA Specific Patient Eligibility Segment.....	3-94
3.27.	ZEM—VA Specific Employment Information Segment .....	3-95
3.28.	ZET—VA Specific Event Reason for Date of Last Treatment Segment .....	3-96
3.29.	ZFF—VA Specific File/Field Segment .....	3-97
3.30.	ZPD—VA Specific Patient Information Segment.....	3-98
3.31.	ZSP—VA Specific Service Period Segment .....	3-101
<b>Chapter 4:</b>	<b>VA HL7 Tables .....</b>	<b>4-1</b>
4.1.	Table VA001—Yes/No .....	4-1
4.2.	Table VA002—Current Means Test Status .....	4-1
4.3.	Table VA004—Eligibility .....	4-2
4.4.	Table VA005—Disability Retirement From Military .....	4-3
4.5.	Table VA006—Eligibility Status .....	4-3

4.6. Table VA008—Religion.....	4-4
4.7. Table VA010—Means Test Indicator .....	4-6
4.8. Table VA011—Period of Service.....	4-7
4.9. Table VA012—Type of Insurance .....	4-8
4.10. Table VA015—Enrollment Status.....	4-9
4.11. Table VA016—Reason Canceled/Declined .....	4-10
4.12. Table VA021—Enrollment Priority .....	4-10
4.13. Table VA022—Radiation Exposure Method .....	4-10
4.14. Table VA023—Prisoner of War Location.....	4-11
4.15. Table VA024—Source of Enrollment .....	4-11
4.16. Table VA036—MST Status .....	4-11
4.17. Table VA046—Agent Orange Exposure Location.....	4-12
4.18. Table NPCD 001—National Patient Care Database Error Codes .....	4-12
Glossary .....	Glossary-1
Appendix A—Communication with MPI Specification Agreement .....	Appendix A-1
Index .....	Index-1

Contents

# Figures and Tables

Table i. Documentation revision history .....	viii
Table ii. Documentation symbol descriptions.....	xxi
Table 1-1. MPI-related Integration Agreement (IA) references .....	1-5
Table 2-1. Trigger events and message definitions.....	2-3
Figure 2-1. ADT-A28—Add Person or Patient Information msg: Sent from VistA to MPI.....	2-5
Figure 2-2. ADT-A28—Add Person or Patient Information msg: Commit acknowledgement sent from MPI to sending system .....	2-5
Figure 2-3. ADT-A28—Add Person or Patient Information msg: Application acknowledgement sent from MPI to sending system .....	2-5
Figure 2-4. ADT-Add Person or Patient Information msg: Commit acknowledgement returned to MPI.	2-6
Figure 2-5. ADT-A01—Admit/Visit Notification msg: Sent from VistA to MPI.....	2-7
Figure 2-6. ADT-A01—Admit/Visit Notification msg: Commit acknowledgement sent from MPI to sending system .....	2-7
Figure 2-7. ADT-A01—Admit/Visit Notification msg: Application acknowledgement sent from MPI to sending system .....	2-7
Figure 2-8. ADT-A01—Admit/Visit Notification msg: Commit acknowledgement returned to MPI.....	2-7
Figure 2-9. ADT-A03—Discharge/End Visit msg: Sent to MPI from VistA.....	2-9
Figure 2-10. ADT-A03—Discharge/End Visit msg: Commit acknowledgement sent from MPI to sending system.....	2-9
Figure 2-11. ADT-A03—Discharge/End Visit msg: Application acknowledgement sent from MPI to sending system .....	2-9
Figure 2-12. ADT-A03—Discharge/End Visit msg: Commit acknowledgement returned to MPI.....	2-9
Figure 2-13. ADT-A24—Link Patient Information msg: message sent to MPI.....	2-11
Figure 2-14. ADT-A24—Link Patient Information msg: Commit acknowledgement sent from MPI to sending system .....	2-12
Figure 2-15. ADT-A24—Link Patient Information msg: Application acknowledgement sent from MPI to sending system .....	2-12
Figure 2-16. ADT-A24—Link Patient Information msg: Commit acknowledgement returned to MPI .	2-12
Figure 2-17. ADT-A24—Link Patient Information msg: Sent from MPI to sending system.....	2-13
Figure 2-18. ADT-A24—Link Patient Information msg: Commit acknowledgement sent to MPI from sending system .....	2-13
Figure 2-19. ADT-A24—Link Patient Information msg: Application acknowledgement returned to MPI	2-13
Figure 2-20. ADT-A24—Link Patient Information msg: Commit acknowledgement returned from MPI to sending system .....	2-13

Figure 2-21. ADT-A24—Link Patient Information msg: Sent from MPI to sites after local merge notifying subscriber(s) of change to DFN ..... 2-14

Figure 2-22. ADT-A24—Link Patient Information msg: Commit acknowledgement sent to MPI from sending system ..... 2-14

Figure 2-23. ADT-A24—Link Patient Information msg: Application acknowledgement sent to MPI from sending system ..... 2-14

Figure 2-24. ADT-A24—Link Patient Information msg: Commit acknowledgement returned from MPI to sending system ..... 2-14

Figure 2-25. ADT-A24—Link Patient Information msg: Sent to the MPI from VistA to Link PID2 ICN to PID1 ICN..... 2-15

Figure 2-26. ADT-A24—Link Patient Information msg: Application acknowledgement sent from MPI to sending system ..... 2-15

Figure 2-27. ADT-A24—Link Patient Information msg: Commit acknowledgement sent from MPI to sending system ..... 2-15

Figure 2-28. Message FROM the MPI TO PSIM via HLO ..... 2-16

Figure 2-29. Message FROM the MPI TO PSIM via HLO—Accept ACK ..... 2-16

Figure 2-30. Message FROM the MPI TO PSIM via HLO—Application ACK..... 2-16

Figure 2-31. QBP-Q22—Find Candidates query message sent to MPI..... 2-18

Figure 2-32. QBP-Q22—Find Candidates query msg sent to MPI: Commit acknowledgement sent from MPI to sending system ..... 2-18

Figure 2-33. RSP-K22—Response msg from QBP-Q22 back to sending system: Site/DFN pair found on MPI..... 2-19

Figure 2-34. RSP-K22—Commit acknowledgement: Response msg from QBP-Q22 back to sending system..... 2-19

Figure 2-35. QBP-Q22—Find Candidates query msg sent to MPI ..... 2-19

Figure 2-36. QBP-Q22—Find Candidates query msg sent to MPI: Commit acknowledgement sent to the MPI from sending system..... 2-20

Figure 2-37. RSP-K22—Response msg from QBP-Q22 back to sending system: sending site not found on MPI..... 2-20

Figure 2-38. RSP-K22—Response msg from QBP-Q22—Commit acknowledgement..... 2-20

Figure 2-39. QBP-Q22—Find Candidates query msg sent to MPI ..... 2-20

Figure 2-40. QBP-Q22—Find Candidates query msg: Commit acknowledgement sent to MPI ..... 2-21

Figure 2-41. RSP-K22—Response msg from QBP-Q22 back to sending system: Site/DFN pair not known to MPI..... 2-21

Figure 2-42. RSP-K22—Response msg from QBP-Q22: Commit acknowledgement..... 2-21

Figure 2-43. ADT- A40—Merge Patient—Patient Identifier List msg: Sent to MPI from VistA..... 2-23

Figure 2-44. ADT-A40—Merge Patient—Patient Identifier List msg: Commit acknowledgement sent from MPI to VistA ..... 2-23

Figure 2-45. ADT-A40—Merge Patient—Patient Identifier List msg: Application acknowledgement sent from MPI to VistA ..... 2-23

Figure 2-46. ADT-A40—Merge Patient—Patient Identifier List msg: Commit acknowledgement returned to MPI..... 2-24

Figure 2-47. ADT-A43—Move Patient Information—Patient Identifier List msg: Sent from MPI to subscribing system ..... 2-25

Figure 2-48. ADT-A43—Move Patient Information—Patient Identifier List msg: Commit acknowledgement sent to MPI ..... 2-26

Figure 2-49. ADT-A43—Move Patient Information—Patient Identifier List msg: Application acknowledgement sent to MPI ..... 2-26

Figure 2-50. ADT-A43—Move Patient Information—Patient Identifier List msg: Commit acknowledgement returned from MPI to sending system ..... 2-26

Figure 2-51. Message Sent FROM MPI TO PSIM via HLO..... 2-26

Figure 2-52. Message Sent FROM MPI TO PSIM via HLO—Commit ACK ..... 2-26

Figure 2-53. Message Sent FROM MPI TO PSIM via HLO—Application Level ACK ..... 2-27

Figure 2-54. ADT-A04—Register a Patient msg: Sent to MPI from VistA ..... 2-28

Figure 2-55. ADT-A04—Register a Patient msg: Commit acknowledgement sent from MPI to VistA. 2-28

Figure 2-56. ADT-A04—Register a Patient msg: Application acknowledgement sent from MPI to VistA 2-29

Figure 2-57. ADT-A04—Register a Patient msg: Commit acknowledgement returned to MPI from VistA 2-29

Figure 2-58. ADT-A08—Update Patient Information msg: Sent to MPI from VistA ..... 2-31

Figure 2-59. ADT-A08—Update Patient Information msg: Commit acknowledgement sent from MPI to VistA ..... 2-31

Figure 2-60. ADT-A08—Update Patient Information msg: Application acknowledgement sent from MPI 2-31

Figure 2-61. ADT-A08—Update Patient Information msg: Commit acknowledgement returned to MPI 2-32

Figure 2-62. ADT-A31—Update Person Information msg: Sent from VistA to MPI..... 2-33

Figure 2-63. ADT-A31—Update Person Information msg: Commit acknowledgement sent from MPI to VistA ..... 2-33

Figure 2-64. ADT-A31—Update Person Information msg: Application acknowledgement sent from MPI 2-34

Figure 2-65. ADT-A31—Update Person Information msg: Commit acknowledgement returned to MPI 2-34

Figure 2-66. ADT-A31—Update Person Information msg: Sent to VistA from MPI..... 2-34

Figure 2-67. ADT-A31—Update Person Information msg: Commit acknowledgement sent to VistA from MPI..... 2-34

Figure 2-68. ADT-A31—Update Person Information msg: Commit acknowledgement sent to VistA from MPI..... 2-34

Figure 2-69. Message Sent FROM the MPI TO PSIM..... 2-35

Figure 2-70. Message Sent FROM the MPI TO PSIM—Commit ACK ..... 2-35

Figure 2-71. Message Sent FROM the MPI TO PSIM—Application Level ACK..... 2-35

Figure 2-72. Message Sent FROM PSIM with Error Condition Reported—Application Level ACK.... 2-35

Figure 2-73. ADT-A31—Update Person Information msg: Sent to the MPI requesting CMOR change 2-36

Figure 2-74. ADT-A31—Update Person Information msg: Commit acknowledgement ..... 2-37

Figure 2-75. ADT-A31—Update Person Information msg: Received regarding CMOR change ..... 2-37

Figure 2-76. ADT-A31—Update Person Information msg: Commit acknowledgement sent from CMOR 2-37

Figure 2-77. ADT-A31—Update Person Information msg: Sent to MPI changing CMOR..... 2-38

Figure 2-78. ADT-A31—Update Person Information msg: Commit acknowledgement sent to requesting VistA site..... 2-38

Figure 2-79. ADT-A31—Update Person Information msg: Sent to VistA from MPI..... 2-40

Figure 2-80. ADT-A31—Update Person Information msg: Commit acknowledgement sent to VistA from MPI..... 2-40

Figure 2-81. ADT-A31—Update Person Information msg: Commit acknowledgement sent to VistA from MPI..... 2-40

Figure 2-82. Message Sent FROM the MPI TO PSIM..... 2-40

Figure 2-83. Message Sent FROM the MPI TO PSIM—Commit ACK ..... 2-41

Figure 2-84. Message Sent FROM the MPI TO PSIM—Application Level ACK..... 2-41

Figure 2-85. MFN-M05—Update Treating Facility msg: Received from MPI..... 2-43

Figure 2-86. MFN-M05—Update Treating Facility msg: Commit acknowledgement sent to MPI..... 2-43

Figure 2-87. MFN-M05—Update Treating Facility msg: Application acknowledgement sent to MPI.. 2-43

Figure 2-88. MFN-M05—Update Treating Facility msg: Commit acknowledgement sent from MPI... 2-43

Figure 2-89. QRY-A19—Patient Query msg: Sent from MPI ..... 2-45

Figure 2-90. QRY-A19—Patient Query msg: Commit acknowledgement sent to MPI..... 2-45

Figure 2-91. QRY-A19—Patient Query msg: Query results received when patient is known at queried facility..... 2-45

Figure 2-92. QRY-A19—Patient Query msg: Commit acknowledgement sent from MPI ..... 2-46

Figure 2-93. QRY-A19—Query Message sent from MPI ..... 2-47

Figure 2-94. QRY-A19—Query Message sent from MPI: Commit acknowledgement sent to MPI ..... 2-47

Figure 2-95. QRY-A19—Query results received when patient is NOT known at queried facility ..... 2-47

Figure 2-96. QRY-A19—Query results received when patient is NOT known at queried facility: Commit acknowledgement returned from MPI..... 2-47

Figure 2-97. VQQ-Q02—Real-Time Connection Query msg: Sent to MPI..... 2-48

Figure 2-98. VQQ-Q02—Real-Time Connection Query msg: Returned from MPI..... 2-49

Figure 2-99. VQQ-Q02—Real-Time Connection Query batch msg: Sent to MPI ..... 2-51

Figure 2-100. VQQ-Q02—Real-Time Connection Query batch msg: Commit acknowledgement sent from MPI..... 2-51

Figure 2-101. VQQ-Q02—Real-Time Connection Query batch msg: Returned from MPI..... 2-51

Figure 2-102. ADT-A37—Unlink Patient Information msg: Sent to MPI .....2-53

Figure 2-103. ADT-A37—Unlink Patient Information msg: Commit acknowledgement sent from MPI2-53

Figure 2-104. ADT-A37—Unlink Patient Information msg: Application acknowledgement sent to MPI2-53

Figure 2-105. ADT-A37—Unlink Patient Information msg: Commit acknowledgement sent to MPI...2-53

Table 3-1. BHS—Batch Header, HL7 attributes ..... 3-3

Table 3-2. BTS—Batch Trailer, HL7 attributes ..... 3-7

Table 3-3. DSC—Continuation Pointer, HL7 Attributes ..... 3-8

Table 3-4. HL7 Table 0398—Continuation style code ..... 3-8

Table 3-5. ERR—Error, HL7 attributes ..... 3-9

Table 3-6. EVN—Event Type, HL7 attributes ..... 3-10

Table 3-7:HL7 Table 0003 EVN—ADT/R Event Type Codes ..... 3-11

Table 3-8. User-defined Table 0062—Event Reason ..... 3-11

Table 3-9. User-defined Table 0188—Operator ID ..... 3-12

Figure 3-1. EVN—Event Type Segment example ..... 3-12

Table 3-10. MFA—Master File Acknowledgement, HL7 attributes ..... 3-14

Table 3-11. User-defined Table 0181—MFN Record-level Error Return ..... 3-15

Table 3-12. HL7 Table 0355—Primary key value type ..... 3-15

Table 3-13. MFE—Master File Entry, HL7 attributes ..... 3-17

Table 3-14. HL7 Table 0180—Record-level Event Code ..... 3-17

Table 3-15. MFI—Master File Identification, HL7 attributes ..... 3-19

Table 3-16. HL7 Table 0175—Master File Identifier Code ..... 3-19

Table 3-17. HL7 Table 0178—File Level Event Code ..... 3-20

Table 3-18. HL7 Table 0179—Response Level ..... 3-20

Table 3-19. MRG—Merge Patient Information, HL7 attributes ..... 3-21

Table 3-20. MSA—Message Acknowledgement, HL7 attributes ..... 3-24

Table 3-21. HL7 Table 0008—Acknowledgement Code ..... 3-25

Table 3-22. HL7 Table 0102—Delayed Acknowledgement type ..... 3-26

Table 3-23. HL7 Table 0357—Message Error Condition Codes ..... 3-27

Table 3-24. MSH—Message Header, HL7 attributes ..... 3-32

Table 3-25. User-defined Table 0361—Sending/Receiving Application ..... 3-33

Table 3-26. User-defined Table 0362—Sending/Receiving Facility ..... 3-34

Table 3-27. HL7 Table 0103—Processing ID ..... 3-35

Table 3-28. HL7 Table 0104—Version ID ..... 3-36

Table 3-29. HL7 Table 0155—Accept/Application Acknowledgement Conditions ..... 3-36

Figures and Tables

Table 3-30. HL7 Table 0399—Country Code .....	3-37
Table 3-31. NTE—Notes and Comments, HL7 attributes .....	3-38
Table 3-32. HL7 Table 0105—Source of Comment.....	3-39
Table 3-33. OBX—Observation/Result, HL7 attributes .....	3-42
Table 3-34. PD1—Patient Additional Demographic, HL7 attributes .....	3-44
Table 3-35. HL7 Table 0136—Yes/no indicator .....	3-44
Figure 3-2. Sample Message Patient Identification PID Segment .....	3-45
Table 3-36. PID—Patient Identification, HL7 attributes .....	3-48
Table 3-37. HL7 Table 0203—Identifier type .....	3-50
Table 3-38. HL7 Table 0200—Name type .....	3-51
Table 3-39. User-defined Table 0001—Administrative sex .....	3-52
Table 3-40. User-defined Table 0005—Race .....	3-52
Table 3-41. HL7 Table 0190—Address type.....	3-53
Table 3-42. HL7 Table 0201 Telecommunication Use Code .....	3-54
Table 3-43. HL7 Table 0202 Telecommunication Equipment Type .....	3-54
Table 3-44. User-defined Table 0002—Marital status .....	3-55
Table 3-45. User-defined Table 0006—Religion.....	3-56
Table 3-46. User-defined Table 0189—Ethnic group.....	3-57
Table 3-47. User-defined Table 0445—Identity Reliability Code.....	3-59
Table 3-48. PV1—Patient Visit, HL7 attributes .....	3-63
Table 3-49. QAK—Query Acknowledgement, HL7 attributes .....	3-69
Table 3-50. HL7 Table 0208—Query Response Status.....	3-69
Table 3-51. QPD—Query Parameter Definition, HL7 attributes.....	3-71
Table 3-52. QRD—Original-Style Query Definition, HL7 attributes .....	3-75
Table 3-53. HL7 Table 0106—Query/Response Format Code .....	3-76
Table 3-54. HL7 Table 0091—Query Priority.....	3-76
Table 3-55. HL7 Table 0126—Quantity Limited Request .....	3-77
Table 3-56. VA Patient identifiers .....	3-78
Table 3-57. HL7 Table 0048—What Subject Filter.....	3-78
Table 3-58. RCP—Response Control Parameter, HL7 Attribute .....	3-80
Table 3-59. HL7 Table 0091—Query priority.....	3-80
Table 3-60. HL7 Table 0126—Quantity limited request .....	3-81
Table 3-61. HL7 Table 0394—Response modality .....	3-81
Table 3-62. HL7 Table 0395—Modify indicator.....	3-82

Table 3-63. HL7 Table 0391—Segment group ..... 3-83

Table 3-64. RDF—Table Row Definition, HL7 attributes ..... 3-84

Table 3-65. HL7 field designation numbers and translations ..... 3-85

Table 3-66. RDT—Table Row Data, HL7 attributes ..... 3-87

Table 3-67. HL7 field designation numbers and translations ..... 3-88

Table 3-68. VTQ—Virtual Table Query Request, HL7 attributes ..... 3-89

Table 3-69. HL7 Table 0209—Relational operator ..... 3-91

Table 3-70. HL7 Table 0210—Relational conjunction ..... 3-92

Table 3-71. ZCT—VA Specific Emergency Contact, HL7 attributes ..... 3-93

Table 3-72. ZEL—VA Specific Patient Eligibility, HL7 attributes ..... 3-94

Table 3-73. ZEM—VA Specific Employment Information, HL7 attributes ..... 3-95

Table 3-74. ZET—Event Reason for Date of Last Treatment, HL7 attributes ..... 3-96

Table 3-75. ZFF—VA Specific File/Field, HL7 attributes ..... 3-97

Table 3-76. ZPD—VA Specific Patient Information, HL7 attributes ..... 3-100

Table 3-77. Possible values for PSEUDO SSN REASON ..... 3-100

Table 3-78. ZSP—VA Specific Service Period, HL7 attributes ..... 3-101

Table 4-1. VA001—Yes/No ..... 4-1

Table 4-1. VA002—Current Means Test Status ..... 4-1

Table 4-2. VA004—Eligibility ..... 4-2

Table 4-3. VA005—Disability Retirement From Military ..... 4-3

Table 4-4. VA006—Eligibility Status ..... 4-3

Table 4-5. VA008—Religion ..... 4-5

Table 4-6. VA010—Means Test Indicator ..... 4-7

Table 4-7. VA011—Period of Service ..... 4-8

Table 4-8. VA012—Type of Insurance ..... 4-8

Table 4-9. VA015—Enrollment Status ..... 4-9

Table 4-10. VA016—Reason Canceled/Declined ..... 4-10

Table 4-11. VA021—Enrollment Priority ..... 4-10

Table 4-12. VA022—Radiation Exposure Method ..... 4-10

Table 4-13. VA023—Prisoner of War Location ..... 4-11

Table 4-14. VA024—Source of Enrollment ..... 4-11

Table 4-15. VA036—MST Status ..... 4-11

Table 4-16. VA046—Agent Orange Exposure Location ..... 4-12

Table 4-17. NPCD 001—National Patient Care Database Error Codes ..... 4-12

Figures and Tables

Table Appendix A-1. HL7 messages for non-VistA systems ..... 2

# 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 terms are used throughout the documentation to alert the reader to special information. The following table gives a description of each:

Term	Description
<b>CAUTION:</b>	Used to caution the reader to take special notice of critical information.
<b>NOTE:</b>	Used to inform the reader of additional noteworthy or related information for a topic or subject.
<b>REF:</b>	Refers the reader to additional reading material.

**Table ii. Documentation symbol descriptions**

- Descriptive text is presented in a proportional font (as represented by this font).
- Example HL7 messages are shown in a *non*-proportional font and enclosed within a box.
- "Snapshots" of computer online displays (i.e., character-based screen captures/dialogs) and computer source code are shown in a *non*-proportional font and enclosed within a box. Also included are Graphical User Interface (GUI) Microsoft Windows images (i.e., dialogs or forms).
  - User's responses to online prompts will be boldface type.
  - The "<Enter>" found within these snapshots indicate that the user should press the Enter or Return key on their keyboard.
- 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).
- Conventions for displaying TEST data in this document are as follows:
  - The first three digits (prefix) of any Social Security Numbers (SSN) will begin with either "000" or "666".
  - Patient and user names will be formatted as follows: [Application Name]PATIENT,[N] and [Application Name]USER,[N] respectively, where "Application Name" is defined in the Approved Application Abbreviations document, located on the Web site listed below, and where "N" represents the first name as a number spelled out and incremented with each new entry.

## 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.

**NOTE:** 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.

**REF:** 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) Veterans Health IT Portfolio - VistA Development Home Page at the following Web address:

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

## Reference Materials

In order to competently operate this package you must be familiar with the operations of the VistA computer system, in general. This information can be obtained at the following Web site:

<http://vaww.vista.med.va.gov>

Readers who wish to learn more about the Master Patient Index (MPI) / Patient Demographic (PD) software should consult the following Web sites:

- VHA Software Document Library at the following address:

<http://www.va.gov/vdl/application.asp?appid=16>

The MPI/PD VistA product documentation, as found at the link above, includes the following manuals:

- *Master Patient Index/Patient Demographics (MPI/PD) VistA Release Notes*
- *Master Patient Index/Patient Demographics (MPI/PD) VistA User Manual*
- *Master Patient Index/Patient Demographics (MPI/PD) VistA HL7 Interface Specifications*
- *Master Patient Index/Patient Demographics (MPI/PD) VistA Technical Manual*
- *Master Patient Index/Patient Demographics (MPI/PD) VistA Exception Handling*
- *Master Patient Index/Patient Demographics (MPI/PD) VistA Programmer Manual*
- *Master Patient Index (MPI) VistA Monograph*
- Master Patient Index (MPI) Web site:  
<http://vista.med.va.gov/mpi/index.asp>
- Identity Management Data Quality (IMDQ) team at:

## Orientation

[http://vista.med.va.gov/mpi\\_dqmt/](http://vista.med.va.gov/mpi_dqmt/)

- Security & Other Common Services (S&OCS) at:  
<http://vista.med.va.gov/iss/>
- VistA documentation is made available online in both Microsoft Word format and Adobe Acrobat Portable Document Format (PDF). It can be downloaded from the VHA Software Document Library Web site at:  
<http://www.va.gov/vdl/>

The HL7 Standard documentation for current and previous versions is available at the following web address:

[http://vista.med.va.gov/messaging/msgadmin/hl7\\_specifications.asp](http://vista.med.va.gov/messaging/msgadmin/hl7_specifications.asp)

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/>

**REF:** 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>

**CAUTION:** This is a disclaimer indicating that the appearance of any external hyperlink references in this manual does not constitute endorsement by the Department of Veterans Affairs (VA) of this Web site or the information, products, or services contained therein. The VA does not exercise any editorial control over the information you may find at these locations. Such links are provided and are consistent with the stated purpose of this VA Intranet Service.

# 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 initialization to the MPI, each active patient receives the following:

- Integration Control Number (ICN)
- Coordinating Master of Record (CMOR)
- 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. This manual covers the functionality of MPI/PD.

This interface specification is intended to identify the VistA information that will be shared as part of the MPI/PD. The sharing of this information will be triggered by specific VistA events. Both the exact events and the messages used to share this data will be reviewed.

MPI/PD makes use of and creates messages using the abstract message approach and encoding rules specified by the HL7 standard. The HL7 VistA application will be used for communicating data associated with various events that occur in health care environments.

The formats of these messages conform to HL7 interface standards, Version 2.4.

**NOTE:** There are references in this document to the VistA HL7 package enhancement known as HLO which stands for HL7 Optimized (HLO). HLO is a tool available to developers and is used on the MPI to speed up outbound messages to PSIM.

**REF:** For more information on why a patient doesn't have an ICN, please refer to the Appendix "Why Doesn't a Patient Have a National ICN?" located in the Master Patient Index/Patient Demographics (MPI/PD) VistA [User](#) or [Exception Handling](#) Manuals.

**REF:** For more information on ICN assignment exceptions, please refer to the Appendix titled "Why Doesn't a Patient Have a National ICN?" located in the Master Patient Index/Patient Demographics (MPI/PD) VistA [User](#) or [Exception Handling](#) Manuals.

## 1.1. HL7 Commit Acknowledgement and Application Level Acknowledgements Requirements

An HL7 Commit and Application Level Acknowledgement are required for the majority of messages document here. Each message details whether or not each is expected and the format for these acknowledgements.

The HL7 Commit Acknowledgement is required for ALL messages. It allows the sender to know that the message has been successfully received. The commit acknowledgement is not for anything more than that. The Commit ACK is expected back over the same socket connection as the original message was sent. For those applications using VistA HL7, the commit ACK is generated and processed by VistA HL7.

The Application Level Acknowledgement is required for most all messages. It allows the sender to know how the processing of this specific message went. Was it was successful or was there a problem. For a number of messages sent by the MPI, it is the Application Level Acknowledgement that triggers the completion of the event that resulted in the original message. Without the receipt of that application acknowledgement, the process remains incomplete. The application level acknowledgement is not to be sent back over the same socket as the commit acknowledgement but rather over a subsequent connection.

## 1.2. HL7 Delimiter(s) Included Data in Field Value

It is possible to have HL7 delimiters are part of a data field within a given segment. To avoid issues with the parsing of the message these delimiters are encoded. Below is taken from Section 2.10 of the 2.4 HL7 Standards:

### 2.10 Use of escape sequences in text fields

#### 2.10.1 Formatting codes

When a field of type TX, FT, or CF is being encoded, the escape character may be used to signal certain special characteristics of portions of the text field. The escape character is whatever display ASCII character is specified in the <escape character> component of *MSH-2-encoding characters*. For purposes of this section, the character \ will be used to represent the character so designated in a message. An **escape sequence** consists of the escape character followed by an escape code ID of one character, zero (0) or more data characters, and another occurrence of the escape character. The following escape sequences are defined:

\H\	start highlighting
\N\	normal text (end highlighting)
\F\	field separator
\S\	component separator
\T\	subcomponent separator
\R\	repetition separator
\E\	escape character
\Xddd...\	hexadecimal data
\Zddd...\	locally defined escape sequence

The **escape sequences** for field separator, component separator, subcomponent separator, repetition separator, and escape character are also valid within an ST data field.

No escape sequence may contain a nested escape sequence.

## 1.3. Background Jobs

### UPDATE BATCH JOB FOR HL7 v2.3 [VAFC BATCH UPDATE]

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.

### LOCAL/MISSING ICN RESOLUTION BACKGROUND [MPIF LOC/MIS ICN RES]

The Local and Missing ICN background process looks at the Local ICN ("AICNL") and Missing ICN ("AMPIMIS") cross-references and sends batch messages to the MPI requesting an ICN (100 patients per message). How do patients receive a Local ICN? Patients can receive a Local ICN if an attempt to contact the MPI fails. How does a patient get the Missing ICN cross-reference set? The Missing ICN cross-reference is set when a package adds a patient to the PATIENT file (#2), but does not communicate with the MPI.

**NOTE:** Options that add patients to the PATIENT file (#2) AND communicate with the MPI are:

- Load/Edit Patient Data [DG LOAD PATIENT DATA]
- Register a Patient [DG REGISTER PATIENT]
- Electronic 10-10EZ Processing [EAS EZ 1010EZ PROCESSING]

Options that communicate with the MPI and can obtain ICNs for patients in PATIENT file (#2), but do not add patients to the MPI are:

- Local/Missing ICN Resolution background job
- Potential Match Rev (PMR) action, located on the MPI/PD Exception Handling option [RG EXCEPTION HANDLING]

**REF:** For more information on why a patient doesn't have an ICN, please refer to the Appendix "Why Doesn't a Patient Have a National ICN?" located in the Master Patient Index/Patient Demographics (MPI/PD) VistA [User](#) and [Exception Handling](#) Manuals.

**REF:** For more information on ICN assignment exceptions, please refer to the Appendix titled "Why Doesn't a Patient Have a National ICN?" located in the Master Patient Index/Patient Demographics (MPI/PD) VistA [User](#) and [Exception Handling](#) Manuals.

## 1.4. 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, and Electronic 10-10EZ Processing processes when:

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

In addition, by utilizing the Potential Match Review (PMR) action within the MPI/PD EXCEPTION HANDLING option, for Potential Match exceptions, 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.

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 VQQ-Q02 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.

## 1.5. VistA References

The MPI/PD software maintains the following VistA fields in the PATIENT (#2) file:

- INTEGRATION CONTROL NUMBER (#991.01),
- ICN CHECKSUM (#991.02),
- COORDINATING MASTER OF RECORD (#991.03),
- LOCALLY ASSIGNED ICN (#991.04),
- CMOR ACTIVITY SCORE (#991.06),
- ICN HISTORY {multiple} (#992),
- and CMOR HISTORY {multiple} (#993),

as well as the list of systems that know this patient by this ICN, in the TREATING FACILITY file [#391.91] at all VistA sites.

The MPI/PD software also maintains the integrity of 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 obtained through the FORUM DBA menu):

**NOTE:** SUBSCRIPTION CONTROL NUMBER (#991.05) is no longer utilized by the MPI/PD software in the PATIENT (#2) file.

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, 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.
VAFACTFU1	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 1-1. MPI-related Integration Agreement (IA) references**



# Chapter 2: Trigger Events & Message Definitions

This section 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.

**REF:** For more information on which HL7 messages apply specifically to non-VistA systems see "[Appendix A](#)" in this documentation.

**NOTE:** Primary View Initialization, as reference in Table 2-1, Trigger Event "Update to fields on an existing MPI entry", is a process that occurs on the MPI. This process applies significant enhancements to the MPI business logic to support a more centralized approach to creating and maintaining an Enterprise "Primary View" of the Patient record based on Business Rules instead of CMOR values. "Primary View" is the new centralized Enterprise "View" of a patient on the MPI after the initialization process has been executed, making existing patients on the MPI "Primary View Initialized". Any subsequent records created after "Primary View Initialization" has been run on the MPI will automatically be "Primary View" based.

Trigger Event	Event Supported HL7 V2.4 Message	Description
Query MPI for match	<a href="#">VTQ-Q02</a>  <a href="#">QBP-Q22/RSP-K22</a>	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 (changed from ADT-A31 in patches MPI*1.0*32 and MPIF*1.0*38)  <b>NOTE:</b> supported for internal VistA VAMC messaging).  This find Candidates query is used to return a list of one ICN candidates for a given local identifier (i.e. dfn/station#). The query can also be used to establish a correlation to an ICN and/or an association to an existing correlated id (i.e. dfn/station#).  <b>NOTE:</b> Supported for external VistA VAMC messaging.
Add new patient to the MPI	<a href="#">ADT-A28</a>  <a href="#">VQQ-Q02</a> (via Local/Missing ICN Resolution Job)	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.  The MPI will add a new patient if the VQQ-Q02 is sent in the form of the Local/Missing ICN Resolution Job and the patient is not found. The MPI will return the ICN in the ACK/Q02 Local/Missing ICN Resolution job response.
Link to an existing patient on the MPI	<a href="#">ADT-A24</a>	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.
Update to fields on an	<a href="#">ADT-A04</a> ,	The MPI will accept patient updates via ADT-A04 (register

Trigger Event	Event Supported HL7 V2.4 Message	Description
existing MPI entry	<a href="#">ADT-A08</a>	<p>a patient) or ADT-A08 (update patient information) and will broadcast out to the authoritative source system if the update came from a non-authoritative source system and to all systems if it came from the authoritative source system for all patients that haven't been Primary View Initialized.</p> <p>Once a patient has been Primary View Initialized the updates will be sent out to all systems in need of the update via an ADT-A31 message.</p> <p>(RSA will still get the A08 message for their processes.)</p>
Update Person Information outside of an event	<a href="#">ADT-A31</a>	<p>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]).</p> <p>The MPI also broadcast out an ADT-A31 message to synchronize the identity management elements to the MPI Patient "primary view".</p>
Update to date last treated	<a href="#">ADT-A01</a> , <a href="#">ADT-A03</a> ,	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.
Resolution of duplicates at the site where both entries exist on the MPI	<a href="#">ADT-A40</a> ,	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).
Resolution of duplicates on the MPI	<a href="#">ADT-A24</a>	The MPI will notify sites of a duplicate resolution via ADT-A24 (link patient information).
Identification and resolution of a mismatched patient	<a href="#">ADT-A43</a>	The MPI will notify sites of a mismatched patient via ADT-A43 (move patient - patient identifier list). This maintenance message is used to update a record's ICN (i.e. enterprise ID trait).
Change of CMOR assignment	<a href="#">ADT-A31</a>	The MPI will accept a change in CMOR assignment via an ADT-A31 from the current CMOR via ADT-A31 (update person information).
Patient Query	<a href="#">QRY/ADR-A19</a>	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.
Unlink Patient	<a href="#">ADT-A37</a>	The sending site is requesting to unlink its patient record from an ICN. This action reverses the Link.

Trigger Event	Event Supported HL7 V2.4 Message	Description
Treating Facility List Update	<a href="#">MFN-M05</a>	<p>The MPI will send out an MFN-M05 if the treating facility list is modified or if the date last treated or event reason changes.</p> <p>This message can be generated as a result of another message being processed on the MPI or maybe triggered manually.</p>

**Table 2-1. Trigger events and message definitions**

## HL7 Messages

Each HL7 message is composed of segments. Segments contain logical groupings of data. Segments can be optional or repeatable. In the HL7 Standard documentation, square brackets ([]) indicate segments are optional, curly brackets ({} ) indicate segments are repeatable. For each message type there is a list of HL7 standard segments. This section describes the HL7 messages that help to establish and maintain the integrity of the unique identification of a patient throughout the VHA Enterprise.

**NOTE:** The VistA data is mapped to fields within these segments. The elements/contents of each of these message segments is defined in the section titled "Message Segments" in this manual.

### 2.1. 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 requests the establishment of an ICN and stores the person identifiers (e.g., social security number, claim#, or other unique identifiers) as passed in the [PID-3 - patient identifier list](#). Other identifiers such as deprecated 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.

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

<u>ADT^A28^ADT A28</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
[ <a href="#">PD1</a> ]	Additional Demographics	3
<a href="#">PVI</a>	Patient Visit	3
[ <a href="#">ZPD</a> ]	VA Specific Patient Information Segment	
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2



**Commit Level Acknowledgement Returned TO the MPI FROM the Sending System**

```
MSH^~|\&^MPIF TRIGGER^553~TSTCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051109124639-0400^^ACK^55385465^P^2.4
MSA^CA^200895618
```

**Figure 2-4. ADT-Add Person or Patient Information msg: Commit acknowledgement returned to MPI**

## 2.2. 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.

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

<u>ADT^A01^ADT A01</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
[ <a href="#">PDI</a> ]	Additional Demographics	3
<a href="#">PVI</a>	Patient Visit	3
[ <a href="#">ZPD</a> ]	VA Specific Patient Information Segment	
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<u>ACK^A01^ACK</u>	<u>Application Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
[ <a href="#">ERR</a> ]	Error	2



## 2.3. ADT/ACK—Discharge/End Visit (Event A03)

An A03 event signals the end of a patient's stay in a healthcare facility. It signals that the patient's status has changed to "discharged" and that a discharge date has been recorded. (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 following:

- On the MPI: Fields DATE LAST TREATED (#29) and ADT/HL7 EVENT REASON (#30) located in the MPI FACILITY ASSOCIATION file (#985.5).
- In VistA: Fields DATE LAST TREATED (#.03) and ADT/HL7 EVENT REASON (#.07) located in the TREATING FACILITY LIST file (#391.91).

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.

**NOTE:** The only data updated on the MPI from the ADT-A03 message is the Date Last Treated and Event Reason. No other demographic fields are reviewed or updated.

**REF:** The "Chapter" references below refer to the HL7 Standard Version 2.4 documentation.

<b><u>ADT^A03^ADT A03</u></b>	<b><u>ADT Message</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
[ <a href="#">PD1</a> ]	Additional Demographics	3
<a href="#">PV1</a>	Patient Visit	3
[ <a href="#">ZPD</a> ]	VA Specific Patient Information Segment	
<b><u>ACK^COMMIT</u></b>	<b><u>Commit Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<b><u>ACK^A03^ACK</u></b>	<b><u>Application Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
[ <a href="#">ERR</a> ]	Error	2



## 2.4. ADT/ACK—Link Patient Information (Event A24)

The A24 event is used when the patient in the first PID segment needs to be linked to the patient in the second PID segment and when both patient identifiers identify the same patient. Linking two or more patients does not require the actual merging of patient information; following a link event, the affected patient data records should remain distinct. For example, hospital A, hospital B, and hospital C would each keep their own records on a patient, but an A24 link event would be sent to the VHA MPI to enable the coupling of ID information with the Enterprise ID number (ICN or VPID). This event is not meant to link mothers and babies since a field exists ([PID-21 - mother's identifier](#)) for that purpose. This event is a bi-directional event it is used to link a hospital record ID to the Enterprise ID (ICN or VPID) as identified above or from the MPI out to signal either the linking of two hospital records or two enterprise id's. When the A24 event involves two different ICNs, the first ICN replaces the second ICN.

### NOTE: VistA MPI/PD Business Rule for DUPLICATE ICNs

This business rule prevents two different patient records from having the same ICN value. More than one patient in a single PATIENT file (#2) cannot have the same ICN. For example, let's say that the MPI returned an ICN to your local PATIENT file (#2) for a patient who previously did not have one assigned. If that same ICN is currently assigned to a different patient in your PATIENT file (#2), an exception (problem) message is sent to the MPIF EXCEPTIONS mail group, and the patient is sent to the MPI to be added as a new ICN entry. [Change made with MPIF\*1.0\*43, RG\*1.0\*43 and MPI\*1.0\*38, prior to these patches, the patient would have received a Local ICN].

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

**NOTE:** Other demographic fields are not updated from the A24. If there are other data changes an ADT-A31 message should be triggered.

**REF:** The "Chapter" references below refer to the HL7 Standard Version 2.4 documentation.

<u>ADT^A24^ADT A24</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient (1) Identification	3
[ <a href="#">PD1</a> ]	Patient (1) Additional Demographics	3
[ <a href="#">PV1</a> ]	Patient (1) Visit	3
<a href="#">PID</a>	Patient (2) Identification	3
[ <a href="#">PD1</a> ]	Patient (2) Additional Demographics (Not sent)	3
[ <a href="#">PV1</a> ]	Patient (2) Visit (Not Sent)	3
[ <a href="#">ZPD</a> ]	VA Specific Patient Information Segment (Not sent from the MPI; however, this segment is sent from VistA.)	

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

<u>ACK^A24^ACK</u>	<u>Application Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
[ <a href="#">ERR</a> ]	Error	2

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

### ADT-A24 Example 1

The example message below is an ADT-A24 message sent from the VAMC (identified by station# 500) to the MPI. The key pieces of information is PID-3 in both PID segments which contain the ICN that the system is requesting that its source ID (100000082) be linked to ICN 1001170560V235869. This same message example would be used by a non-VistA system to request linkage of the non-VistA system to the ICN specified in the 1<sup>st</sup> PID segment.

### ADT-A24 Message Sent TO the MPI FROM the Sending System Attempting to Subscribe to the ICN

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20020921203833-0500^^ADT~A24^000167165^P^2.4^^^AL^AL^
EVN^^^^^12556~MPIUSER~ONE~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500
PID^1^1001170560V235869^1001170560V235869~~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|
000064567~~~~USSSA&&0363~SS~VA FACILITY ID&500&L|100000082~~~~USVHA&&0363~PI~VA
FACILITY ID&500&L^MP^PATIENT~TEN~~~~~L^MP^MAIDEN~~~~~M^19780303^M^^^876 TIGER
DRIVE~"~"~BIRMINGHAM~AL~35209~~P~"~" |~~TUSCALOOSA~AL~~~N^073^(876)987-
9987^"^^M^0^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
PD1^^^BPMARION~D~998
PID^2^1001170560V235869^1001170560V235869~~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|
000064567~~~~USSSA&&0363~SS~VA FACILITY ID&500&L|100000082~~~~USVHA&&0363~PI~VA
FACILITY ID&500&L^MP^PATIENT~TEN~~~~~L^MP^MAIDEN~~~~~M^19780303^M^^^876 TIGER
DRIVE~"~"~BIRMINGHAM~AL~35209~~P~"~" |~~TUSCALOOSA~AL~~~N^073^(876)987-
9987^"^^M^0^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
ZPD^1^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
```

Figure 2-13. ADT-A24—Link Patient Information msg: message sent to MPI

### Commit Level Acknowledgement Sent FROM the MPI TO the Sending System

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-  
ALBANY.MED.VA.GOV~DNS^20051024133014-0500^^ACK^2001661670143^P^2.4  
MSA^CA^000167165
```

**Figure 2-14. ADT-A24—Link Patient Information msg: Commit acknowledgement sent from MPI to sending system**

### Application Level Acknowledgement Sent FROM the MPI TO the Sending System

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-  
ALBANY.MED.VA.GOV~DNS^20020921203840-0500^^ACK~A24^200100069^P^2.4^^AL^NE^  
MSA^AA^000167165^^^DFN=100000082
```

**Figure 2-15. ADT-A24—Link Patient Information msg: Application acknowledgement sent from MPI to sending system**

### Commit Level Acknowledgement Returned TO the MPI FROM the Sending System

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^MPI-  
AUSTIN.MED.VA.GOV~DNS^20051109124551-0500^^ACK^500917674^P^2.4  
MSA^CA^200100069
```

**Figure 2-16. ADT-A24—Link Patient Information msg: Commit acknowledgement returned to MPI**

### ADT-A24 Example 2

The example message below is an ADT-A24 message sent from the MPI to a subscribing system to tell them of a change in ICN assignment. The key piece of information is in PID-3 in the PID segments, which contain the ICN that the subscribing system is to update. The ICN value in PID2 is being updated to the ICN value in PID1.

**NOTE:** When the MPI initiates the ADT-A24 to tell a subscriber that a change to ICN has happened, until the Application Level Acknowledgement is returned, the subscriber is not moved to the ICN in the 1<sup>st</sup> PID segment. It is part of the complete processing of the ADT-A24 event.

**NOTE:** Fewer fields are populated in the ADT-A24 message when it originates on the MPI and is sent to VistA and non-VistA systems. This is because the MPI doesn't store all the fields that VistA does.

### ADT-A24 Message Sent FROM the MPI TO the Sending System, Notifying Sending System of Change to ICN Assignment

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^553~TSTCRN.FO-
ALBANY.MED.VA.GOV~DNS^20041110132901-0500^^ADT~A24^200890416^P^2.4^^^AL^AL^
EVN^A24^20041110132901-0500
PID^1^^1008520398V272129~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|036664114~~~USSSA&
&0363~SS~VA FACILITY ID&553&L|7171324~~~USVHA&&0363~PI~VA FACILITY ID&553&L^^
MPIPATIENT~ELEVEN~~~~~L^MPIMAIDEN~~~~~M^19690303^F^^^~NEW YORK CITY~36~~~N^^^^^^
PD1^^^DETROIT,MI~D~553
PID^2^^100852999V383128~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|036664114~~~USSSA&
&0363~SS~VA FACILITY ID&553&L|7171324~~~USVHA&&0363~PI~VA FACILITY ID&553&L^^
MPIPATIENT~ELEVEN~~~~~L^MPIMAIDEN~~~~~M^19690303^F^^^~NEW YORK CITY~36~~~N^^^^^^
```

Figure 2-17. ADT-A24—Link Patient Information msg: Sent from MPI to sending system

### Commit Level Acknowledgement Sent TO the MPI FROM the Sending System

```
MSH^~|\&^MPIF TRIGGER^553~TSTCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^
200M~MPI-AUSTIN.MED.VA.GOV~DNS^20051024133014-0500^^ACK^2001661670143^P^2.4
MSA^CA^200890416
```

Figure 2-18. ADT-A24—Link Patient Information msg: Commit acknowledgement sent to MPI from sending system

### Application Level Acknowledgement Returned to MPI FROM the Sending System

```
MSH^~|\&^MPIF TRIGGER^553~TSTCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^
200M~MPI-AUSTIN.MED.VA.GOV~DNS^20041110132914-0400^^ACK~A24^55370230^P^2.4^^^AL^NE^
MSA^AA^200890416^^^ICN=1008520398V272129
```

Figure 2-19. ADT-A24—Link Patient Information msg: Application acknowledgement returned to MPI

### Commit Level Acknowledgement Returned FROM the MPI TO Sending System

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^553~TSTCRN.FO-
ALBANY.MED.VA.GOV~DNS^20051109124551-0500^^ACK^200917675^P^2.4
MSA^CA^55370230
```

Figure 2-20. ADT-A24—Link Patient Information msg: Commit acknowledgement returned from MPI to sending system

### ADT-A24 Example 3

The example message below is an ADT-A24 message sent from the MPI to a subscribing system to tell them of a change in the local identifier. The key piece of information is in PID-3 in the PID segments, which contain the local identifier. The local identifier value in PID2 (5000) is being updated to the local identifier value in PID1 (100000087).

**The ADT-A24 is sent from the MPI to sites after a local duplicate record merge has occurred, notifying the subscriber(s) of the change to the local identifier (DFN).**

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-  
ALBANY.MED.VA.GOV~DNS^20020921203833-0500^^ADT~A24^200167165^P^2.4^^^AL^AL^  
EVN^^^^^12556~MPIUSER~ONE~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&500&L^^500  
PID^1^1001170566V325869^1001170566V325869~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|  
000064567~~~USSSA&&0363~SS~VA FACILITY ID&500&L|100000087~~~USVHA&&0363~PI~VA  
FACILITY ID&500&L^MPIPATIENT~TEN~~~~~L^MPIMAIDEN~~~~~M^19780303^M^^^876 TIGER  
DRIVE~" " ~BIRMINGHAM~AL~35209~~P~" " |~~TUSCALOOSA~AL~~~N^073^(876)987-  
9987^"^^M^0^^^^^^^^^^^^^^^^^^^^^^  
PD1^^^BPMARION~D~998  
PID^2^1001170565V325869^1001170565V325869~~~USVHA&&0363~NI~VA FACILITY  
ID&200M&L|000064567~~~USSSA&&0363~SS~VA FACILITY ID&500&L|5000~~~USVHA&&0363~PI~VA  
FACILITY ID&500&L^MPIPATIENT~TEN~~~~~L^MPIMAIDEN~~~~~M^19780303^M^^^876 TIGER  
DRIVE~" " ~BIRMINGHAM~AL~35209~~P~" " |~~TUSCALOOSA~AL~~~N^073^(876)987-  
9987^"^^M^0^^^^^^^^^^^^^^^^^^^^^^
```

**Figure 2-21. ADT-A24—Link Patient Information msg: Sent from MPI to sites after local merge notifying subscriber(s) of change to DFN**

### Commit Level Acknowledgement Sent TO the MPI FROM Sending System

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-  
AUSTIN.MED.VA.GOV~DNS^20051024133014-0500^^ACK^50016616^P^2.4  
MSA^CA^200167165
```

**Figure 2-22. ADT-A24—Link Patient Information msg: Commit acknowledgement sent to MPI from sending system**

### Application Level Acknowledgement Sent TO the MPI FROM Sending System

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-  
AUSTIN.MED.VA.GOV~DNS^20020921203840-0500^^ACK~A24^500111069^P^2.4^^^AL^NE^  
MSA^AA^200167165^^^DFN=100000087
```

**Figure 2-23. ADT-A24—Link Patient Information msg: Application acknowledgement sent to MPI from sending system**

### Commit Level Acknowledgement Returned FROM the MPI TO the Sending System

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^553~TSTCRN.FO-  
ALBANY.MED.VA.GOV~DNS^20051109124551-0500^^ACK^200917333^P^2.4  
MSA^CA^500111069
```

**Figure 2-24. ADT-A24—Link Patient Information msg: Commit acknowledgement returned from MPI to sending system**

## ADT-A24 Example 4

The example message below is an ADT-A24 message sent from the VistA site to tell them MPI that they just linked to another ICN during the Potential Match Review process. The key piece of information is in PID-3 in the PID segments, which contain the Primary ICN (1008520566V385026) and Deprecated ICN (1008520577V394026). The Deprecated ICN value in PID2 (1008520577V394026) is being updated to the Primary ICN value in PID1 (1008520566V385026).

### Message Sent TO the MPI FROM VistA to Link PID2 ICN to PID1 ICN

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20020921203833-0500^^ADT~A24^5000167165^P^2.4^^AL^AL
EVN^A24^20050401125324-0500
PID^1^^1008520566V385026~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|112233445~~~USSSA&&
0363~SS~VA FACILITY ID&200M&L|100000549~~~USVHA&&0363~PI~VA FACILITY ID&500&L
1008520577V394026~~~USVHA&&0363~NI~VA FACILITY ID&200M&L~~20020207^^DRI~FRIDAY~
AFTERNOON~~~L^FOOL~APRIL~~~~M^19610401^M^^^~BUTLER~42~~~N^^^^^^^^^^^^^^^^^^^^
PID^2^^1008520577V394026~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|112233445~~~USSSA&&
0363~SS~VA FACILITY ID&200M&L|100000549~~~USVHA&&0363~PI~VA FACILITY ID&500&L^^DRI~
FRIDAY~AFTERNOON~~~L^FOOL~APRIL~~~~M^19610401^M^^^~BUTLER~42~~~N^^^^^^^^^^^^^^^^^^^^
^^^
PD1^^^ALBANY~D~500
```

**Figure 2-25. ADT-A24—Link Patient Information msg: Sent to the MPI from VistA to Link PID2 ICN to PID1 ICN**

### Application Level Acknowledgement Sent FROM the MPI TO Sending System

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020921203840-0500^^ACK~A24^200100069^P^2.4^^AL^NE^
MSA^AA^5000167165^^^DFN=10000549
```

**Figure 2-26. ADT-A24—Link Patient Information msg: Application acknowledgement sent from MPI to sending system**

### Commit Level Acknowledgement Returned FROM the MPI TO the Sending System

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20051024133014-0500^^ACK^2001661670143^P^2.4
MSA^CA^5000167165
```

**Figure 2-27. ADT-A24—Link Patient Information msg: Commit acknowledgement sent from MPI to sending system**

### ADT-A24 Example 5 – Message FROM the MPI TO PSIM via HLO

The example message below is an ADT-A24 message sent from the MPI to tell PSIM that they need to link two ICNs together. The key piece of information is in PID-3 in the first PID segments, which contain the Primary ICN (1001170877V600753) and Deprecated ICN (1008521212V088641). The Deprecated ICN value in PID2 (1008521212V088641) is being updated to the Primary ICN value in PID1 (1001170877V600753).

#### Message FROM the MPI TO PSIM via HLO

```
MSH^~|\&^MPI^200M~HL7.MPI-AUSTIN.MED.VA.GOV:5026~DNS^PSIM^
HL7.200PS~TSTCRN.FO-ALBANY.MED.VA.GOV:5027~DNS^
20061107082414-0500^^ADT~A24~^200M 780^P~^2.4^^^AL^AL^USA
EVN^A24^20061107082414-0500^^^^500
PID^1^^1001170877V600753~~~USVHA&&0363~NI~VA FACILITY ID&200M&L~
20040915114610~|888888889~~~USSSA&&0363~SS~VA FACILITY ID&200M&L^
^MARTIAN~MARV~~~~L^^19900303^M^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
PID^2^^1008521212V088641~~~USVHA&&0363~NI~VA FACILITY ID&200M&L~~
|888888889~~~USSSA&&0363~SS~VA FACILITY ID&200M&L^
^MARTIAN~MARVIN~~~~L^^19900303^M^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
PD1^^^DETROIT,MI~D~553
```

Figure 2-28. Message FROM the MPI TO PSIM via HLO

Accept ACK:

```
MSH|^~\&|PSIM|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082419-0400||ACK|553 354|P^|2.4|||AL|NE|
MSA|AA|200M 780||
```

Figure 2-29. Message FROM the MPI TO PSIM via HLO—Accept ACK

Application ACK:

```
MSH|^~\&|PSIM|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082419-0400||ACK^A24^ACK|553 355|P^|2.4|||AL|NE|
MSA|AA|553 355|
```

Figure 2-30. Message FROM the MPI TO PSIM via HLO—Application ACK

## 2.5. QBP/RSP—Find Candidates (QBP) and Response (RSP) (events Q22 and K22)

This query/response returns list of candidates matching demographic data specified by the input parameters. This HL7 message is designed for interaction between a client system and the MPI. The query consists of a set of demographics for a person, and the response is the list of candidates considered by the MPI to match that set.

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

The RSP-K22 message is the application level acknowledgement to the QBP-Q22 message and must be processed at the non-VistA system. The RSP-K22 message tells the QBP-Q22 sender the results of processing said message.

**NOTE:** At this time the MPI only supports queries by DFN/Site pair.

<u>QBP^Q22^QBP Q21</u>	<u>Query By Parameter</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">QPD</a>	Query Parameter Definition Segment	5
<a href="#">RCP</a>	Response Control Parameters	5
<a href="#">[DSC]</a>	Continuation Pointer	2

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

<u>RSP^K22^RSP K22</u>	<u>Segment Pattern Response</u>	<u>Group Control</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header		2
<a href="#">MSA</a>	Message Acknowledgement		2
<a href="#">[ERR]</a>	Error		2
<a href="#">QAK</a>	Query Acknowledgement		5
<a href="#">QPD</a>	Query Parameter Definition Segment		5
	Query Result Cluster,		
{	Begin PID Group		
[ <a href="#">PID</a>	Patient Identification		3
<a href="#">[PD1]</a> ]	Additional Demographics		5
}	End PID Group,		

	End Query Results	
[ <a href="#">DSC</a> ]	Continuation Pointer	2

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

The following are example groups of Q22/K22 query and response message pairs. In each group, the first message is the QBP-Q22 query sent to the MPI and the second message is the RSP-K22 response sent back to the sending system resulting from the query. These example scenarios show:

1. Site/DFN pair is found on the MPI—Query processed.
2. Sending site is not found in the MPI SITE MONITOR file—Query rejected.
3. Site/DFN pair is not known to the MPI—No match found on the MPI.

Depending on the value passed in the QPD segment, for the User Parameter field (sequence #6) the query may also add an Association of the sending site to the DFN/Site pair, and/or add the sending site as a system of interest for the ICN associated with this DFN/Site pair or if the DFN/Site pair isn't known create a record of interest so that when it does become known to the MPI it can associate the sending site with it and inform the sending site of the ICN.

**Figure 2-31 shows a QBP-Q22 query sent TO the MPI**

```
MSH^~|\&^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^MPI^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^200412091430-0500^^QBP~Q22^888387888^P^2.4^^AL^AL^
QPD^Q22~FIND CANDIDATES~HL72.4^888387888^@PID.3.1~271|@PID.3.2~" |@PID.3.3~" |
@PID.3.4~USVHA&&0363|@PID.3.5~PI|@PID.3.6~VA FACILITY ID&500&L^VHA MPI^1.0^BT
RCP^I^1~RD^R^^N^
```

**Figure 2-31. QBP-Q22—Find Candidates query message sent to MPI**

**Commit Level Acknowledgement Sent FROM the MPI TO the Sending System**

```
MSH^~|\&^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS
^20051028060001-0500^^ACK^200167235556^P^2.4
MSA^CA^888387888
```

**Figure 2-32. QBP-Q22—Find Candidates query msg sent to MPI: Commit acknowledgement sent from MPI to sending system**

This query, Figure 2-31, is asking both (BT) a treating facility entry and a site association to be created for sending station 888 for patient with a DFN equal to 271 at Station Number 500. If that DFN/Site pair is found, add the sending site to the site association for the treating facility for station 500 *and* add the sending site as its own treating facility. Returning RSP-K22 message with the PID segment containing the information regarding this patient, indicating that the patient was found. (Figure 2-16).

**NOTE:** If a treating facility entry is created for an ICN as a result of the QBP~Q22 query, that will trigger back out to all systems subscribing to that ICN a treating facility update message (MFN-M05).

```
MSH^~|\&^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^
20041210123536-0500^^RSP~K22^200896113^P^2.4^^AL^NE^
MSA^AA^888387888
QAK^888387888^OK^Q22~FIND CANDIDATES~HL72.4^1
QPD^Q22~FIND CANDIDATES~HL72.4^888387888^@PID.3.1~271|@PID.3.2~"|"@PID.3.3~"|"
@PID.3.4~USVHA&&0363|@PID.3.5~PI|@PID.3.6~VA FACILITY ID&500&L^VHA MPI^1.0^BT
PID^1^^1001168794V381470~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|000456780~~~USSSA&&
0363~SS~VA FACILITY ID&500&L|271~~~USVHA&&0363~PI~VA FACILITYID&500&L^MPIPATIENT
~ONE~~~L^19810808^M^198705211140-0500^^
```

**Figure 2-33. RSP-K22—Response msg from QBP-Q22 back to sending system: Site/DFN pair found on MPI**

**NOTE:** Notice in Figure 2-33 that the number 1 at the end of the QAK segment signifying the number of matches. This will correspond to the number of PID segment(s) returned as matches to the query criteria. Since we are working just with Site/DFN at this time the response will either contain no matches or 1 match.

**Commit Level Acknowledgement Returned FROM the MPI TO the Sending System**

```
MSH^~|\&^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS
^20051028060001-0500^^ACK^2001672355647^P^2.4^^|
MSA^CA^200896113^Message Processed
```

**Figure 2-34. RSP-K22—Commit acknowledgement: Response msg from QBP-Q22 back to sending system**

**Messaging Example when Sending Facility is Unknown to MPI**

This query, Figure 2-17, is asking both (BT) a treating facility entry and a site association to be created for sending station 777 for patient with a DFN equal to 22710 at Station Number 500. If that DFN/Site pair is found, add the sending site to the site association for the treating facility for station 500 *and* add the sending site as its own treating facility. Returning RSP-K22 message with the PID segment containing the information regarding this patient, indicating that the patient was found.

```
MSH^~|\&^MPI^777~MPIDEVELOPER.MED.VA.GOV~DNS^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^
200410140939-0500^^QBP~Q22^7777387888^P^2.4
QPD^Q22~FIND CANDIDATES~HL72.4^888387888^@PID.3.1~22710|@PID.3.2~"|"@PID3.3~"|"
@PID.3.4~USVHA&&0363|@PID.3.5~PI|@PID.3.6~VA FACILITY ID&500&L^VHA MPI^1.0^BT
RCP^I^1~RD^R^^N^
```

**Figure 2-35. QBP-Q22—Find Candidates query msg sent to MPI**

**Commit Level Acknowledgement Sent TO the MPI FROM the Sending System**

```
MSH^~|\&^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPI^777~MPIDEVELOPER.MED.VA.GOV~DNS^
20051028060001-0500^^ACK^2001672355646^P^2.4
MSA^CA^7777387888
```

**Figure 2-36. QBP-Q22—Find Candidates query msg sent to MPI: Commit acknowledgement sent to the MPI from sending system**

The RSP-K22 response message, Figure 2-37, shows that the sending site was not found in the MPI SITE MONITOR file. Hence, the QBP-Q22 message is rejected by sending back the RSP-K22 message as follows.

```
MSH^~|\&^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPI^777~MPIDEVELOPER.MED.VA.GOV~DNS^
20050215082223-0500^^RSP~K22^200899812^P^2.4^^AL^NE^
MSA^AR^7777387888^System isn't in MPI Site Monitor file - rejected
QAK^7777387888^AR^Q22~FIND CANDIDATES~HL72.4^0
QPD^Q22~FIND CANDIDATES~HL72.4^888387888^@PID.3.1~22710|@PID.3.2~"|"@PID3.3~"|"
|@PID.3.4~USVHA&&0363|@PID.3.5~PI|@PID.3.6~VA FACILITY ID&500&L^VHA MPI^1.0^BT
```

**Figure 2-37. RSP-K22—Response msg from QBP-Q22 back to sending system: sending site not found on MPI**

**Commit Level Acknowledgement Returned FROM the MPI TO the Sending System**

```
MSH^~|\&^MPI^777~MPIDEVELOPER.MED.VA.GOV~DNS^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^
20051028060001-0500^^ACK^2001672355777^P^2.4
MSA^CA^200899812
```

**Figure 2-38. RSP-K22—Response msg from QBP-Q22—Commit acknowledgement**

This query, Figure 2-19, is asking for a site association (AS) to be created for sending station 888 for patient with a DFN equal to 22710 at Station Number 500. If that DFN/Site pair is found, add the sending site to the site association for the treating facility for station 500. Returning RSP-K22 message with the QAK segment containing 0 match notation and no PID segment (Figure 2-20).

**Figure 2-39 Shows a QBP-Q22 Query Sent TO the MPI FROM the Sending System sent to MPI"**

```
MSH^~|\&^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^
200412091430-0500^^QBP~Q22^888387888^P^2.4
QPD^Q22~FIND CANDIDATES~HL72.4^888387888^@PID.3.1~22710|@PID.3.2~"|"@PID3.3~"|"
|@PID.3.4~USVHA&&0363|@PID.3.5~PI|@PID.3.6~VA FACILITY ID&500&L^VHA MPI^1.0^AS
RCP^I^1~RD^R^^N^
```

**Figure 2-39. QBP-Q22—Find Candidates query msg sent to MPI**

**Commit Level Acknowledgement Sent TO the MPI FROM the Sending System**

```
MSH^~|\&^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^
20051028060001-0500^^ACK^2001672355807^P^2.4
MSA^CA^888387888
```

**Figure 2-40. QBP-Q22—Find Candidates query msg: Commit acknowledgement sent to MPI**

**Figure 2-41, shows an example RSP-K22 response when a Site/DFN pair is not found (no match found) on the MPI.**

```
MSH^~|\&^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^
20050215081307-0500^^RSP~K22^200899809^P^2.4^^AL^NE^
MSA^AA^888387888
QAK^888387888^NF^Q22~FIND CANDIDATES~HL72.4^0
QPD^Q22~FIND CANDIDATES~HL72.4^888387888^@PID.3.1~22710|@PID.3.2~"|"@PID3.3~"|"
@PID.3.4~USVHA&&0363|@PID.3.5~PI|@PID.3.6~VA FACILITY ID&500&L^VHA MPI^1.0^AS
```

**Figure 2-41. RSP-K22—Response msg from QBP-Q22 back to sending system: Site/DFN pair not known to MPI****Commit Level Acknowledgement Returned FROM the MPI TO the Sending System**

```
MSH^~|\&^MPI^888~MPIDEVELOPER.MED.VA.GOV~DNS^MPI^200M~MPI-AUSTIN.MED.VA.GOV~DNS^
20051028060001-0500^^ACK^2001672355887^P^2.4
MSA^CA^200899809
```

**Figure 2-42. RSP-K22—Response msg from QBP-Q22: Commit acknowledgement**

## 2.6. ADT/ACK—Merge Patient—Patient Identifier List (Event A40)

A merge has been done at the patient record level (i.e., DFN and/or record ID 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. However, the current VHA MPI implementation does not support the referencing of the merged record id but identify that there are potential benefits to supporting that functionality so future implementation will support that function.

The result of the ADT-A40 message being processed at the MPI is an ADT-A24 Link Patient message sent to each site in the treating facility list and any sites in the site association list for those treating facilities (including the site that did the merge), not including the site that the ADT-A40 message was received from, with the "FROM" ICN/DFN in MRG-1 (1001170164V123456/112978) to change the "TO" ICN/DFN in PID-3 (1001169886V995666/7169971).

The ADT-A40 message is sent during the special processing routine section of the VistA Duplicate Record Merge software, which happens before the actual merging of the PATIENT (#2) file entries has happened. Once the merge has successfully completed, an ADT-A31 message is sent to the MPI with the current view of the TO record, which may contain different information for other fields stored on the MPI as a result of the merge.

The MFN-M05 message may also be triggered if the result of the linking of the two ICNs resulted in a new treating facility list.

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

<u>ADT^A40^ADT A40</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
{ <a href="#">PID</a>	Patient Identification	3
[ <a href="#">PD1</a> ]	Additional Demographics	3
<a href="#">MRG</a>	Merge Information	3
[ <a href="#">PV1</a> ] }	Patient Visit	3
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2



## Commit Level Acknowledgement Returned to the MPI From VistA

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051028060001-0500^^ACK^500167235^P^2.4
MSA^CA^200103350
```

**Figure 2-46. ADT-A40—Merge Patient—Patient Identifier List msg: Commit acknowledgement returned to MPI**

## 2.7. ADT/ACK—Move Patient Information—Patient Identifier List (Event A43)

A move has been done at the patient record id level (i.e., a records ID moves from one ICN to another ICN) 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".

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 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. Since every system handles merges differently, an ADT-A31 (update person information) message could also be used instead of the ADT-A08 (update patient information). The HL7 2.4 specification documents the following usage: *The fields included when this message is sent should be the fields pertinent to communicate this event. When other fields change, it is recommended that the A31 (update person information) event be used for person level updates and A08 (update patient information) event for patient level updates.* However, all PID data associated with the "correct target identifier" ([PID-3 - Patient identifier list](#)) are treated as updated information.

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. However, currently within the VHA MPI implementation we do not support the referencing of the merged records but identify that there are potential benefits to supporting that reference and plan to support them in future releases.

**NOTE:** ADT-A43 messages are only supported as an outbound message from the MPI. Inbound ADT-A43 messages will be negatively acknowledged.

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

<u>ADT^A43</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
<a href="#">[PD1]</a>	Additional Demographics	3
<a href="#">MRG</a>	Merge Information	3

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

<u>ACK^A43^ACK</u>	<u>Application Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<a href="#">[ ERR ]</a>	Error	2

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

**Example 1: Message Sent FROM MPI TO Receiving System**

```

MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020921204232-0500^^ADT~A43^200100101^P^2.4^^AL^AL^
EVN^A43^20020921204232-0500^20020921204232-0500^^12556~MPIUSER~FOUR~~~~~USVHA&&
0363~L~~~NI~VA FACILITY ID&200M&L
PID^1^^1008520572V991480~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|100000551~~~USVHA
&&0363~PI~VA FACILITY ID&500&L^^MPIPATIENT~ONE~E~~~~L^MPIMAIDEN~~~~~M^2780203^M
^^^^^^^^^^000064567^^^^^^^^^^^^
MRG^1001170560V235869~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|100000551~~~USVHA
&&0363~PI~VA FACILITY ID&500&L^^^^^^MPIPATIENT~ONE~E~~~~L
    
```

**Figure 2-47. ADT-A43—Move Patient Information—Patient Identifier List msg: Sent from MPI to subscribing system**

**Commit Level Acknowledgement Sent TO the MPI FROM Receiving System**

```
MSH^~|\&^MPIF TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051028060001-0500^^ACK^2001672355997^P^2.4
MSA^CA^200100101
```

**Figure 2-48. ADT-A43—Move Patient Information—Patient Identifier List msg: Commit acknowledgement sent to MPI**

**Application Level Acknowledgement Sent TO the MPI FROM the Receiving System**

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

**Figure 2-49. ADT-A43—Move Patient Information—Patient Identifier List msg: Application acknowledgement sent to MPI**

**Commit Level Acknowledgement Returned TO the Receiving System FROM the MPI**

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20051028060001-0500^^ACK^2001672355997^P^2.4
MSA^CA^500167189
```

**Figure 2-50. ADT-A43—Move Patient Information—Patient Identifier List msg: Commit acknowledgement returned from MPI to sending system**

**Example 2: Message Sent FROM MPI TO PSIM via HLO**

```
MSH^~|\&^MPI^200M~HL7.MPI-AUSTIN.MED.VA.GOV:5026~DNS^
PSIM^HL7.200PS~TSTCRN.FO-ALBANY.MED.VA.GOV:5027~DNS^
20061107082545-0500^^ADT~A43~^200M 782^P~^2.4^^AL^AL^USA
EVN^A43^20061107082545-0500^^^^200M^20061107082545-0500^^12564~CHESNEY~CHRISTI
NE~~~~~USVHA&&0363~L~~~NI~VA FACILITY ID&200M&L
PID^1^^1008521514V195551~~~USVHA&&0363~NI~VA FACILITY ID&200M&L~20061107082545~
|100000107~~~USVHA&&0363~PI~VA FACILITY ID&500&L|888888889~~~USSSA&&0363~SS~VA F
ACILITY ID&200M&L^MARTIAN~MARVIN~~~~~L^19900303^M^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
PD1^^^ALBANY~D~500
MRG^1001170877V600753~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|
100000107~~~USVHA&&0363~PI~VA FACILITY ID&500&L|888888889
~~~USSSA&&0363~SS~VA FACILITY ID&500&L^MARTIAN~MARV~~~~~L
```

**Figure 2-51. Message Sent FROM MPI TO PSIM via HLO**

**Commit ACK:**

```
MSH|^~\&|PSIM|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082419-0400||ACK|553 354|P^|2.4||AL|NE|
MSA|CA|200M 782||
```

**Figure 2-52. Message Sent FROM MPI TO PSIM via HLO—Commit ACK**

**Application Level ACK:**

```
MSH|^~\&|PSIM|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5
027^DNS|MPI|200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS
|20061107082549-0400||ACK^A43^ACK|553 357|P^|2.4|||AL|NE|
MSA|AA|200M 782
```

**Figure 2-53. Message Sent FROM MPI TO PSIM via HLO—Application Level ACK****2.8. 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.

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

<u>ADT^A04^ADT^A04</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
[ <a href="#">PD1</a> ]	Patient Additional Demographics	3
<a href="#">PV1</a>	Patient Visit	3
[PV2]	Patient Visit – additional information	3
[{ <a href="#">OBX</a> }]	Observation/Result	7
[ <a href="#">ZPD</a> ]	VA Specific Patient Information Segment	
[ <a href="#">ZSP</a> ]	VA Specific Service Period Segment (Passed but not used by MPI)	
[ <a href="#">ZEL</a> ]	VA Specific Patient Eligibility Segment (Passed but not used by MPI)	
[ <a href="#">ZCT</a> ]	VA Specific Emergency Contact Segment (Passed but not used by MPI)	
[ <a href="#">ZEM</a> ]	VA Specific Employment Information Segment (Passed but not used by MPI)	
[ <a href="#">ZFF</a> ]	VA Specific File/Field Segment (Passed but not used by MPI)	
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2



**Application Level Acknowledgement Sent FROM MPI TO VistA**

**NOTE:** Error message returned as an example, this does not indicate that there is a need to resend the message. This actually generated a data quality exception on the MPI for the IMDQ team to address.

```
MSH^~|\&^RG ADT^200M~MPI-AUSTIN.MED.VA.GOV~DNS^RG ADT^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20021015084805-0500^^ACK~A04^200103324^P^2.4^^^AL^NE^USA
MSA^AA^500168673^ Unable to update field 48 in MPI FACILITY ASSOCIATION ( #985.5)
file due to: The value '1' for field POW STATUS INDICATED? in file MPI FACILITY
ASSOCIATION is not valid.
```

**Figure 2-56. ADT-A04—Register a Patient msg: Application acknowledgement sent from MPI to VistA**

**Commit Level Acknowledgement Returned TO the MPI FROM VistA**

```
MSH^~|\&^RG ADT^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^RG ADT^200M~MPI-
AUSTING.MED.VA.GOV~DNS^20051020060001-0500^^ACK^5004563^P^2.4
MSA^CA^200103324
```

**Figure 2-57. ADT-A04—Register a Patient msg: Commit acknowledgement returned to MPI from VistA**

**2.9. 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.

**NOTE:** 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.

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

<u>ADT^A08^ADT A08</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
[ <a href="#">PD1</a> ]	Patient Additional Demographics	3

Trigger Events & Message Definitions

<a href="#">PV1</a>	Patient Visit	3
[PV2]	Patient Visit – additional information	3
[{OBX}]	Observation/Result	7
[ZPD]	VA Specific Patient Information Segment	
[ZSP]	VA Specific Service Period Segment (Passed but not used by MPI)	
[ZEL]	VA Specific Patient Eligibility Segment (Passed but not used by MPI)	
[ZCT]	VA Specific Emergency Contact Segment (Passed but not used by MPI)	
[ZEM]	VA Specific Employment Information Segment (Passed but not used ")	
[ZFF]	VA Specific File/Field Segment (Passed but not used by MPI)	

<b><u>ACK^COMMIT</u></b>	<b><u>Commit Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
--------------------------	--	-----------------------

<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

<b><u>ACK^A08^ACK</u></b>	<b><u>Application Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
---------------------------	---	-----------------------

<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
[ <a href="#">ERR</a> ]	Error	2

<b><u>ACK^COMMIT</u></b>	<b><u>Commit Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
--------------------------	--	-----------------------

<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2



**Commit Level Acknowledgement Returned TO the MPI FROM Receiving System**

```
MSH^~|\&^RG ADT^500~DEVCRN.FO~ALBANY.MED.VA.GOV~DNS^RG ADT^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051020060001-0500^^ACK^2001688355533^P^2.4
MSA^CA^20099963
```

**Figure 2-61. ADT-A08—Update Patient Information msg: Commit acknowledgement returned to MPI****2.10. 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.

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

<u>ADT^A31^ADT A31</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
<a href="#">[PD1]</a>	Patient Additional Demographics	3
<a href="#">PV1</a>	Patient Visit	3
<a href="#">[PV2}</a>	Patient Visit - Additional Information	3
<a href="#">[OBX}</a>	Observation/Result	7
<a href="#">[ZPD]</a>	VA Specific Patient Information Segment	
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<u>ACK^A31^ACK</u>	<u>Application Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<a href="#">[ERR]</a>	Error	2





**Example 3: Message Sent FROM the MPI TO PSIM**

```
MSH^~|\&^MPI^200M~HL7.MPI-AUSTIN.MED.VA.GOV:5026~DNS^PSIM^
HL7.200PS~TSTCRN.FO-ALBANY.MED.VA.GOV:5027~DNS^
20061107082515-0500^^ADT~A31~^200M 781^P~^2.4^^AL^AL^USA
EVN^A31^20060310110609-0500^^^^500
PID^1^^1001170877V600753~~~USVHA&&0363~NI~VA FACILITY ID&200M&L~
20040915114610~|100000107~~~USVHA&&0363~PI~VA FACILITY ID&500&L|
888888889~~~USSSA&&0363~SS~VA FACILITY ID&500&L^
^MARTIAN~MARVIN~~~~L^^19900303^M^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
PD1^^^DETROIT,MI~D~553
PV1^N
OBX^1^CE^SSN VERIFICATION STATUS^^~" "~L
ZPD^1^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
```

**Figure 2-69. Message Sent FROM the MPI TO PSIM**

**Commit ACK**

```
MSH|^~\&|PSIM|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082519-0400||ACK|553 356|P^|2.4||AL|NE|
MSA|CA|200M 781|
```

**Figure 2-70. Message Sent FROM the MPI TO PSIM—Commit ACK**

**Application Level ACK**

```
MSH|^~\&|MPI|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082519-0400||ACK^A31^ACK|553 356|P^|2.4||AL|NE|
MSA|AA|200M 781
```

**Figure 2-71. Message Sent FROM the MPI TO PSIM—Application Level ACK**

**Example of PSIM Sending Application Level Acknowledgment with Error Condition Reported:**

```
MSH^~|\&^PSIM^200PS~HL7.200PS.AUSTIN.MED.VA.GOV:8090~DNS^MPI^200M~MPI-
AUSTIN.MED.VA.GOV:15026~DNS^20070807083138.839-0600^^ACK^1186493498839130265-
9715^P^2.4^^AL^NE^USA
MSA^AE^200M 1259620
ERR^~~~&Cannot locate VPID 0000001011191168V130766000000
```

**Figure 2-72. Message Sent FROM PSIM with Error Condition Reported—Application Level ACK**







## 2.12. ADT/ACK—Enterprise Update Person Information (Event A31)

**NOTE:** The third occurrence of this message is included specifically to document the ADT-A31 message being triggered from the MPI Austin side.

An A31 event can be used to update person information on VistA. 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 synchronize the treating facilities with the CMOR's data as it exists on the MPI or the Primary View data once the patient has been primary view initialized on the MPI.

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

<b><u>ADT^A31^ADT A31</u></b>	<b><u>ADT Message</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
<a href="#">[PD1]</a>	Patient Additional Demographics	3
<a href="#">PVI</a>	Patient Visit	3
<a href="#">[ZPD]</a>	VA Specific Patient Information Segment	
<b><u>ACK^COMMIT</u></b>	<b><u>Commit Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<b><u>ACK^A31^ACK</u></b>	<b><u>Application Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<a href="#">[ERR]</a>	Error	2
<b><u>ACK^COMMIT</u></b>	<b><u>Commit Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2



**Commit ACK**

```
MSH|^~\&|PSIM|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082519-0400||ACK|553 356|P^|2.4|||AL|NE|
MSA|CA|200M 781||
```

**Figure 2-83. Message Sent FROM the MPI TO PSIM—Commit ACK****Application Level ACK**

```
MSH|^~\&|MPI|553^HL7.TSTCRN.FO-ALBANY.MED.VA.GOV:5027^DNS|MPI|
200M^HL7.MPI-AUSTIN.MED.VA.GOV:5026^DNS|
20061107082519-0400||ACK^A31^ACK|553 356|P^|2.4|||AL|NE|
MSA|AA|200M 781
```

**Figure 2-84. Message Sent FROM the MPI TO PSIM—Application Level ACK**

**NOTE:** This ADT-A31 message is sent from the MPI to VistA. Fewer fields are populated in the ADT-A31 message when it originates on the MPI and is sent to VistA. This is because the MPI doesn't store all the fields that VistA does.

## 2.13. MFN—Update Treating Facility (Event M05)

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.

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

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

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

<u>MFK^M05</u>	<u>Master File update Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2.24.1
<a href="#">MFI</a>	Master File Identification Segment	8.4.1
{ <a href="#">MFE</a>	Master File Entry Segment	8.4.2
<a href="#">MFA</a> }	Master File Acknowledgement Segment	8.4.3

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

**Example Message Received FROM the MPI**

```
MSH^~|\&^VAFC TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^VAFC TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20020916085620-0500^^MFN~M05^20096036^P^2.4^^AL^AL^US
MFI^TFL^^UPD^^AL^500~ALBANY
MFE^MUP^500^20020913112211-0500^500~ALBANY~VA~1001170419V238836~ICN~VA
ZET^A1
MFE^MUP^553^^553~DETROIT,MI~VA~1001170419V238836~ICN~VA
ZET^
MFE^MUP^998^^998~BPMARION~VA~1001170419V238836~ICN~VA
ZET^
```

**Figure 2-85. MFN-M05—Update Treating Facility msg: Received from MPI****Commit Level Acknowledgement Sent TO the MPI**

```
MSH^~|\&^VAFC TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051111094136-0400^^ACK^673105227963^P^2.4
MSA^CA^20096036
```

**Figure 2-86. MFN-M05—Update Treating Facility msg: Commit acknowledgement sent to MPI****Application Level Acknowledgement Sent TO the MPI**

```
MSH^~|\&^VAFC TRIGGER^500~DEVCRN.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051111094130-0500^^MFK~M05^5008304^P^2.4^^AL^NE^US
MSA^AA^500164930^0
MFI^TFL^^UPD^^AL^500~ALBANY
MFE^MUP^500^20020913112211-0500^500~ALBANY~VA~1001170419V238836~ICN~VA
MFA^MUP^500^20041108122753-0500^S
MFE^MUP^553^^553~DETROIT,MI~VA~1001170419V238836~ICN~VA
MFA^MUP^553^20041108122753-0500^S
MFE^MUP^998^^998~BPMARION~VA~1001170419V238836~ICN~VA
MFA^MUP^998^20041108122753-0500^S
```

**Figure 2-87. MFN-M05—Update Treating Facility msg: Application acknowledgement sent to MPI****Commit Level Acknowledgement Returned FROM MPI to Sending System**

```
MSH^~|\&^VAFC TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^VAFC TRIGGER^500~DEVCRN.FO-
ALBANY.MED.VA.GOV~DNS^20051111084137-0500^^ACK^2001705747823^P^2.4
MSA^CA^5008304
```

**Figure 2-88. MFN-M05—Update Treating Facility msg: Commit acknowledgement sent from MPI**

## 2.14. QRY/ADR—Patient Query (Event A19)

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

**NOTE:** At this time, the QRY-A19 message is only triggered from the MPI to any of the sites in the Treating Facility list and any associated systems related to those treating facilities.

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

<b><u>QRY^A19^QRY A19</u></b>	<b><u>Patient Query</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">QRD</a>	Query Definition	2
<b><u>ACK^COMMIT</u></b>	<b><u>Commit Level Acknowledgement</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<b><u>ADR^A19^ADR A19</u></b>	<b><u>ADT Response</u></b>	<b><u>Chapter</u></b>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<a href="#">[ERR]</a>	Error	2
<a href="#">[ QAK ]</a>	Query Acknowledgement (Not built by the MPI)	5
<a href="#">QRD</a>	Query Definition	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient Identification	3
<a href="#">[ PD1 ]</a>	Patient Additional Demographics	3
<a href="#">PV1</a>	Patient Visit	3
<a href="#">[ ZPD ]</a>	VA Specific Patient Information Segment	



**Commit Level Acknowledgement Sent FROM the MPI**

```
MSH^~|\&^VAFC TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^VAFC TRIGGER^500~DEVCRN.FO-  
ALBANY.MED.VA.GOV~DNS^20051104073723-0500^^ACK^200917444^P^2.4  
MSA^CA^500167426
```

**Figure 2-92. QRY-A19—Patient Query msg: Commit acknowledgement sent from MPI**

**Example 2: When the Patient is Not Known at the Facility by ICN Known at MPI****Query Message Sent FROM the MPI**

```
MSH^~|\&^VAFC TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^VAFC TRIGGER^553~TSTCRN.FO-
ALBANY.MED.VA.GOV~DNS^20051104073703-0500^^QRY~A19^200917406^P^2.4^^AL^AL^US
QRD^20051104073703-
0500^R^I^1000170555V098765^^^1~RD^1000170555V098765~-----USVHA&&0363
~NI~~~~VA FACILITY ID&200M&L|7169826~-----USVHA&&0363~PI~~~~VA FACILITY
ID&553&L^DEM^^^
```

**Figure 2-93. QRY-A19—Query Message sent from MPI****Commit Level Acknowledgement Sent TO the MPI**

```
MSH^~|\&^VAFC TRIGGER^553~TSTCRN.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051104073709-0400^^ACK^55385379^P^2.4
MSA^CA^200917406
```

**Figure 2-94. QRY-A19—Query Message sent from MPI: Commit acknowledgement sent to MPI****Query Results Received When Patient is NOT Known at Queried Facility**

```
MSH^~|\&^VAFC TRIGGER^553~TSTCRN.FO-ALBANY.MED.VA.GOV~DNS^VAFC TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051104073710-0400^^ADR~A19^55385380^P^2.4^^AL^NE^US
MSA^AA^200917406^Unknown ICN#1000170555V098765 and SSN#
QRD^20051104073703-
500^R^I^1008520116^^^1~RD^1000170555V098765~-----USVHA&&0363~NI~~~~VA FACILITY
ID&200M&L^DEM^^^
```

**Figure 2-95. QRY-A19—Query results received when patient is NOT known at queried facility****Commit Level Acknowledgement Returned FROM the MPI**

```
MSH^~|\&^VAFC TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^VAFC TRIGGER^553~TSTCRN.FO-
ALBANY.MED.VA.GOV~DNS^20051104073723-0500^^ACK^200917413^P^2.4
MSA^CA^55385380
```

**Figure 2-96. QRY-A19—Query results received when patient is NOT known at queried facility: Commit acknowledgement returned from MPI**

## 2.15. VQQ—Query for Patient Matches (Event Q02)

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.

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

<u>VQQ^Q02</u>	<u>Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">VTQ</a>	Virtual Table Query	2
<a href="#">RDF</a>	Table Row Definition	2

<u>ACK^Q02</u>	<u>Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<a href="#">QAK</a>	Query Acknowledgement	2
<a href="#">RDF</a>	Table Row Definition	2
{ <a href="#">RDT</a> }	Table Row Data	2

### Message Example Real-Time Connection Query Sent TO the MPI

```
MSH|^~\&|MPI_LOAD|500|MPI-ICN|||VQQ^Q02|100000082-1|
VTQ|100000082|T|VTQ_PID_ICN_NO_LOAD|ICN|@00108.1^EQ^MPIPATIENT^AND~@00122^EQ^0000645
67^AND~@00108.2^EQ^TEN^AND~@00110^EQ^19780303
RDF|24|@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~POW^ST^1~@00127^
ST^1~@00112.1^ST^30~@00112.2^ST^25~@00112.3^ST^25~@00112.5^ST^10~@00112.4^ST^10
```

**Figure 2-97. VQQ-Q02—Real-Time Connection Query msg: Sent to MPI**

**Message Example Real-Time Connection Query Returned FROM the MPI**

```

MSH|^~\&|MPI|MPI|MPI_LOAD|500|||ACK^Q02|100000082-1|P|2.3
MSA|AA|100000082-1
QAK|100000082|OK
RDF|24|@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|MPIPATIENT|000064567|19780203|998|1001170560V235869|INDY|998~||E|M|JASPER|AL|||P
UPPY|

```

**Figure 2-98. VQQ-Q02—Real-Time Connection Query msg: Returned from MPI**

## 2.16. VQQ-Q02 in Batch Format (i.e., the Local/Missing ICN Resolution Job)

**NOTE:** There can be up-to 100 patients per batch message, when sent via the Local/Missing ICN Resolution Job.

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

<u>VQQ^Q02</u>	<u>Message</u>	<u>Chapter</u>
<a href="#">BHS</a>	Batch Message Header	2
<a href="#">{MSH</a>	Message Header	2
<a href="#">VTQ</a>	Virtual Table Query	2
<a href="#">RDE}</a>	Table Row Definition	2
<a href="#">BTS</a>	Batch Trailer Segment	2

<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

<u>ACK^Q02</u>	<u>Message</u>	<u>Chapter</u>
<a href="#">BHS</a>	Batch Message Header	2
<a href="#">{MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<a href="#">QAK</a>	Query Acknowledgement	2
<a href="#">RDF</a>	Table Row Definition	2
<a href="#">{RDT}}</a>	Table Row Data	2
<a href="#">BTS</a>	Batch Trailer Segment	2

**Example VQQ-Q02 Used in a Batch Message (i.e., the Local/Missing ICN Resolution Job) Sent TO the MPI**

```

BHS^~|\&^MPIF-STARTUP^500^MPIF MPI^^20020913111339-0500^^~P~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_NO_LOAD^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 2-99. VQQ-Q02—Real-Time Connection Query batch msg: Sent to MPI****Commit Level Acknowledgement sent FROM the MPI**

```

BHS^~|\&^MPIF MPI^500^MPIF-STARTUP^500^20051114120003-0500^^~P~ACK^CA^
2001708000178^51129
MSA^CA^500149126

```

**Figure 2-100. VQQ-Q02—Real-Time Connection Query batch msg: Commit acknowledgement sent from MPI****Example VQQ-Q02 Used in a Batch Message Returned FROM the MPI**

```

BHS^~|\&^MPIF MPI^MPI^MPIF-STARTUP^500^20020913111358-500^^~P~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 2-101. VQQ-Q02—Real-Time Connection Query batch msg: Returned from MPI**

## 2.17. ADT/ACK—Unlink Patient Information (Event A37)

The A37 event unlinks a patient from an identifier. An A37 event can be used to unlink a systems patient from an existing entry on the MPI.

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

<u>ADT^A37^ADT A37</u>	<u>ADT Message</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">EVN</a>	Event Type	3
<a href="#">PID</a>	Patient (1) Identification	3
[ <a href="#">PD1</a> ]	Patient (1) Additional Demographics	3
[ <a href="#">PV1</a> ]	Patient (1) Visit	3
<a href="#">PID</a>	Patient (2) Identification	3
[ <a href="#">PD1</a> ]	Patient (2) Additional Demographics	3
[ <a href="#">PV1</a> ]	Patient (2) Visit	3
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
<u>ACK^A37^ACK</u>	<u>Application Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2
[ <a href="#">ERR</a> ]	Error	2
<u>ACK^COMMIT</u>	<u>Commit Level Acknowledgement</u>	<u>Chapter</u>
<a href="#">MSH</a>	Message Header	2
<a href="#">MSA</a>	Message Acknowledgement	2

**Example Message Sent TO the MPI**

This message indicates that the MHV application is requesting that the MHV ID 123 be unlinked from the 1001170560V235869 ICN (sequence 3 in PID2) and not be linked with another ICN (null in sequence 3 of PID1).

```
MSH^~|\&^MPIF TRIGGER^200MHV~MYHEAL.MED.VA.GOV^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20020921202421-0500^^ADT~A37^200100057^P^2.4^^AL^AL^
EVN^A37^20020921202421-0500^20020921202421-0500^^USER NAME
PID^1^^"~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|123~~~USVHA&&0363~PI~VA FACILITY
ID&200MHV&L^MHVPATIENT~ONE~~~~L^PUPPY~~~~M^2780203^M^^^^^^^^^^^^11111111^^^^^^^^
PID^2^^1001170560V235869~~~USVHA&&0363~NI~VA FACILITY ID&200M&L|123~~~USVHA&&0363
~PI~VA FACILITY ID&200MHV&L^MHVPATIENT~ONE~E~~~~L^PUPPY~~~~M^2780203^M^^
^^^^^^^^11111111^^^^^^^^^^^^^^^^
```

**Figure 2-102. ADT-A37—Unlink Patient Information msg: Sent to MPI**

**Commit Level Acknowledgement Sent FROM the MPI**

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF
TRIGGER^200MHV~MYHEAL.MED.VA.GOV~DNS^20051028060001-0500^^ACK^2001672355997^P^2.4
MSA^CA^200100057
```

**Figure 2-103. ADT-A37—Unlink Patient Information msg: Commit acknowledgement sent from MPI**

**Application Level Acknowledgement Sent TO the MPI**

```
MSH^~|\&^MPIF TRIGGER^200M~MPI-AUSTIN.MED.VA.GOV~DNS^MPIF TRIGGER^200MHV~
MYHEAL.MED.VA.GOV~DNS^20020921202425-0500^^ACK~A37^200167161^P^2.4^^AL^NE^
MSA^AA^200100057^
```

**Figure 2-104. ADT-A37—Unlink Patient Information msg: Application acknowledgement sent to MPI**

**Commit Level Acknowledgement Sent TO the MPI**

```
MSH^~|\&^MPIF TRIGGER^200MVH~MYHEAL.MED.VA.GOV~DNS^MPIF TRIGGER^200M~MPI-
AUSTIN.MED.VA.GOV~DNS^20051028060001-0500^^ACK^2001672355997^P^2.4
MSA^CA^200167161
```

**Figure 2-105. ADT-A37—Unlink Patient Information msg: Commit acknowledgement sent to MPI**



## Chapter 3: Message Segments

This section describes the HL7 message segments supported by VistA and used specifically by the MPI/PD software. All standard HL7 segments and sequence/field definitions involved with MPI processes are listed in tables in this section. However, only the VistA data passed by the MPI is mapped to the standard HL7 sequences/fields within these segment tables and subsequently translated.

The HL7 message segments documented in this chapter are listed as follows:

- BHS—Batch Header Segment
- BTS—Batch Trailer Segment
- DSC—Continuation Pointer Segment
- ERR—Error Segment
- EVN—Event Type Segment
- MFA—Master File Acknowledgement Segment
- MFE—Master File Entry Segment
- MFI—Master File Identification Segment
- MRG—Merge Patient Information Segment
- MSA—Message Acknowledgement Segment
- MSH—Message Header Segment
- NTE—Notes and Comments Segment
- OBX—Observation/Result, HL7 Segment
- PD1—Patient Additional Demographic Segment
- PID—Patient Identification Segment
- PV1—Patient Visit Segment
- PV2—Patient Visit Segment – Additional Information
- QAK—Query Acknowledgement Segment
- QPD—Query Parameter Definition
- QRD—Original-Style Query Definition Segment
- RCP—Response Control Parameter Segment
- RDF—Table Row Definition Segment
- RDT—Table Row Data Segment
- VTQ—Virtual Table Query Request Segment
- ZCT—VA Specific Emergency Contact Segment
- ZEL—VA Specific Patient Eligibility Segment
- ZEM—VA Specific Employment Information Segment
- ZET—VA Specific Event Reason for Date of Last Treatment Segment
- ZFF—VA Specific File/Field Segment
- ZPD—VA Specific Patient Information Segment
- ZSP—VA Specific Service Period Segment

### 3.1. BHS—Batch Header Segment

The BHS segment defines the start of a batch.

SEQ	LEN	DT	R/O	RP/#	TBL#	Element Name	VistA Element Name
1	1	ST	R			Batch Field Separator	Recommended value is ^
2	4	ST	R			Batch Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat =   (bar) Escape = \ (back slash) Subcomponent = & (ampersand)
3	15	ST				Batch Sending Application	When originating from facility and is MPI Initialization: MPI-STARTUP When originating from MPI in response to Initialization: MPIF MPI
4	20	ST				Batch Sending Facility	Station's facility number where Initial Batch request came from
5	15	ST				Batch Receiving Application	When originating from facility for Initialization: MPIF MPI When originating from MPI: MPI-STARTUP
6	20	ST				Batch Receiving Facility	Station's facility number where Initial Batch request came from
7	26	TS				Batch Creation Date/Time	Date and time batch message was created
8	40	ST				Batch Security	Not used

SEQ	LEN	DT	R/O	RP/#	TBL#	Element Name	VistA Element Name
9	20	ST				Batch Name/ID/Type	When originating from facility: Component 1: Not used Component 2: P Component 3: Sub Component 1: message type: VQQ Sub Component 2: event type code:Q02 Component 4: 2.3 Component 5: AL Component 6: NE  When originating from MPI: Component 1: Not used Component 2: P Component 3: Sub Component 1: message type: ACK
10	80	ST				Batch Comment	When originating from facility: (not used)  When originating from MPI: Component 1: CA <i>(Refer to table <a href="#">0008</a>)</i> Component 2: Text Message, (not used)
11	20	ST				Batch Control ID	Automatically generated by VistA HL7 Package
12	20	ST				Reference Batch Control ID	When from MPI: Batch Control ID of batch message being acknowledged When from facility: (not used)

Table 3-1. BHS—Batch Header, HL7 attributes

## BHS Field Definitions

### 3.1.1. 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).

### 3.1.2. 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).

### 3.1.3. 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.**

### 3.1.4. 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.

**Station Number of site making initial query request.**

### 3.1.5. 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 MPI is used. When the message is initiated by the MPI, MPIF-STARTUP is used.**

### 3.1.6. 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.

**REF:** For more information, please refer to the comments in the "BHS-4 Batch Sending Facility (ST) 00084" topic in this manual. Entirely site-defined.

**Station Number of site making initial query request.**

### **3.1.7. 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.

### **3.1.8. BHS-8 Batch Security (ST) 00088**

**This field is passed but not used by the MPI software.**

### **3.1.9. 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:**

**Component 2:** P

**Component 3:**

**Subcomponent 1:** Message type

**Subcomponent 2:** Event type

**Component 4:** 2.3

### **3.1.10. BHS-10 Batch Comment (ST) 00090**

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

**When originating from facility: this field is not used.**

**When originating from MPI:**

**Component 1:** CA, (*Refer to table 0008*)

**Component 2:** Text Message, this field is not used.

### **3.1.11. 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 Health Level 7 (HL7) application.**

### **3.1.12. 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 on the initial batch query message from the VistA site.**

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

### 3.2. BTS—Batch Trailer Segment

The BTS segment defines the end of a batch.

SEQ	LEN	DT	R/O	RP/#	Item#	Element Name	VistA Description
1	10	ST			00093	Batch Message Count	Number of messages within batch
2	80	ST			00090	Batch Comment	Passed but not used by MPI.
3	100	CM		Y	00095	Batch Totals	Passed but not used by MPI.

Table 3-2. BTS—Batch Trailer, HL7 attributes

#### BTS Field Definitions

##### 3.2.1. BTS-1 Batch Message Count (ST) 00093

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

##### 3.2.2. BTS-2 Batch Comment (ST) 00090

This field is not used by the MPI software.

##### 3.2.3. BTS-3 Batch Totals (NM) 00095

This field is not used by the MPI software.

### 3.3. DSC—Continuation Pointer Segment

The DSC segment is used in the continuation protocol.

SEQ	LEN	DT	OPT	RP	TBL	Item	Element Name
1	180	ST	O			00014	Continuation Pointer
2	1	ID	O		0398	01354	Continuation Style

Table 3-3. DSC—Continuation Pointer, HL7 Attributes

#### DSC Field Definitions

##### 3.3.1. DSC-1 Continuation pointer (ST) 00014

**Definition:** This field contains the continuation pointer. In an initial query, this field is not present. If the responder returns a value of null or not present, then there is no more data to fulfill any future continuation requests.

##### 3.3.2. DSC-2 Continuation style (ID) 01354

**Definition:** Indicates whether this is a fragmented message, or if it is part of an interactive continuation message (see Section 5.6.3, "Interactive continuation of response messages").

**REF:** Refer to HL7 Table 0398 – Continuation style code for valid values.

Value	Description
F	Fragmentation
I	Interactive Continuation

Table 3-4. HL7 Table 0398—Continuation style code

### 3.4. ERR—Error Segment

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

SEQ	LEN	DT	OPT	RP/#	TBL#	Item	Element Name
1	80	CM	R	Y		00024	Error Code and Location

Table 3-5. ERR—Error, HL7 attributes

#### ERR Field Definitions

##### 3.4.1. 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.

**REF:** For a listing of HL7 Table 0357—Message Error Condition Codes, please refer to section 3.10.5, "MSA-6 Error Condition (CE) 00023."

**NOTE:** This will only be used when communicating between PSIM and the MPI when the application level acknowledgement needs to record an error condition has happened on the PSIM side.

### 3.5. EVN—Event Type Segment

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

**REF:** The valid event types for all chapters are contained in Table 3-6 in this manual, "EVN—Event Type."

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Description
1	3	ID	B		<a href="#">0003</a>	00099	Event Type Code	Refer to table <a href="#">0003</a>
2	26	TS	R			00100	Recorded Date/Time	Date/Time Event Occurred
3	26	TS	O			00101	Date/Time Planned Event	Not populated or used by the MPI
4	3	IS	O		<a href="#">0062</a>	00102	Event Reason Code	Refer to table <a href="#">0062</a>
5	250	XCN	O	Y	<a href="#">0188</a>	00103	Operator ID	User causing event
6	26	TS	O			01278	Event Occurred	Date/Time of Event
7	180	HD	O			01534	Event Facility	Station Number of facility sending message

Table 3-6. EVN—Event Type, HL7 attributes

#### EVN Field Definitions

##### 3.5.1. EVN-1 Event Type Code (ID) 00099

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

Value	Description
A1	Patient Admission
A2	Patient Discharge
A3	Patient Clinic Checkout
A24	Link Patient
A31	CMOR Change Request
A37	Unlink Patient
A43	Mismatched Patient

Table 3-7:HL7 Table 0003 EVN—ADT/R Event Type Codes

### 3.5.2. EVN-2 Recorded Date/Time (TS) 00100

**When sent from site:**

**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).

**When sent from the MPI:**

**Definition:** This field contains the corresponding date last updated field for the Primary View, contained in MPI VETERAN/CLIENT file #985, or the corresponding date last updated field for the Correlation's View, contained in MPI FACILITY ASSOCIATION file #985.5.

### 3.5.3. EVN-3 Date/Time Planned Event (TS) 00101

Passed but not used by MPI.

### 3.5.4. 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
A24	Link Patient
A31	CMOR Change Request
A37	Unlink Patient

Table 3-8. User-defined Table 0062—Event Reason

### 3.5.5. EVN-5 Operator ID (XCN) 00103

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

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

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

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

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

Value	Description
	No suggested values defined

**Table 3-9. User-defined Table 0188—Operator ID**

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 3-1. EVN—Event Type Segment example**

### 3.5.6. EVN-6 Event Occurred (TS) 01278

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

### 3.5.7. EVN-7 Event Facility (HD) 01534

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

**Definition:** This field identifies the actual facility where the event 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.

### 3.6. MFA—Master File Acknowledgement Segment

The Technical Steward for the MFA segment is CQ.

The MFA segment contains the following fields:

SEQ	LEN	DT	OPT	RP/#	TBL#	Item	Element Name	VistA Description
1	3	ID	R		<a href="#">0180</a>	00664	Record-Level Event Code	Type of Update: MUP – update TF MAD – Add TF MDL – delete TF
2	20	ST	C			00665	MFN Control ID	Station number data from MPI's gold copy of the correlated/linked system id's
3	26	TS	O			00668	Event Completion Date/Time	Last Treatment Date/Time
4	250	CE	R		<a href="#">0181</a>	00669	MFN Record Level Error Return	Status
5	250	CE	N	Y	9999	01308	Primary Key Value - MFA	Passed but not used by MPI.
6	3	ID	N	Y	0355	01320	Primary Key Value Type - MFA	Passed but not used by MPI.

Table 3-10. MFA—Master File Acknowledgement, HL7 attributes

## MFA Field Definitions

### 3.6.1. MFA-1 Record-Level Event Code (ID) 00664

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

**REF:** For a list of valid values, please refer to Table 3-14 in this manual, "HL7 Table 0180—Record-level Event Code."

### 3.6.2. 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.

### 3.6.3. MFA-3 Event Completion Date/Time (TS) 00668

This field contains the field contains the last treatment date at that facility. This information is currently being used to update the local VistA Treating Facility (#391.71). The Treating Facility file information is used by VistA CPRS-RDV to allow the user to identify whether they want to pull remote data or not.

### 3.6.4. 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.

**REF:** For a list of suggested values, please refer to Table 3-11 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 3-11. User-defined Table 0181—MFN Record-level Error Return

### 3.6.5. MFA-5 Primary Key Value - MFA (CE) 01308

This field is passed but not used by the MPI software.

**Definition:** This field contains the HL7 data type of *MFE-4 - Primary key value*. The valid values for the data type of a primary key are listed in [HL7 table 0355 - Primary key value type](#).

Value	Description
PL	Person location
CE	Coded element

Table 3-12. HL7 Table 0355—Primary key value type

**NOTE:** This table contains data types for MFE-4 values present in HL7 defined master files. As HL7 adopts a new master file that contains a data type for MFE-4 not defined in Table 0355, the data type will be added to Table 0355. For locally defined master files, this table can be locally extended with other HL7 data types as defined in section 2.6.6.

### **3.6.6. MFA-6 Primary Key Value Type - MFA (ID) 01320**

**This field is passed but not used by the MPI software.**

### 3.7. MFE—Master File Entry Segment

The Technical Steward for the MFE segment is CQ.

SEQ	LEN	DT	OPT	RP#	TBL#	Item	Element Name	VistA Description
1	3	ID	R		<a href="#">0180</a>	00664	Record-Level Event Code	Type of Update
2	20	ST	C			00665	MFN Control ID	Station Number
3	26	TS	O			00662	Effective Date/Time	Date Last Treated for non-VAMC systems this would be null
4	200	Varies	R	Y		00667	Primary Key Value - MFE	Site and ICN involved
5	3	ID	N	Y	0355	01319	Primary Key Value Type	

Table 3-13. MFE—Master File Entry, HL7 attributes

#### MFE Field Definitions

##### 3.7.1. MFE-1 Record-Level Event Code (ID) 00664

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

**REF:** For a list of valid values, please refer to Table 3-14 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 3-14. HL7 Table 0180—Record-level Event Code

**NOTE:** 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).

### 3.7.2. MFE-2 MFN Control ID (ST) 00665

**Definition:** A number or other identifier that uniquely identifies this change to this record from the point of view of the originating system. When returned to the originating system via the MFA segment, this field allows the target system to precisely identify which change to this record is being acknowledged. 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.

**NOTE:** 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.

### 3.7.3. 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.

### 3.7.4. MFE-4 Primary Key Value - MFE (Varies) 00667

**Components:** <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.

### 3.7.5. MFE-5 Primary Key Value Type (ID) 01319

**This field is passed but not used by the MPI software.**

### 3.8. 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	VistA Description
1	250	CE	R		<a href="#">0175</a>	00658	Master File Identifier	TFL
2	180	HD	O			00659	Master File Application Identifier	Passed but not used by MPI.
3	3	ID	R		<a href="#">0178</a>	00660	File-Level Event Code	Type of update UPD or REP
4	26	TS	O			00661	Entered Date/Time	Passed but not used by MPI.
5	26	TS	O			00662	Effective Date/Time	Passed but not used by MPI.
6	2	ID	R		<a href="#">0179</a>	00663	Response Level Code	Site Station Number~Name?

Table 3-15. MFI—Master File Identification, HL7 attributes

#### MFI Field Definitions

##### 3.8.1. 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 3-16) was extended by local agreement to include "TFL."

**REF:** For a list of valid values, please refer to Table 3-16 in this manual, "HL7 Table 0175—Master File Identifier Code."

Value	Description
TFL	Treating Facility list master file

Table 3-16. HL7 Table 0175—Master File Identifier Code

### 3.8.2. MFI-3 File-Level Event Code (ID) 00660

**REF:** For a list of valid values, please refer to Table 3-17 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 3-17. HL7 Table 0178—File Level Event Code

### 3.8.3. 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 3-18 in this manual). Required for MFN-Master File Notification message. Specifies additional detail (beyond [MSH-15 - Accept Acknowledgement type](#) and [MSH-16 - Application Acknowledgement type](#)) for application-level [Acknowledgement](#) paradigms for Master Files transactions. [MSH-15 - Accept Acknowledgement type](#) and [MSH-16 - Application Acknowledgement 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 Acknowledgement message

Table 3-18. HL7 Table 0179—Response Level

### 3.9. MRG—Merge Patient Information Segment

The MRG segment provides receiving applications with information necessary to initiate the merging of patient data as well as groups of records. It is intended that this segment be used throughout the standard to allow the merging of registration, accounting, and clinical records within specific applications.

The assigning authority, the fourth component of the patient identifiers, is 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	VistA Description
1	250	CX	R	Y		00211	Prior Patient Identifier List	Integration Control Number of "FROM" record
2	250	CX	B	Y		00212	Prior Alternate Patient ID	Not populated or used by the MPI.
3	250	CX	O			00213	Prior Patient Account Number	Not populated or used by the MPI.
4	250	CX	B			00214	Prior Patient ID	Not populated or used by the MPI.
5	250	CX	O			01279	Prior Visit Number	Not populated or used by the MPI.
6	250	CX	O			01280	Prior Alternate Visit ID	Not populated or used by the MPI.
7	250	XPN	O	Y		01281	Prior Patient Name	Patient's Name

Table 3-19. MRG—Merge Patient Information, HL7 attributes

#### MRG Field Definitions

##### 3.9.1. MRG-1 Prior Patient Identifier List (CX) 00211

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

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

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

**Definition:** This field contains the prior patient identifier list. This field contains a list of potential "old" numbers to match. Only one old number can be merged with one new number in a transaction.

**REF:** 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.**

### 3.9.2. MRG-2 Prior Alternate Patient ID (CX) 00212

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

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

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

**Definition:** *This field has been retained for backward compatibility only.* Use [MRG-1 - Prior patient identifier list](#) for all patient identifiers. This field contains the prior alternate patient identifier.

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

**This field is passed but not used by the MPI software.**

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

### 3.9.3. MRG-3 Prior Patient Account Number (CX) 00213

**This field is passed but not used by the MPI software.**

### 3.9.4. MRG-4 Prior Patient ID (CX) 00214

**This field is passed but not used by the MPI software.**

### 3.9.5. MRG-5 Prior Visit Number (CX) 01279

This field is passed but not used by the MPI software.

### 3.9.6. MRG-6 Prior Alternate Visit ID (CX) 01280

This field is passed but not used by the MPI software.

### 3.9.7. MRG-7 Prior Patient Name (XPN) 01281

Patient name is passed for this value.

**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 passed but not used by MPI to change a patient name.

### 3.10. MSA—Message Acknowledgement Segment

The MSA segment contains information sent while acknowledging another message.

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Desc
1	2	ID	R		<a href="#">0008</a>	00018	Acknowledgement Code	Refer to Table <a href="#">0008</a>
2	20	ST	R			00010	Message Control ID	Message Control ID of message being acknowledged
3	80	ST	O			00020	Text Message	Error condition returned from processing original message. <b>NOTE:</b> The error text is returned in the ERR segment ONLY with PSIM messaging. See ERR segment for more information.
4	15	NM	O			00021	Expected Sequence Number	Not used.
5	1	ID	B		0102	00022	Delayed Acknowledgement Type	Not used.
6	250	CE	O		<a href="#">0357</a>	00023	Error Condition	ICN or DFN associated with original message processed.

Table 3-20. MSA—Message Acknowledgement, HL7 attributes

## MSA Field Definitions

### 3.10.1. MSA-1 Acknowledgement Code (ID) 00018

**Definition:** This field contains an Acknowledgement code.

AA is sent when the application successfully processed and executed the requested function.

AE is sent when the application was unsuccessful in executing the requested IdM function due to an internal application error.

AR is sent when the application if the application is unable to locate the patient within its database. This would be the case if MPI erroneously sent a system a message for a patient that is not known to that system.

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

**REF:** For a list of valid values, please refer to Table 3-21 in this manual, [HL7 Table 0008—Acknowledgement Code](#).

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

**Table 3-21. HL7 Table 0008—Acknowledgement Code**

### 3.10.2. 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.

### 3.10.3. 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 in favor of *ERR-1-Error code and location*. The ERR segment allows for richer descriptions of the erroneous conditions.

**NOTE:** The error text is returned in the ERR segment ONLY with PSIM messaging. See ERR segment definition for more information.

### 3.10.4. MSA-5 Delayed Acknowledgement Type (ID) 00022

**This field is passed but not used by the MPI software.**

*Definition: This field has been retained for backward compatibility.*

Value	Description
D	Message received, stored for later processing
F	Acknowledgement after processing

**Table 3-22. HL7 Table 0102—Delayed Acknowledgement type**

### 3.10.5. 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. The error codes listed below are pulled from the HL7 v2.4 standard table 0357, however locally identified text can be passed as well by leaving the identifier blank and coding scheme as "L". This will be used to raise an exception on the central MPI system.

Error Condition Code	Error Condition Text	Description/Comment
<b>Success</b>		
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 3-23. HL7 Table 0357—Message Error Condition Codes**

### 3.11. 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	VistA Description
1	1	ST	R			00001	Field Separator	Recommended value is ^ (caret)
2	4	ST	R			00002	Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat =   (bar) Escape = \ (back slash) Subcomponent = & (ampersand)
3	180	HD	O		<a href="#">0361</a>	00003	Sending Application	When originating from facility and the message type is A01, A03, A04 or A08: RG ADT When originating from facility and the message type is A28 or A24: MPIF TRIGGER When originating from facility OR MPI and the message type is A31, A37, A43 or A24: MPIF TRIGGER When originating from facility or MPI and the message type is MFN or MFK or A19: VAFC TRIGGER When originating from facility and the message type is a query via the Direct Connect: MPI_LOAD When originating from MPI and the message type is the response to the query via the Direct Connect or via the Q22/K22 query/response: MPI

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Description
								<p>For batch queries:                      MPI-STARTUP                      Change CMOR messages:                      RG CIRN                      MPIF CMOR CHNG                      MPIF CMOR RSLT</p> <p>When the message type is A24, A31 or A43 and is sent via HLO from the MPI:                      MPI</p>
4	180	HD	O		<a href="#">0362</a>	00004	Sending Facility	<p>When originating from facility:                      Station's facility number</p> <p>When originating from MPI and message is the batch query:                      MPI</p> <p>When originating from the MPI and not the batch query:                      200M</p> <p>When originating from the MPI and the message type is A24, A31 or A43 and is being sent via HLO the port number of HLO listener for the sending site will be included at the end of the domain name preceded by a colon.</p>
5	180	HD	O		<a href="#">0361</a>	00005	Receiving Application	<p>When originating from facility and the message type is A01, A03, A04 or A08:                      RG ADT</p> <p>When originating from facility and the message type is A28 or A24:                      MPIF TRIGGER</p> <p>When originating from facility OR MPI and the message type is A31,</p>

Message Segments

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Description
								<p>A37, A43 or A24:  MPIF TRIGGER  When originating from facility or MPI and the message type is MFN or MFK or A19:  VAFC TRIGGER  When originating from facility and the message type is a query via the Direct Connect:  MPI_LOAD  When originating from MPI and the message type is the response to the query via the Direct Connect or via the Q22/K22 query/response:  MPI  For batch queries:  MPI-STARTUP  Change CMOR messages:  RG CIRN  MPIF CMOR CHNG  MPIF CMOR RSLT</p> <p>When the message type is A24, A31 or A43 and is sent via HLO from the MPI:  PSIM</p>
6	180	HD	O			00006	Receiving Facility	<p>When message is originating at the facility to the MPI and the message is related to the CMOR Change:  Station Number of facility sending message  When the message is originating from the facility to the MPI and the message is the Query (batch or real-time): there is no value sent</p>

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Description
								Otherwise, when the message is originating at the facility to the MPI: 200M When originating from the MPI and the message type is A24, A31 or A43 and is being sent via HLO the port number of HLO listener for the receiving site will be included at the end of the domain name preceded by a colon.
7	26	TS	R			00007	Date/Time Of Message	Date and time message was created
8	40	ST	O			00008	Security	(not used)
9	13	CM	R			00009	Message Type	<u>2 Components</u> Refer to Table 0076 Refer to Table 0003
10	20	ST	R			00010	Message Control ID	Automatically generated by VistA HL7 Package NOTE: The HLO message number will include a space.
11	3	PT	R			00011	Processing ID	<b>P</b> (production)
12	60	VID	R		<a href="#">0104</a>	00012	Version ID	<b>2.3</b> (Version 2.3) or <b>2.4</b> (version 2.4)
13	15	NM	O			00013	Sequence Number	(not used)
14	180	ST	O			00014	Continuation Pointer	(not used)
15	2	ID	O			00015	Accept Acknowledgement Type	AL (always acknowledge)
16	2	ID	O			00016	Application Acknowledgement Type	AL (always acknowledge) Unless related to the Change of CMOR messages then is NE (never acknowledge)
17	3	ID	O		<a href="#">0399</a>	00017	Country Code	USA
18	16	ID	O	Y		00692	Character Set	(not used)

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Description
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 3-24. MSH—Message Header, HL7 attributes

## MSH Field Definitions

### 3.11.1. 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).

### 3.11.2. 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).

### 3.11.3. 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 3-25 in this manual) is used as the user-defined table of values for the first component, as shown below:

Value	Description
MPI	When originating from MPI and the message type is the response to the query via the Direct Connect. This is also used for the QBP~Q22 query to the MPI and the responding RSP~K22. When the HLO messages are sent from the MPI for the message types A24, A31 and A43 MPI is also sent.
MPI_LOAD	When originating from facility and the message type is a query via the Direct Connect.
MPIF CMOR CHNG	This will be used when communicating a CMOR change via an ADT-A31 message.
MPIF CMOR RSLT	This will be used when communicating a CMOR Change via an ADT-A31 message.
MPIF TRIGGER	When originating from facility or the MPI and the message type is ADT-A24, ADT-A31 (MPI update message), ADT-A37, or ADT-A43.
MPIF TRIGGER	When originating from facility and the message type is ADT-A24 or ADT-A28.
MPI-STARTUP	For batch queries.
RG ADT	When originating from facility and the message type is 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.
VAFC TRIGGER	When originating from facility or MPI and the message type is MFN-M05 Treating Facility Master file update message

**Table 3-25. User-defined Table 0361—Sending/Receiving Application**

### 3.11.4. 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 3-26 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
<vha_station#^HL7.domainname^DNS>	No suggested values defined

**Table 3-26. User-defined Table 0362—Sending/Receiving Facility**

### 3.11.5. 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 3-25 in this manual) is used as the HL7 identifier for the user-defined table of values for the first component.

### 3.11.6. 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 3-26 in this manual) is used as the HL7 identifier for the user-defined table of values for the first component. Entirely site-defined.

### 3.11.7. 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.

**CAUTION:** 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.

### 3.11.8. 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 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.

**REF:** 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 Acknowledgement messages.

### 3.11.9. 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 Acknowledgement segment (MSA).

### 3.11.10. 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.

**REF:** For a list of valid values, please refer to Table 3-27 in this manual, "HL7 Table 0103—Processing ID."

Value	Description
P	Production

Table 3-27. HL7 Table 0103—Processing ID

### 3.11.11. 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 3-28. HL7 Table 0104—Version ID**

### 3.11.12. MSH-15 Accept Acknowledgement Type (ID) 00015

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

**REF:** For a list of valid values, please refer to Table 3-29 in this manual, "HL7 Table 0155—Accept/Application Acknowledgement Conditions."

### 3.11.13. MSH-16 Application Acknowledgement Type (ID) 00016

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

The following table contains the possible values for [MSH-15-accept Acknowledgement type](#) and [MSH-16-application Acknowledgement type](#):

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

**Table 3-29. HL7 Table 0155—Accept/Application Acknowledgement Conditions**

**NOTE:** If [MSH-15-accept Acknowledgement type](#) and [MSH-16-application Acknowledgement type](#) are omitted (or are both null), the original Acknowledgement mode rules are used.

### 3.11.14. 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.<sup>1</sup> 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.

**REF:** For the 3-character codes as defined by ISO 3166 table, please refer to Table 3-30 in this manual, "HL7 Table 0399—Country Code."

Value	Description
USA	UNITED STATES

**Table 3-30. HL7 Table 0399—Country Code**

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<sup>1</sup> Available from ISO 1 Rue de Varembe, Case Postale 56, CH 1211, Geneve, Switzerland

### 3.12. 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	VistA Description
1	4	SI	O			00096	Set ID - NTE	Passed but not used by MPI.
2	8	ID	O		0105	00097	Source of Comment	"P" sent always
3	65536	FT	O	Y		00098	Comment	Phone number of person making request
4	250	FT					Reviewer comments	This is from Reviewer comments field in File #984.9
5		FT						Status of request
6		FT						Request number
7		FT						Station Number of requestor
9		FT						Current CMOR

Table 3-31. NTE—Notes and Comments, HL7 attributes

#### NTE Field Definitions

##### 3.12.1. 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.

##### 3.12.2. 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.

**REF:** For a list of valid values, please refer to Table 3-32 in this manual, "HL7 Table 0105—Source of Comment."

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

**Table 3-32. HL7 Table 0105—Source of Comment**

### 3.12.3. NTE-3 Comment (FT) 00098

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

**NOTE:** 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.

### 3.13. OBX—Observation/Result, HL7 Segment

**NOTE:** The OBX—Observation/Result segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment.

The OBX segment is used to transmit a single observation or observation fragment. It represents the smallest indivisible unit of a report. Its structure is summarized in Figure 7-5.

Its principal mission is to carry information about observations in report messages. But the OBX can also be part of an observation order (see Section 4.2, "Order Message Definitions"). In this case, the OBX carries clinical information needed by the filler to interpret the observation the filler makes. For example, an OBX is needed to report the inspired oxygen on an order for a blood oxygen to a blood gas lab, or to report the menstrual phase information, which should be included on an order for a pap smear to a cytology lab. Appendix 7A includes codes for identifying many of pieces of information needed by observation producing services to properly interpret a test result. OBX is also found in other HL7 messages that need to include patient clinical information.

SEQ	LEN	DT	R/O	RP/#	TBL#	Item	Element Name	VistA Description
1	10	SI	O			00569	Set ID - OBX	not used
2	2	ID	C		0125	00570	Value Type	CE - Security Log, SSN Verification and Active Prescriptions TS - Last Radiology Exam date/time and Last Lab Test date/time
3	590	CE	R			00571	Observation Identifier	38.1^SECURITY LOG (Passed but not used by MPI) SSN VERIFICATION (sent by ESR to MPI and MPI to subscribers from ESR update based upon business rules) ACTIVE PRESCRIPTIONS (only received at the MPI from the VistA sites, not sent out by the MPI) LAST RADIOLOGY EXAM DATE/TIME (only received at the MPI from the VistA sites, not sent out by the MPI) LAST LAB TEST DATE/TIME (only received at the MPI from the VistA sites, not sent out by the MPI)

SEQ	LEN	DT	R/O	RP/#	TBL#	Item	Element Name	VistA Description
4	20	ST	C			00572	Observation Sub-ID	not used
5	65536 <sup>2</sup> *		C	Y <sup>3</sup>		00573	Observation Value	Sensitive= 1 Not Sensitive or No Value= 0  SSN VERIFICATION (see table below): <value>^<text>^"L" valid verification text: value text  ----- Null  New Record In-Process Invalid Per SSA Resend to SSA Verified  ACTIVE PRESCRIPTIONS Y – for Yes active prescriptions N – for no current active prescriptions
6	60	CE	O			00574	Units	not used
7	10	ST	O			00575	References Range	not used
8	5	ID	O	Y/5	0078	00576	Abnormal Flags	not used
9	5	NM	O			00577	Probability	not used.
10	2	ID	O	Y	0080	00578	Nature of Abnormal Test	not used.
11	1	ID	R		0085	00579	Observation Result Status	F=Results entered, Not verified (Passed but not used by MPI)
12	26	TS	O			00580	Date Last Observation Normal Value	not used
13	20	ST	O			00581	User Defined Access Checks	not used
14	26	TS	O			00582	Date/Time of the Observation	Date if found in VistA
15	60	CE	O			00583	Producer's ID	not used
16	80	XCN	O			00584	Responsible Observer	Name if found in VistA

<sup>2</sup> The length of the observation value field is variable, depending upon value type. See *OBX-2-value type*.

<sup>3</sup> May repeat for multipart, single answer results with appropriate data types, e.g., CE, TX, and FT data types.

Message Segments

SEQ	LEN	DT	R/O	RP/#	TBL#	Item	Element Name	VistA Description
17	60	CE	O	Y		00936	Observation Method	not used
18	22	EL	O	Y		01479	Equipment Instance Identifier	not used
19	26	TS	O			01480	Date/Time of the Analysis	not used

**Table 3-33. OBX—Observation/Result, HL7 attributes**

### 3.14. PD1—Patient Additional Demographic Segment

**NOTE:** PD1-3 (Patient Primary Facility) is the only field used by the MPI software in the PD1—Patient Additional Demographic segment. All other fields in this segment are passed but not used by the MPI. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this 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	VistA Description
1	2	IS	O	Y	0223	00755	Living Dependency	Passed but not used by MPI.
2	2	IS	O		0220	00742	Living Arrangement	Passed but not used by MPI.
3	250	XON	O	Y		00756	Patient Primary Facility	Coordinating Master of Record
4	250	XCN	B	Y		00757	Patient Primary Care Provider Name & ID No.	Passed but not used by MPI.
5	2	IS	O		0231	00745	Student Indicator	Passed but not used by MPI.
6	2	IS	O		0295	00753	Handicap	Passed but not used by MPI.
7	2	IS	O		0315	00759	Living Will Code	Passed but not used by MPI.
8	2	IS	O		0316	00760	Organ Donor Code	Passed but not used by MPI.
9	1	ID	O		<a href="#">0136</a>	00761	Separate Bill	Passed but not used by MPI.
10	250	CX	O	Y		00762	Duplicate Patient	Passed but not used by MPI.
11	250	CE	O		0215	00743	Publicity Code	Passed but not used by MPI.
12	1	ID	O		<a href="#">0136</a>	00744	Protection Indicator	Passed but not used by MPI.
13	8	DT	O			01566	Protection Indicator Effective Date	Passed but not used by MPI.
14	250	XON	O	Y		01567	Place of Worship	Passed but not used by MPI.
15	250	CE	O	Y	0435	01548	Advance Directive Code	Passed but not used by MPI.

SEQ	LEN	DT	OPT	RP#	TBL	Item	Element Name	VistA Description
16	1	IS	O		0441	01569	Immunization Registry Status	Passed but not used by MPI.
17	8	DT	O			01570	Immunization Registry Status Effective Date	Passed but not used by MPI.
18	8	DT	O			01571	Publicity Code Effective Date	Passed but not used by MPI.
19	5	IS	O		0140	01572	Military Branch	Passed but not used by MPI.
20	2	IS	O		0141	00486	Military Rank/Grade	Passed but not used by MPI.
21	3	IS	O		0142	00487	Military Status	Passed but not used by MPI.

**Table 3-34. PD1—Patient Additional Demographic, HL7 attributes**

## PD1 Field Definition

### 3.14.1. 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.

### 3.14.2. Yes/No Indicator Table

The actual interpretation of Yes/No is context sensitive.

Value	Description
Y	Yes
N	No

**Table 3-35. HL7 Table 0136—Yes/no indicator**



Message Segments

SEQ	LEN	DT	OPT	RP	TBL	Item	Element Name	VistA Description
1	4	SI	O			00104	Set ID - PID	Sequential Number
2	20	CX	B			00105	Patient ID	ICN, including V checksum for backwards compatibility
3	250	CX	R	Y		00106	Patient Identifier List	Integration Control Number (including V and checksum), Social Security Number, DFN, Claim Number, all entries in the ICN History Multiple, and all alias SSNs which will correspond directly to the alias name in the name field (pid-5).  The ID State for the primary ICN will be determined based upon the following: ID State for a deactivated ICN will have the expiration date only set; ID State for a temporary ICN will have neither the expiration nor effective date set; ID State for a permanent ICN will have the effective date only set.
4	20	CX	B	Y		00107	Alternate Patient ID - PID	Not used.
5	250	XPN	R	Y		00108	Patient Name	Patient Name and all Alias entries
6	250	XPN	O	Y		00109	Mother's Maiden Name	Mother's Maiden Name
7	26	TS	O			00110	Date/Time of Birth	Date of Birth
8	1	IS	O		<u>0001</u>	00111	Administrative Sex	Sex
9	250	XPN	B	Y		00112	Patient Alias	Not used. Alias is passed in PID-5
10	250	CE	O	Y	<u>0005</u>	00113	Race	Race Information
11	250	XAD	O	Y		00114	Patient Address	Permanent: <ul style="list-style-type: none"> <li>• Street Address [Line 1]</li> <li>• Street Address [Line 2]</li> </ul>

SEQ	LEN	DT	OPT	RP	TBL	Item	Element Name	VistA Description
								<ul style="list-style-type: none"> <li>• Street Address [Line 3]</li> <li>• City</li> <li>• State</li> <li>• ZIP+4</li> <li>• County Code</li> <li>• Country Code</li> <li>• Provence</li> <li>• Postal Code [incorporating foreign address]</li> <li>• Bad Address Indicator (only for Permanent address)</li> </ul> Place of Birth: <ul style="list-style-type: none"> <li>• Place of Birth [City]</li> <li>• Place of Birth [State]</li> </ul> Confidential Address: <ul style="list-style-type: none"> <li>• Street Address line 1</li> <li>• Street Address line 2</li> <li>• Street Address line 3</li> <li>• City</li> <li>• State</li> <li>• Zip+4</li> <li>• County Code</li> <li>• Confidential Address Category</li> <li>• Start And End Date</li> <li>• Country Code</li> <li>• Provender</li> <li>• Post Code (incorporating confidential foreign address)</li> </ul>
12	4	IS	B		0289	00115	County Code	County
13	250	XTN	O	Y		00116	Phone Number - Home	<ul style="list-style-type: none"> <li>• Phone Number [Residence]</li> <li>• Work Number</li> <li>• Cell Phone</li> <li>• Pager Number</li> <li>• E-Mail Address</li> </ul>
14	250	XTN	O	Y		00117	Phone Number - Business	Phone Number [Work] **only for backwards compatibility should use PID-13
15	250	CE	O		0296	00118	Primary Language	Not used.

SEQ	LEN	DT	OPT	RP	TBL	Item	Element Name	VistA Description
16	250	CE	O			00119	Marital Status	Marital Status
17	250	CE	O			00120	Religion	Religious Preference
18	250	CX	O			00121	Patient Account Number	Not used.
19	16	ST	B			00122	SSN Number - Patient	SSN – for backwards compatibility
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	Ethnicity Information
23	250	ST	O			00126	Birth Place	Place of birth city and place of birth state – backwards compatibility
24	1	ID	O		<a href="#">0136</a>	00127	Multiple Birth Indicator	Multiple Birth Indicator [Y for multiple birth]
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	Date of Death
30	1	ID	O		<a href="#">0136</a>	00741	Patient Death Indicator	Not used.
31	1	ID	O		<a href="#">0136</a>	01535	Identity Unknown Indicator	Not used.
32	20	IS	O		0445	01536	Identity Reliability Code	Only sent from the MPI in A31 message. Used by PSIM.
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.
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 3-36. PID—Patient Identification, HL7 attributes**

## PID Field Definitions

### 3.15.1. PID-1 Set ID - PID (SI) 00104

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

### 3.15.2. PID-2 Patient ID (CX) 00105

**Definition:** This field is being populated with the VHA MPI integration control number [ICN], including V and the ICN Checksum for backwards compatibility ONLY. ICN should be retrieved from PID-3.

### 3.15.3. PID-3 Patient identifier list (CX) 00106

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

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

**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.). Refer to *HL7 Table 0061 - Check digit scheme* for valid values. The arbitrary term of "internal ID" has been removed from the name of this field for clarity. Refer also to *HL7 Table 0203 - Identifier type* and *User-defined Table 0363 - Assigning authority* for valid values. The currently supported values are listed below.

Identifier	Assigning Authority	Identifier type	Assigning Location unique station# id	Expiration date	Effective date
National ICN **	USVHA	NI	200M	If populated, the ICN ID State is considered Deactivated  If both Expiration Date and Effective date are not populated the ICN ID State is Temporary	If populated, the ID State of the ICN is Permanent (see note above)  If both Expiration Date and Effective date are not populated the ICN ID State is Temporary
Local ICN	USVHA	NI	unique station# id		
SSN	USSSA	SS	unique station# id		
Alias SSN	USSSA	SS	Unique station # id	Date/Time of segment being built	
VistA id (DFN)	USVHA	PI	unique station# id		
CLAIM#	USVBA	PN	unique station# id		
Deprecated National ICN (resolved duplicate pair)	USVHA	NI	200M	Replacement date/time  Also, indicates that the ID State is Deactivated	
Deprecated local ICN	USVHA	NI	unique station# id	Replacement date/time	

Table 3-37. HL7 Table 0203—Identifier type

**\*\* Note:** If both the Expiration and Effective dates are null then this indicates that the ICN has a temporary ID State.

### 3.15.4. PID-4 Alternate patient ID - PID (CX) 00107

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

### 3.15.5. PID-5 Patient name (XPN) 00108

**Components:** In Version 2.3, replaces the PN data type. <family name (FN)> ^ <given name (ST)> ^ <second and further given names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID)> ^ <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^ <name assembly order (ID)>

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

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

Value	Description
L	Legal Name
M	Maiden Name (not used}
A	Alias Name

Table 3-38. HL7 Table 0200—Name type

### 3.15.6. PID-6 Mother's maiden name (XPN) 00109

**Components:** In Version 2.3, replaces the PN data type. <family name (FN)> ^ <given name (ST)> ^ <second and further given names or initials thereof (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^ <degree (e.g., MD) (IS)> ^ <name type code (ID)> ^ <name representation code (ID)> ^ <name context (CE)> ^ <name validity range (DR)> ^ <name assembly order (ID)>

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

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

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

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

### 3.15.8. PID-8 Administrative sex (IS) 00111

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

Value	Description
F	Female
M	Male

Table 3-39. User-defined Table 0001—Administrative sex

### 3.15.9. PID-9 Patient alias (XPN) 00112

**Definition:** This field is not used. Alias should be retrieved from PID-5.

### 3.15.10. PID-10 Race (CE) 00113

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

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

**NOTE:** Table [0005](#) values contain a pre-calculated Mod 10 check digits, separated by a dash.

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

Table 3-40. User-defined Table 0005—Race

### 3.15.11. PID-11 Patient address (XAD) 00114

**Components:** In Version 2.3 and later, replaces the AD data type. <street address (ST)> ^ <other designation (ST)> ^ <city (ST)> ^ <state or province (ST)> ^ <zip or postal code (ST)> ^ <country (ID)>

^ < address type (ID)> ^ <other geographic designation (ST)> ^ <county/parish code (IS)> ^ <census tract (IS)> ^ <address representation code (ID)> ^ <address validity range (DR)>

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

**Definition:** This field contains the mailing address of the patient. Address type codes are defined 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.

Value	Description
N	Birth (nee) (birth address, not otherwise specified)
P	Permanent
VAB1	VA - Bad Address, Undeliverable
VAB2	VA Bad Address, Homeless
VAB3	VA Bad Address, Other
VAB4	VA Bad Address, Address Not Found
VACAA	VA - Confidential Address Appointment/Scheduling
VACAC	VA - Confidential Address Copayments/Veteran Billing
VACAE	VA - Confidential Address Eligibility/Enrollment
VACAM	VA - Confidential Address Medical Records
VACAO	VA - Confidential Address All Others

**Table 3-41. HL7 Table 0190—Address type**

### 3.15.12. PID-12 County code (IS) 00115

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

### 3.15.13. PID-13 Phone number - home (XTN) 00116

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

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

Value	Description
BPN	Beeper Number
EMR	Emergency Number (not used)
NET	Network (email) Address
ORN	Other Residence Number (not used)
PRN	Primary Residence Number
VHN	Vacation Home Number (not used)
WPN	Work Number

Table 3-42. HL7 Table 0201 Telecommunication Use Code

Value	Description
BP	Beeper
CP	Cellular Phone
Internet	Internet Address: Use Only if Telecommunication Use Code is NET
PH	Telephone

Table 3-43. HL7 Table 0202 Telecommunication Equipment Type

### 3.15.14. PID-14 Phone number - business (XTN) 00117

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

**Definition:** This field contains the patient's business telephone numbers. All business numbers for the patient are sent in the following sequence. The first sequence is considered the patient's primary business phone number (for backward compatibility). If the primary business phone number is not sent, then a

repeat delimiter must be sent in the first sequence. Refer to *HL7 Table 0201 - Telecommunication use code* and *HL7 Table 0202 - Telecommunication equipment type* for valid values.

### 3.15.15. PID-15 Primary language (CE) 00118

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

### 3.15.16. PID-16 Marital status (CE) 00119

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

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

Value	Description
A	Separated
D	Divorced
M	Married
S	Never Married
W	Widowed
U	Unknown

Table 3-44. User-defined Table 0002—Marital status

### 3.15.17. PID-17 Religion (CE) 00120

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

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

Value	Description
0	CATHOLIC
1	JEWISH
2	EASTERN ORTHODOX
3	BAPTIST
4	METHODIST

Value	Description
5	LUTHERAN
6	PRESBYTERIAN
7	UNITED CHURCH OF CHRIST
8	EPISCOPALIAN
9	ADVENTIST
10	ASSEMBLY OF GOD
11	BRETHREN
12	CHRISTIAN SCIENTIST
13	CHURCH OF CHRIST
14	CHURCH OF GOD
15	DISCIPLES OF CHRIST
16	EVANGELICAL COVENANT
17	FRIENDS
18	JEHOVAH'S WITNESS
19	LATTER-DAY SAINTS
20	ISLAM
21	NAZARENE
22	OTHER
23	PENTECOSTAL
24	PROTESTANT, OTHER
25	PROTESTANT, NO DENOMINATION
26	REFORMED
27	SALVATION ARMY
28	UNITARIAN;UNIVERSALIST
29	UNKNOWN/NO PREFERENCE
30	NATIVE AMERICAN
31	BUDDHIST

Table 3-45. User-defined Table 0006—Religion

### 3.15.18. PID-18 Patient account number (CX) 00121

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

**3.15.19. PID-19 SSN number - patient (ST) 00122**

**Definition:** This field is populated for backwards compatibility only. SSN should be retrieved from PID-3.

**3.15.20. PID-20 Driver's license number - Patient (DLN) 00123**

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

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

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

**3.15.22. PID-22 Ethnic group (CE) 00125**

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

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

Value	Description
H	Hispanic or Latino
N	Not Hispanic or Latino
U	Unknown by Patient
D	Declined to Answer

Table 3-46. User-defined Table 0189—Ethnic group

**3.15.23. PID-23 Birth place (ST) 00126**

**Definition:** This field is populated for backward compatibility only. Data should be pulled from PID-11.

**3.15.24. PID-24 Multiple birth indicator (ID) 00127**

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

**3.15.25. PID-25 Birth order (NM) 00128**

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

**3.15.26. PID-26 Citizenship (CE) 00129**

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

**3.15.27. PID-27 Veterans military status (CE) 00130**

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

**3.15.28. PID-28 Nationality (CE) 00739**

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

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

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

**3.15.30. PID-30 Patient Death Indicator (ID) 00741**

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

**3.15.31. PID-31 Identity Unknown Indicator (ID) 01535**

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

**3.15.32. PID-32 Identity Reliability Code (IS) 01536**

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

Value	Description
P	Pending
A	Accepted all fields
R	Some fields were excepted
C	Reject–Catastrophic – all fields were rejected
N is stored on the MPI but mapped to R for sending to PSIM	Reject – Non Catastrophic edit – all fields were rejected but not due to catastrophic edit.

Table 3-47. User-defined Table 0445—Identity Reliability Code

**3.15.33. PID-33 Last Update Date/Time (TS) 01537**

Definition: This field is not used.

**3.15.34. PID-34 Last Update Facility (HD) 01538**

Definition: This field is not used.

**3.15.35. PID-35 Species Code (CE) 01539**

Definition: This field is not used.

**3.15.36. PID-36 Breed Code (ID) 01540**

Definition: This field is not used.

**3.15.37. PID-37 Strain (ST) 01541**

Definition: This field is not used.

**3.15.38. PID-38 Production Class Code (CE) 01542**

Definition: This field is not used.

### 3.16. PV1—Patient Visit Segment

**NOTE:** Only fields used by the MPI in the PV1 segment are PV1-44 Admit Date/Time and PV1-2 Patient Class. All other fields may or may not be populated depending on the message type; however, none of them are used by the MPI.

**NOTE:** This segment is only included in A01, A03, A04, A08, and A31.

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 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	VistA Desc
1	4	SI	O			00131	Set ID - PV1	Passed but not used by MPI.
2	1	IS	R		<a href="#">0004</a>	00132	Patient Class	MPI will pass N to PSIM
3	80	PL	O			00133	Assigned Patient Location	Passed but not used by MPI.
4	2	IS	O		0007	00134	Admission Type	Passed but not used by MPI.
5	250	CX	O			00135	Preadmit Number	Passed but not used by MPI.
6	80	PL	O			00136	Prior Patient Location	Passed but not used by MPI.
7	250	XCN	O	Y	0010	00137	Attending Doctor	Passed but not used by MPI.
8	250	XCN	O	Y	0010	00138	Referring Doctor	Passed but not used by MPI.
9	250	XCN	B	Y	0010	00139	Consulting Doctor	Passed but not used by MPI.
10	3	IS	O		0069	00140	Hospital Service	Passed but not used by

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Desc
								MPI.
11	80	PL	O			00141	Temporary Location	Passed but not used by MPI.
12	2	IS	O		0087	00142	Preadmit Test Indicator	Passed but not used by MPI.
13	2	IS	O		0092	00143	Re-admission Indicator	Passed but not used by MPI.
14	6	IS	O		0023	00144	Admit Source	Passed but not used by MPI.
15	2	IS	O	Y	0009	00145	Ambulatory Status	Passed but not used by MPI.
16	2	IS	O		0099	00146	VIP Indicator	Passed but not used by MPI.
17	250	XCN	O	Y	0010	00147	Admitting Doctor	Passed but not used by MPI.
18	2	IS	O		0018	00148	Patient Type	Passed but not used by MPI.
19	250	CX	O			00149	Visit Number	Passed but not used by MPI.
20	50	FC	O	Y	0064	00150	Financial Class	Passed but not used by MPI.
21	2	IS	O		0032	00151	Charge Price Indicator	Passed but not used by MPI.
22	2	IS	O		0045	00152	Courtesy Code	Passed but not used by MPI.
23	2	IS	O		0046	00153	Credit Rating	Passed but not used by MPI.
24	2	IS	O	Y	0044	00154	Contract Code	Passed but not used by MPI.
25	8	DT	O	Y		00155	Contract Effective Date	Passed but not used by MPI.
26	12	NM	O	Y		00156	Contract Amount	Passed but not used by MPI.
27	3	NM	O	Y		00157	Contract Period	Passed but not used by MPI.
28	2	IS	O		0073	00158	Interest Code	Passed but not used by MPI.
29	1	IS	O		0110	00159	Transfer to Bad Debt Code	Passed but not used by MPI.
30	8	DT	O			00160	Transfer to Bad Debt Date	Passed but not used by MPI.

Message Segments

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Desc
31	10	IS	O		0021	00161	Bad Debt Agency Code	Passed but not used by MPI.
32	12	NM	O			00162	Bad Debt Transfer Amount	Passed but not used by MPI.
33	12	NM	O			00163	Bad Debt Recovery Amount	Passed but not used by MPI.
34	1	IS	O		0111	00164	Delete Account Indicator	Passed but not used by MPI.
35	8	DT	O			00165	Delete Account Date	Passed but not used by MPI.
36	3	IS	O		0112	00166	Discharge Disposition	Passed but not used by MPI.
37	25	CM	O		0113	00167	Discharged to Location	Passed but not used by MPI.
38	250	CE	O		0114	00168	Diet Type	Passed but not used by MPI.
39	2	IS	O		0115	00169	Servicing Facility	Passed but not used by MPI.
40	1	IS	B		0116	00170	Bed Status	Passed but not used by MPI.
41	2	IS	O		0117	00171	Account Status	Passed but not used by MPI.
42	80	PL	O			00172	Pending Location	Passed but not used by MPI.
43	80	PL	O			00173	Prior Temporary Location	Passed but not used by MPI.
44	26	TS	O			00174	Admit Date/Time	Currently admitted – date/time of admission
45	26	TS	O	Y		00175	Discharge Date/Time	Passed but not used by MPI.
46	12	NM	O			00176	Current Patient Balance	Passed but not used by MPI.
47	12	NM	O			00177	Total Charges	Passed but not used by MPI.
48	12	NM	O			00178	Total Adjustments	Passed but not used by MPI.
49	12	NM	O			00179	Total Payments	Passed but not used by MPI.
50	250	CX	O		0203	00180	Alternate Visit ID	Passed but not used by MPI.
51	1	IS	O		0326	01226	Visit Indicator	Passed but not used by MPI.

SEQ	LEN	DT	OPT	RP/#	TBL	Item	Element Name	VistA Desc
52	250	XCN	B	Y	0010	01274	Other Healthcare Provider	Passed but not used by MPI.

Table 3-48. PV1—Patient Visit, HL7 attributes

## PV1 Field Definition

### 3.16.1. PV1-2 Patient Class

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

User-defined Table 0004 - Patient class

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

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

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

**NOTE:** MPI will send 'N' to PSIM for Patient Class.

### **3.16.2. PV1-44 Admit Date/Time (TS) 00174**

Definition: This field contains the current admit date/time or the last registration date/time. Using the PV1-2 Patient Class to determine if it's an admission date/time or a registration date/time.

### 3.17. PV2—Patient Visit Segment – Additional Information

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

**NOTE:** Only fields used by the MPI in the PV2 segment is PV2-8 Expected Admit Date/time for the next scheduled appointment, PV2-14 Previous Service Date for the last admission date, and PV2-46 Patient Status Effective Date for the last registration date (date only, time not included). All other fields may or may not be populated depending on the message type; however, none of them are used by the MPI.

**NOTE:** This segment is only included in A04, A08, and A31.

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

HL7 Attribute Table - PV2 – Patient visit – additional information

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	80	PL	C			00181	Prior Pending Location [not passed to MPI]
2	250	CE	O		0129	00182	Accommodation Code [not passed to MPI]
3	250	CE	O			00183	Admit Reason [not passed to MPI]
4	250	CE	O			00184	Transfer Reason [not passed to MPI]
5	25	ST	O	Y		00185	Patient Valuables [not passed to MPI]
6	25	ST	O			00186	Patient Valuables Location [not passed to MPI]
7	2	IS	O	Y	0130	00187	Visit User Code [not passed to MPI]
8	26	TS	O			00188	Expected Admit Date/Time (used for the Next Scheduled Appointment)
9	26	TS	O			00189	Expected Discharge Date/Time [not passed to MPI]
10	3	NM	O			00711	Estimated Length of Inpatient Stay [not passed to MPI]
11	3	NM	O			00712	Actual Length of Inpatient Stay [not passed to MPI]
12	50	ST	O			00713	Visit Description [not passed to MPI]
13	250	XCN	O	Y		00714	Referral Source Code [not passed to MPI]
14	8	DT	O			00715	Previous Service Date (used for the Last Admission Date)
15	1	ID	O		0136	00716	Employment Illness Related Indicator [not passed to MPI]
16	1	IS	O		0213	00717	Purge Status Code [not passed to MPI]
17	8	DT	O			00718	Purge Status Date [not passed to MPI]
18	2	IS	O		0214	00719	Special Program Code [not passed to MPI]

Message Segments

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
19	1	ID	O		0136	00720	Retention Indicator [not passed to MPI]
20	1	NM	O			00721	Expected Number of Insurance Plans [not passed to MPI]
21	1	IS	O		0215	00722	Visit Publicity Code [not passed to MPI]
22	1	ID	O		0136	00723	Visit Protection Indicator [not passed to MPI]
23	250	XON	O	Y		00724	Clinic Organization Name [not passed to MPI]
24	2	IS	O		0216	00725	Patient Status Code [not passed to MPI]
25	1	IS	O		<u>0217</u>	00726	Visit Priority Code [not passed to MPI]
26	8	DT	O			00727	Previous Treatment Date [not passed to MPI]
27	2	IS	O		<u>0112</u>	00728	Expected Discharge Disposition [not passed to MPI]
28	8	DT	O			00729	Signature on File Date [not passed to MPI]
29	8	DT	O			00730	First Similar Illness Date [not passed to MPI]
30	250	CE	O		0218	00731	Patient Charge Adjustment Code [not passed to MPI]
31	2	IS	O		0219	00732	Recurring Service Code [not passed to MPI]
32	1	ID	O		0136	00733	Billing Media Code [not passed to MPI]
33	26	TS	O			00734	Expected Surgery Date and Time [not passed to MPI]
34	1	ID	O		0136	00735	Military Partnership Code [not passed to MPI]
35	1	ID	O		0136	00736	Military Non-Availability Code [not passed to MPI]
36	1	ID	O		0136	00737	Newborn Baby Indicator [not passed to MPI]
37	1	ID	O		0136	00738	Baby Detained Indicator [not passed to MPI]
38	250	CE	O		<u>0430</u>	01543	Mode of Arrival Code [not passed to MPI]
39	250	CE	O	Y	<u>0431</u>	01544	Recreational Drug Use Code [not passed to MPI]
40	250	CE	O		<u>0432</u>	01545	Admission Level of Care Code [not passed to MPI]
41	250	CE	O	Y	<u>0433</u>	01546	Precaution Code [not passed to MPI]
42	250	CE	O		<u>0434</u>	01547	Patient Condition Code [not passed to MPI]
43	2	IS	O		<u>0315</u>	00759	Living Will Code [not passed to MPI]
44	2	IS	O		<u>0316</u>	00760	Organ Donor Code [not passed to MPI]
45	250	CE	O	Y	<u>0435</u>	01548	Advance Directive Code [not passed to MPI]
46	8	DT	O			01549	Patient Status Effective Date (used for the Last Registration Date) NOTE: Does not include Time.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
47	26	TS	C			01550	Expected LOA Return Date/Time [not passed to MPI]

**PV2 Field Definition**

**3.17.1. PV2-8 Expected admit date/time (TS) 00188**

Definition: This field contains the date and time that the patient has as their next scheduled outpatient appointment.

**3.17.2. PV2-14 Previous service date (DT) 00715**

Definition: This field contains the date of the last admission at this facility.

**3.17.3. PV2-46 Patient Status Effective Date (DT) 01549**

Definition: This field contains the date of the last registration at this facility.

### 3.18. QAK—Query Acknowledgement Segment

**NOTE:** Only field QAK-2 (Query Response Status) is used in the response to the Local/Missing ICN Resolution job and the K22 response to the Q22 query.

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	MPI Description
1	32	ST	C			00696	Query Tag	Local/Missing ICN Resolution job or real-time query (VQQ): DFN of patient sent to MPI for ICN assignment  RSP/K22: Original Query Message ID
2	2	ID	O		<u>0208</u>	00708	Query Response Status	Local/Missing ICN Resolution job or real-time query (VQQ): <ul style="list-style-type: none"> <li>• NO DATA</li> <li>• NO DATA – POTENTIAL MATCHES FOUND</li> <li>• OK</li> </ul> RSP/K22: Refer to Table 0208
3	250	CE	O			01375	Message Query Name	Local/Missing ICN Resolution job or real-time query (VQQ): (Not used)  RSP/K22: Q22^Find Candidates^HL72.4
4	10	NM	O			01434	Hit Count	Local/Missing ICN Resolution job or real-time query (VQQ): (not used)  RSP/K22: 0 or 1 for DFN/Site query.
5	10	NM	O			01622	This payload	Passed but not used by the MPI.

SEQ	LEN	DT	OPT	RP	TBL	Item	Element Name	MPI Description
6	10	NM	O			01623	Hits remaining	Passed but not used by the MPI.

Table 3-49. QAK—Query Acknowledgement, HL7 attributes

## QAK Field Definition

### 3.18.1. 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 Acknowledgement 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

**Local/Missing ICN Resolution job or real-time query (VQQ):** DFN of patient sent to MPI for ICN assignment

**RSP/K22:** Original Query Message ID

### 3.18.2. 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 3-50 in this manual), as shown below:

**Local/Missing ICN Resolution job or real-time query (VQQ):** NO DATA, NO DATA – POTENTIAL MATCHES FOUND, or OK

**RSP/K22:** Table values used.

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

Table 3-50. HL7 Table 0208—Query Response Status

### 3.18.3. QAK-3 Message query name (CE) 01375

**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 name of the query. These names are assigned by the function-specific chapters of this specification. Site-specific event replay query names begin with the letter "Z." Refer to *User defined table 0471 - Query name* for suggested values.

**Local/Missing ICN Resolution job or real-time query (VQQ): This field is not used**

**RSP/K22: Q22^Find Candidates^HL72.4**

### 3.18.4. QAK-4 Hit count total (NM) 01434

**Definition:** This field, when used, contains the total number of records found by the Server that matched the query. For tabular responses, this is the number of rows found. For other response types, the Conformance Statement defines the meaning of a "hit."

**Local/Missing ICN Resolution job or real-time query (VQQ) : This field is not used**

**RSP/K22: 0 or 1 for DFN/Site query.**

### 3.19. QPD—Query Parameter Definition Segment

The QPD segment defines the parameters of the query.

SEQ	LEN	DT	OPT	RP	TBL	Item	Element Name	MPI Description
1	250	CE	R		0471	01375	Message Query Name	Q22^Find Candidates^HL72.4
2	32	ST	C			00696	Query Tag	Original Message ID
3	256	varies				01435	User Parameters (in successive fields)	DFN/Station Number Or Last name, first name, date of birth and social security number
4	256	varies				01435	Matching Algorithm Name	VHA MPI
5	256	varies				01435	Matching Algorithm Version	1.0
6	2	varies				01435	User parameters	TF = add the site sending the query to the Treating Facility List AS = add the site sending the query to the site association for the Treating Facility for the site associated with the DFN BT = add both the TF and the AS NT = don't add a TF or an AS (If nothing is passed the default will be NT) **When user parameters are last name, first name, etc, only NT will be supported at this time.

Table 3-51. QPD—Query Parameter Definition, HL7 attributes

#### QPD Field Definitions

##### 3.19.1. QPD-1 Message query name (CE) 01375

**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 name of the query. These names are assigned by the function-specific chapters of this specification. It is one to one with the conformance statement for this query name, and it is in fact an identifier for that conformance statement. Site-specific query names begin with the letter "Z." Refer to *User defined table 0471 - Query name* for suggested values.

#### Q22^Find Candidates^HL72.4

### 3.19.2. QPD-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 this field is valued, the responding system is required to echo it back as the first field in the query acknowledgement 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.

**NOTE: *Implementation considerations:*** It is not necessary to value this field in implementations where the only return message on the socket will be the response to the query that was just sent. Conversely, in an "asynchronous" implementation where many queries, responses, and other messages may be communicated bidirectionally over the same socket, it is essential that this field be valued so that the Client knows to which query the Server is responding.

#### Original Message ID

### 3.19.3. QPD-3 User parameters (Varies) 01435

**Definition:** These successive parameter fields hold the values that the Client passes to the Server.

The client data is presented as a sequence of HL7 fields. Beginning at *QPD-3-User parameters*, the remaining fields of the QPD segment carry user parameter data. Each QPD user parameter field corresponds to one parameter defined in the Conformance Statement, where each name, type, optionality, and repetition of each parameter has been specified. While these parameters are understood to be usually "anded" together, the user must inspect the required Conformance Statement to properly understand each. Except in the QSC variant, the parameter names do not need to be stated in the query; they are understood to be positional based on the Conformance Statement.

Each parameter field may be specified in the Conformance Statement to be of any single data type, including the complex QIP and QSC types. Parameter fields may also contain the sort control (SRT) field or the segment group (ID) field defined in Sections 5.4.5.3.1 and 5.4.5.3.2 below.

Parameter fields in the QPD segment appear in the same order as in the Conformance Statement.

**1<sup>st</sup> implementation: DFN/Station number**

**PID3 = <dfn>~~USVHA&&0363~PI~VA FACILITY ID&<station #>&L**

**@PID.3.1^<dfn>**

**@PID.3.2^<null>**

**@PID.3.3^<null>**

**@PID.3.4^USVHA&&0363**

**@PID.3.5^PI**

**@PID.3.6^VA FACILITY ID&<station#>&L**

**2<sup>nd</sup> implementation: Last Name, First Name, Date of Birth, Social Security Number**

**@PID.5.1^<last name>**

**@PID.5.2^<first name>**

**@PID.5.3^<null>**

**@PID.5.4^<null>**

**@PID.5.5^<null>**

**@PID.5.6^<null>**

**@PID.5.7^L**

**@PID.7^<date of birth in HL7 format>**

**@PID.3.1^<social security number>**

**@PID.3.2^<null>**

**@PID.3.3^<null>**

**@PID.3.4^USVHA&&0363**

**@PID.3.5^SS**

**@PID.3.6^VA FACILITY ID&<station#>&L**

**3.19.4. QPD-4 User parameters (Varies) 01435**

**Matching Algorithm Name**

**Value will be: VHA MPI**

**3.19.5. QPD-5 User parameters (Varies) 01435**

**Matching Algorithm Version**

**Value will be: 1.0**

### 3.19.6. QPD-6 User parameters (Varies) 01435

#### Record Linking Action

#### Value will be:

**TF = add the site sending the query to the Treating Facility List**

**AS = add the site sending the query to the site association for the Treating Facility for the site associated with the DFN**

**BT = add both the TF and the AS**

**NT = add neither the TF or the AS (If nothing is passed the default will be NT)**

**NOTE: QPD usage for query by example variant:** The query by example is an extension of Query By Parameter (QBP) in which search parameters are passed by sending them in the segment, which naturally carries them. Thus if one wanted to perform a "find\_candidates" query using query by example, one would send the demographics information on which to search in the PID and/or PD1 segments leaving blank those fields in the segment sent which are not query parameters. If, for example, religion were not one of the query parameters, PID-17 would be left blank when the PID was sent in the query. Parameters which do not occur naturally in an HL7 message, such as search algorithm, confidence level, etc, would continue to be carried in the QPD segment as they are in the Query by Parameter. The segments and fields available for use as query parameters would be specified in the Conformance Statement for the query.

### 3.20. QRD—Original-Style Query Definition Segment

The QRD segment is used to define a query.

SEQ	LEN	DT	OPT	RP/#	TBL#	Item	Element Name	MPI Description
1	26	TS	R			00025	Query Date/Time	Date/Time query built
2	1	ID	R		<a href="#">0106</a>	00026	Query Format Code	R – for record orientated response
3	1	ID	R		<a href="#">0091</a>	00027	Query Priority	I for immediate
4	10	ST	R			00028	Query ID	Integration Control Number
5	1	ID	O		0107	00029	Deferred Response Type	No value passed by the MPI
6	26	TS	O			00030	Deferred Response Date/Time	No value passed by the MPI
7	10	CQ	R		<a href="#">0126</a>	00031	Quantity Limited Request	1<component separator> RD
8	250	XCN	R	Y		00032	Who Subject Filter	repeat patient ID list including ICN,SSN AND site/DFN
9	250	CE	R	Y	<a href="#">0048</a>	00033	What Subject Filter	DEM for demographics GID for Generate new identifier
10	250	CE	R	Y		00034	What Department Data Code	No value passed by the MPI
11	20	CM	O	Y		00035	What Data Code Value Qual	No value passed by the MPI
12	1	ID	O		0108	00036	Query Results Level	No value passed by the MPI

Table 3-52. QRD—Original-Style Query Definition, HL7 attributes

#### QRD Field Definitions

##### 3.20.1. QRD-1 Query Date/Time (TS) 00025

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

### 3.20.2. QRD-2 Query Format Code (ID) 00026

**Definition:** This field refers to valid values in the HL7 Table 0106—Query/Response Format Code (Table 3-53 in this manual), as shown below:

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

Table 3-53. HL7 Table 0106—Query/Response Format Code

The MPI is always passing R.

### 3.20.3. QRD-3 Query Priority (ID) 00027

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

**REF:** For a list of valid values, please refer to Table 3-54 in this manual, "HL7 Table 0091—Query Priority." Table values and subsequent fields specify time frames for response.

Value	Description
I	Immediate

Table 3-54. HL7 Table 0091—Query Priority

### 3.20.4. 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.

Integration Control Number is passed as the value used for lookup at the site.

### 3.20.5. QRD-5 Deferred Response Type (ID) 00029

No value passed by the MPI.

### 3.20.6. QRD-6 Deferred Response Date/Time (TS) 00030

No value passed by the MPI.

### 3.20.7. 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.

**REF:** For a list of valid entries for the second component, please refer to Table 3-55 in this manual, "HL7 Table 0126—Quantity Limited Request." Default is LI (lines).

Value	Description
RD	Records

Table 3-55. HL7 Table 0126—Quantity Limited Request

### 3.20.8. 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.).

**REF:** 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.

**Future supported values are listed below:**

Identifier	Assigning Authority	Identifier type	Assigning Location	Expiration date
National ICN	USVHA	NI	200M	
SSN	USSSA	SS	unique station# id	
VistA ID (DFN)	USVHA	PI	unique station# id	

**Table 3-56. VA Patient identifiers**

**NOTE:** 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.

### 3.20.9. 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
GID	Generate new identifier

**Table 3-57. HL7 Table 0048—What Subject Filter**

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

### 3.20.10. QRD-10 What Department Data Code (CE) 00034

No value passed by the MPI.

### 3.20.11. QRD-11 What Data Code Value Qual (CM) 00035

No value passed by the MPI.

### **3.20.12. QRD-12 Query Results Level (ID) 00036**

No value passed by the MPI.

### 3.21. RCP—Response Control Parameter Segment

The RCP segment is used to restrict the amount of data that should be returned in response to query.

SEQ	LEN	DT	OPT	RP	TBL	Item#	Element name	MPI Description
1	1	ID	O		<u>0091</u>	00027	Query Priority	I
2	10	CQ	O		<u>0126</u>	00031	Quantity Limited Request	0-1
3	250	CE	O		<u>0394</u>	01440	Response Modality	R
4	26	TS	C			01441	Execution and Delivery Time	Passed but not used by the MPI
5	1	ID	O		<u>0395</u>	01443	Modify Indicator	N
6	512	SRT	O	Y		01624	Sort-by Field	Passed but not used by the MPI
7	256	ID		Y		01594	Segment group inclusion	Passed but not used by the MPI

Table 3-58. RCP—Response Control Parameter, HL7 Attribute

#### RCP Field Definitions

##### 3.21.1. RCP-1 Query priority (ID) 00027

**Definition:** This field contains the time frame in which the response is expected. Refer to *HL7 Table 0091 - Query priority* for valid values. Table values and subsequent fields specify time frames for response.

**Always immediate.**

Value	Description
D	Deferred
I	Immediate

Table 3-59. HL7 Table 0091—Query priority

##### 3.21.2. RCP-2 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 entries are numerical values (in the first component) given in the units specified in the second component. Default is LI (lines).

**REF:** Refer to *HL7 Table 0126 - Quantity limited request* for valid entries for the second component. In a segment pattern response, a line is defined as a single segment.

**For DFN/Station # the range would be 0-1. (To be revisited when we have other search methods)**

Value	Description	Message Usage	Comment
CH	Characters	RSP/RTB/RDY	Used where size of input buffer has limitations
LI	Lines	RTB/RDY	
PG	Pages	RDY	
RD	Records	RSP/RTB/RDY	In RSP record = hit
ZO	Locally defined		

**Table 3-60. HL7 Table 0126—Quantity limited request**

### 3.21.3. RCP-3 Response modality (CE) 01440

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

**Definition:** This field specifies the timing and grouping of the response message(s). Refer to *HL7 Table 0394 – Response modality* for valid values.

**We would always be Real Time, possible batch in the future.**

Value	Description
R	Real Time
T	Bolus (a series of responses sent at the same time without use of batch formatting)
B	Batch

**Table 3-61. HL7 Table 0394—Response modality**

### 3.21.4. RCP-4 Execution and delivery time (TS) 01441

Specifies the time the response is to be returned. This field is only valued when *RCP-1-Query priority* contains the value **D** (Deferred).

**Only used for deferred queries (Response modality)**

### 3.21.5. RCP-5 Modify indicator (ID) 01443

Definition: This field specifies whether the subscription is new or is being modified. Refer to HL7 Table 0395 - Modify indicator for valid values.

**New one each time.**

Value	Description
N	New Subscription
M	Modified Subscription

**Table 3-62. HL7 Table 0395—Modify indicator**

### 3.21.6. RCP-6 Sort-by field (SRT) 01624

**Components:** <sort-by field/parameter (varies)> ^ <sequencing (ID)>

**Definition:** For queries requesting a tabular response, this field specifies by which fields the response is to be sorted, and the order(s) in which sorting is to be performed. When the QSC variant is not in use, the values specified for the first component in this field are derived from the ColName field of the Output Specification and Commentary. When the QSC variant is used, the values are derived from the ColName field of the Input/Output Specification and Commentary.

Each repetition of this field specifies a single sort field. Thus, the first repetition of this field specifies the primary sort field; the second repetition specifies the secondary sort field; etc.

**We would NOT use for the DFN/Site query since there is only 1 value or 0 value returned.**

### 3.21.7. RCP-7 Segment group inclusion (ID) 01594

**Definition:** Specifies those optional segment groups which are to be included in the response. Refer to HL7 Table 0391—Segment group for values for Segment Group. This is a repeating field, to accommodate inclusion of multiple segment groups. The default for this field, not present, means that all relevant groups are included.

**Default is not present, which includes all relevant groups.**

**NOTE:** Although the codes for segment groups are taken from *HL7 Table 0391*, the exact segment-level definition of a segment group (e.g. PIDG) is given only in the conformance statement of the query in which this segment group appears.

**For example:**

Value	Description
PIDG	PID group
OBRG	OBR group
ORCG	ORC group
RXAG	RXA group
RXDG	RXD group
RXEG	RXE group
RXOG	RXO group
etc	

**Table 3-63. HL7 Table 0391—Segment group**

**NOTE:** *HL7 Table 0391 – Segment group* currently includes no values defined by HL7. As values are agreed upon in conformance statements balloted by HL7 Technical Committees, they will be included in this table.

### 3.22. 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 3-64. RDF—Table Row Definition, HL7 attributes

#### RDF Field Definitions

##### 3.22.1. 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.

**24 passed for the number of fields potentially returned in response.**

##### 3.22.2. 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.

The HL7 field designation numbers and translations for each are as follows:

Field	HL7 Field#	Data Type	Max Length
Last Name	00108.1	ST	30
SSN	00122	ST	9
DOB	00110	TS	8
CMOR	00756	ST	6
ICN	00105	ST	19
First Name	00108.2	ST	30
Treating Facilities (multiple entries possible)	00169	ST	999
Date of Death	00740	TS	8
Middle Name	00108.3	ST	16
Sex	00111	ST	1
POB- City	00126.1	ST	30
POB – State	00126.2	ST	3
Name Prefix	00108.5	ST	15
Name Suffix	00108.4	ST	10
Mother's Maiden Name	00109.1	ST	20
Claim Number	ZEL6	ST	9
MPI DUP CASE#	CASE#	ST	69
POW Status	POW	ST	1
Multiple Birth Indicator	00127	ST	1
Alias Last Name	00112.1	ST	30
Alias First Name	00112.2	ST	25
Alias Middle Name	00112.3	ST	25
Alias Prefix	00112.5	ST	10
Alias Suffix	00112.4	ST	10

**Table 3-65. HL7 field designation numbers and translations**

## Message Segments

**REF:** For a list of relational operators, please refer to Table 3-69 in this manual, "HL7 Table 0209—  
Relational operator."

**REF:** For a list of relational conjunctions, please refer to Table 3-70 in this manual, "HL7 Table 0210—  
Relational conjunction"

### 3.23. 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 3-66. RDT—Table Row Data, HL7 attributes

#### RDT Field Definition

##### 3.23.1. 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.

Values returned correspond directly to the values in the RDF—Table Row Definition Segment. If that field isn't populated, no value is passed.

Field	HL7 Field#	Data Type	Max Length
Last Name	00108.1	ST	30
SSN	00122	ST	9
DOB	00110	TS	8
CMOR	00756	ST	6
ICN	00105	ST	19
First Name	00108.2	ST	30
Treating Facilities (multiple entries possible)	00169	ST	999
Date of Death	00740	TS	8
Middle Name	00108.3	ST	16
Sex	00111	ST	1
POB- City	00126.1	ST	30
POB – State	00126.2	ST	3
Name Prefix	00108.5	ST	15
Name Suffix	00108.4	ST	10

Field	HL7 Field#	Data Type	Max Length
Mother's Maiden Name	00109.1	ST	20
Claim Number	ZEL6	ST	9
MPI DUP CASE#	CASE#	ST	69
POW Status	POW	ST	1
Multiple Birth Indicator	00127	ST	1
Alias Last Name	00112.1	ST	30
Alias First Name	00112.2	ST	25
Alias Middle Name	00112.3	ST	25
Alias Prefix	00112.5	ST	10
Alias Suffix	00112.4	ST	10

**Table 3-67. HL7 field designation numbers and translations**

### 3.24. 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.

**NOTE:** 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	MPI Description
1	32	ST	O			00696	Query Tag	DFN of patient at site
2	1	ID	R		<a href="#">0106</a>	00697	Query/Response	T
3	60	CE	R			00698	VT Query Name	2 possible values
4	60	CE	R			00699	Virtual Table Name	ICN
5	256	QSC	O	Y		00700	Selection Criteria	Fields used in Query

Table 3-68. VTQ—Virtual Table Query Request, HL7 attributes

#### VTQ Field Definitions

##### 3.24.1. 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 Acknowledgement 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.

##### 3.24.2. Query/Response Format Code (ID) 00697

**Definition:** This field refers to HL7 Table 0106—Query/Response Format Code (Table 3-53 in this manual), which lists valid values. At this point in time the only value used is T.

### 3.24.3. 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.

<u>NAME</u>	<u>FUNCTION</u>
VTQ_PID_ICN_LOAD_1	Used to tell MPI that this is in initialization phase
VTQ_PID_ICN_NO_LOAD	Used to inquire to the MPI without any addition to MPI
VTQ_DISPLAY_ONLY_QUERY	Used to tell MPI that this is the Display Only Query
EXACT_MATCH_QUERY	Used to tell the MPI that only exact matches should be returned based upon business rules

### 3.24.4. 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."

**Integration Control Number (ICN).**

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

### 3.24.5. 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.

Field	HL7 Field#	Data Type	Max Length	Notes
Last Name	00108.1	ST	30	Must be present
SSN	00122	ST	9	Not sent if null
DOB	00110	TS	8	Not sent if null
First Name	00108.2	ST	30	Not sent if null
Date of Death	00740	TS	8	Not sent if null
Middle Name	00108.3	ST	16	Not sent if null
Sex	00111	ST	1	Not sent if null
POB- City	00126.1	ST	30	Not sent if null
POB – State	00126.2	ST	3	Not sent if null
Name Suffix	00108.4	ST	10	Not sent if null

**NOTE:** All fields are sent with equals, except DOB, which can be equals or generic. Generic is used for imprecise DOB.

**REF:** For a list of relational operators, please refer to Table 3-69 in this manual, "HL7 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 3-69. HL7 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. Table [0210](#) provides a list of relational conjunctions.

Relational Conjunction	Note
AND	Default
OR	

**Table 3-70. HL7 Table 0210—Relational conjunction**

Hence, the segment:

```
VTQ|100000082|T|VTQ_PID_ICN_NO_LOAD|ICN|@00108.1^EQ^MPIPATIENT^AND~@00122^EQ^0000645
67^AND~@00108.2^EQ^TEN^AND~@00110^EQ^19780303
```

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.

### 3.25. ZCT—VA Specific Emergency Contact Segment

**NOTE:** The ZCT—VA Specific Emergency Contact segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment. This is not a required segment. It may or may not be present in all messages.

SEQ	LEN	DT	R/O	RP/#	TBL#	VistA Element Name
1	4	SI	R			SET ID
2	1	ID				NEXT OF KIN (NOK) <b>NOTE:</b> Value is always 1 for patient requested
3	35	ST				K-NAME OF PRIMARY NOK
4	30	ST				K-RELATIONSHIP TO PATIENT
5	106	AD		Y		Component 1:K-STREET ADDRESS (LINE 1) Component 2:K-STREET ADDRESS (LINE 2) & K-STREET ADDRESS (LINE 3) Component 3: K-CITY Component 4: K-STATE (abbreviation) Component 5: K-ZIP code
5	106	AD		Y		K-ADDRESS SAME AS PATIENT'S?
6	40	TN		Y		K-PHONE NUMBER
7	40	TN		Y		K-WORK PHONE NUMBER
8	1	ID			<a href="#">VA01</a>	K-ADDRESS SAME AS PATIENT'S?
9	1	ID			<a href="#">VA01</a>	PRIMARY NOK

**Table 3-71. ZCT—VA Specific Emergency Contact, HL7 attributes**

### 3.26. ZEL—VA Specific Patient Eligibility Segment

**NOTE:** The ZEL—VA Specific Patient Eligibility segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment. This is not a required segment. It may or may not be present in all messages.

SEQ	LEN	DT	R/O	RP/#	TBL#	VistA Element Name
1	4	SI	R			SET ID
2	2	ID			<a href="#">VA04</a>	ELIGIBILITY or PRIMARY ELIGIBILITY CODE
3	16	<a href="#">CX</a>				LONG ID or PRIMARY LONG ID
4	12	<a href="#">CX</a>				SHORT ID or PRIMARY SHORT ID
5	1	ID			<a href="#">VA05</a>	DISABILITY RET. FROM MILITARY?
6	8	NM				CLAIM NUMBER
7	40	ST				CLAIM FOLDER LOCATION
8	1	ID			<a href="#">VA01</a>	VETERAN (Y/N)?
9	30	ST				TYPE
10	1	ID			<a href="#">VA06</a>	ELIGIBILITY STATUS
11	8	DT				ELIGIBILITY STATUS DATE
12	8	DT				ELIGIBILITY INTERIM RESPONSE
13	50	ST				ELIGIBILITY VERIF. METHOD
14	1	ID			<a href="#">VA01</a>	RECEIVING A&A BENEFITS?
15	1	ID			<a href="#">VA01</a>	RECEIVING HOUSEBOUND BENEFITS?
16	1	ID			<a href="#">VA01</a>	RECEIVING A VA PENSION?
17	1	ID			<a href="#">VA01</a>	RECEIVING A VA DISABILITY?
18	1	ID			<a href="#">VA01</a>	AGENT ORANGE EXPOS. INDICATED?
19	1	ID			<a href="#">VA01</a>	RADIATION EXPOSURE INDICATED?
20	1	ID	Y		<a href="#">VA01</a>	ENVIRONMENTAL CONTAMINANTS?
21	5	NM				TOTAL ANNUAL VA CHECK AMOUNT
22	22	CE			<a href="#">VA0122</a>	RADIATION EXPOSURE METHOD

**Table 3-72. ZEL—VA Specific Patient Eligibility, HL7 attributes**

### 3.27. ZEM—VA Specific Employment Information Segment

**NOTE:** The ZEM—VA Specific Employment Information segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment. This is not a required segment. It may or may not be present in all messages.

SEQ	LEN	DT	R/O	RP/#	TBL#	VistA Element Name
1	4	SI	R			SET ID
2	1	ID				PATIENT DATA REQUESTED?
3	1	ID			<a href="#">VA15</a>	EMPLOYMENT STATUS
4	30	ST				EMPLOYER NAME
5	30	ST				OCCUPATION
6	106	AD				Component 1: EMPLOYER STREET [LINE 1] Component 2: EMPLOYER STREET [LINE 2] AND EMPLOYER STREET [LINE 3] Component 3: EMPLOYER CITY Component 4: EMPLOYER STATE Component 5: EMPLOYER ZIP CODE
7	40	TN				EMPLOYER PHONE NUMBER
8	1	ID			<a href="#">VA01</a>	GOVERNMENT AGENCY

**Table 3-73. ZEM—VA Specific Employment Information, HL7 attributes**

### 3.28. ZET—VA Specific Event Reason for Date of Last Treatment Segment

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

**NOTE:** The ZET—Event Reason for Date of Last Treatment segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment. This is not a required segment. It may or may not be present in all messages.

SEQ	LEN	DT	OPT	RP/#	TBL#	Item	Element Name
1	2	CE			<a href="#">ZZ011</a>		EVENT REASON CODE NAME
2	90	XON	O				PATIENT PRIMARY FACILITY

Table 3-74. ZET—Event Reason for Date of Last Treatment, HL7 attributes

#### ZET Field Definitions

##### 3.28.1. ZET-1 Event Reason Code Name

**Definition (ZZ011):** This field defines the corresponding event that has occurred. The possible values are:

- A1: Admission
- A2: Discharge
- A3: Clinic check-out

##### 3.28.2. 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

### 3.29. ZFF—VA Specific File/Field Segment

**NOTE:** The ZFF—VA Specific File/Field segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment. This is not a required segment. It may or may not be present in all messages.

SEQ	LEN	DT	R/O	RP/#	TBL#	VistA Element Name
1	20	NM	R			FILE NUMBER
2	150	ST	R			FIELD NUMBER(S)

**Table 3-75. ZFF—VA Specific File/Field, HL7 attributes**

### 3.30. ZPD—VA Specific Patient Information Segment

A	LEN	DT	R/O	RP/#	TBL#	VistA Element Name
1	4	SI	R			SET ID - PATIENT ID (always 1) (Passed but not used by MPI)
2	60	ST				REMARKS (Passed but not used by MPI)
3	20	ST				PLACE OF BIRTH [CITY] (Use the one passed in the PID segment—Passed but not used by MPI)
4	2	ST				PLACE OF BIRTH [STATE] (Use the one passed in the PID segment—Passed but not used by MPI)
5	2	ID			<a href="#">VA02</a>	CURRENT MEANS TEST STATUS (Passed but not used by MPI)
6	35	ST				FATHER'S NAME (Passed but not used by MPI)
7	35	ST				MOTHER'S NAME (Passed but not used by MPI)
8	1	ID			<a href="#">VA01</a>	RATED INCOMPETENT? (Passed but not used by MPI)
9	19	TS				DATE OF DEATH (use the one in the PID segment)
10	48	PN				COLLATERAL SPONSOR'S NAME (Passed but not used by MPI)
11	1	ID			<a href="#">VA01</a>	Active Health Insurance? (Passed but not used by MPI) <b>NOTE:</b> This field comes from the Patient file (#2) looking at the values of a number of fields.
12	1	ID			<a href="#">VA01</a>	ELIGIBLE FOR MEDICAID? (Passed but not used by MPI)
13	19	TS				DATE MEDICAID LAST ASKED (Passed but not used by MPI)
14	1	ID			<u>0005</u>	RACE (use the one in the PID segment—Passed but not used by MPI) <b>NOTE:</b> RACE is the old field, and not the RACE INFORMATION multiple.
15	3	ID			<a href="#">VA08</a>	RELIGIOUS PREFERENCE (Passed but not used by MPI)
16	1	ID			<a href="#">VA01</a>	Homeless Indicator (Passed but not used by MPI) name has been removed. <b>NOTE:</b> This is a computed field derived from VISTA Social Work package.
17	1	ST				POW STATUS INDICATED?
18	2	ID			<a href="#">VA12</a>	TYPE OF INSURANCE (Passed but not used by MPI) <b>NOTE:</b> Derived from the MAJOR CATEGORY field (#.03) in the TYPE OF PLAN file (#355.1).

19	1	ID			VA14	MEDICATION COPAYMENT EXEMPTION (Passed but not used by MPI) <b>NOTE:</b> This is a computed field derived from VISTA Integrated Billing package.
20	22	CE			<a href="#">VA0023</a>	POW CONFINEMENT LOCATION (Passed but not used by MPI)
21	30	ST				PRIMARY CARE TEAM <b>NOTE:</b> Derived from the NAME field (#.01) in the TEAM file (#404.51).
22	3	IS				GI INSURANCE POLICY? (passed but not used by MPI) – Yes, No
23	10	NM				AMOUNT OF GI INSURANCE (passed but not used by MPI)
24	8	DT				MOST RECENT DATE OF CARE (passed but not used by MPI)
25	10	ST				MOST RECENT LOCATION OF CARE (passed but not used by MPI)
26	8	DT				2ND MOST RECENT DATE OF CARE (passed but not used by MPI)
27	10	ST				2 <sup>ND</sup> MOST RECENT LOCATION OF CARE (passed but not used by MPI)
28	8	DT				DATE RULED INCOMPETENT (CIVIL) (passed but not used by MPI)
29	8	DT				DATE RULED INCOMPETENT (VA) (passed but not used by MPI)
30	3	ID				SPINAL CORD INJURY (passed but not used by MPI)
31	3	ST				SOURCE OF NOTIFICATION (passed but not used by MPI) [1:INPATIENT AT VAMC 2:NON-VA MEDICAL FACILITY 3:DEATH CERTIFICATE ON FILE 4:VBA 5:VA INSURANCE 6:SSA 7:NCA 8:NEXT OF KIN/FAMILY/FRIEND 9:OTHER]
32	8	DT				DATE OF DEATH LAST UPDATED (passed but not used by MPI)

33	3	IS			VA048	FILIPINO VETERAN PROOF (passed but not used by MPI)
34	1	ST				Pseudo SSN Reason – 'R' FOR REFUSED TO PROVIDE 'S' FOR SSN UNKNOWN/FOLLOW-UP REQUIRED 'N' FOR NO SSN ASSIGNED
35	15	ID			VA018	AGENCY/ALLIED COUNTRY (passed but not used by MPI)
36-39						NOT DEFINED
40	1	IS		R		Emergency Response Indicator (Passed by not used by MPI) [K: Hurricane Katrina

**Table 3-76. ZPD—VA Specific Patient Information, HL7 attributes**

### ZPD Field Definition

These are the only two fields, which the MPI is pulling data. The MPI will also send the Pseudo SSN Reason out in the ZPD segment.

#### 3.30.1. ZPD-10 POW Status Indicated?

**Definition:** This field defines the Prisoner of War status of the patient. The POW Status Indicator? value is a Yes/No field pulled from the PATIENT (#2) file, field POW STATUS INDICATED? (# .525).

#### 3.30.2. ZPD-34 PSEUDO SSN REASON

**Definition:** This field defines reason that a pseudo SSN has been collected for the patient. Field 17 is the only field that is being taken from the ZPD segment. The PSEUDO SSN REASON value is a set of codes pulled from the PATIENT (#2) file, field PSEUDO SSN REASON (#.0906).

R	REFUSED TO PROVIDE
S	FOR SSN UNKNOWN/FOLLOW-UP REQUIRED
N	NO SSN ASSIGNED;

**Table 3-77. Possible values for PSEUDO SSN REASON**

### 3.31. ZSP—VA Specific Service Period Segment

**NOTE:** The ZSP—VA Specific Service Period segment is passed but not used by the MPI software. However, this segment can be used by any software subscribing to the MPI messages defined in the documentation as containing this segment. This is not a required segment. It may or may not be present in all messages.

SEQ	LEN	DT	R/O	RP/#	TBL#	VistA Element Name
1	4	SI	R			SET ID
2	1	ID	R		<a href="#">VA01</a>	SERVICE CONNECTED?
3	3	NM				SERVICE CONNECTED PERCENTAGE
4	2	ID			<a href="#">VA11</a>	PERIOD OF SERVICE
5	1	ST				VIETNAM SERVICE INDICATED?

**Table 3-78. ZSP—VA Specific Service Period, HL7 attributes**



## Chapter 4: VA HL7 Tables

**NOTE:** For information referring to Race, see "Table 3-40. User-defined Table 0005—Race" in this documentation.

### 4.1. Table VA001—Yes/No

Value	Description
0	NO
1	YES

Table 4-1. VA001—Yes/No

### 4.2. Table VA002—Current Means Test Status

**NOTE:** Type of Care (#.03) field of MEANS TEST STATUS (#408.32) file.

Value	Description
0	Exempt (LTC C0-Pay Exempt Test)
1	Non- Exempt (LTC C0-Pay Exempt Test)
A	MT COPAY EXEMPT
B	CATEGORY B
C	MT COPAY REQUIRED
E	EXEMPT
G	GMT COPAY REQUIRED
I	INCOMPLETE
L	NO LONGER APPLICABLE
M	NON-EXEMPT
N	NO LONGER REQUIRED
P	PENDING ADJUDICATION
R	REQUIRED

Table 4-1. VA002—Current Means Test Status

### 4.3. Table VA004—Eligibility

**NOTE:** Name (#.01) field of MAS ELIGIBILITY CODE (#8.1) file.

Value	Description
1	SERVICE CONNECTED 50% to 100%
2	AID & ATTENDANCE
3	SC LESS THAN 50%
4	NSC - VA PENSION
5	NSC
6	OTHER FEDERAL AGENCY
7	ALLIED VETERAN
8	HUMANITARIAN EMERGENCY
9	SHARING AGREEMENT
10	REIMBURSABLE INSURANCE
12	CHAMPVA
13	COLLATERAL OF VET.
14	EMPLOYEE
15	HOUSEBOUND
16	MEXICAN BORDER WAR
17	WORLD WAR I
18	PRISONER OF WAR
19	TRICARE/CHAMPUS
21	CATASTROPHIC DISABILITY
22	PURPLE HEART RECIPIENT
23	REFUSED MT CO-PAY

**Table 4-2. VA004—Eligibility**

#### 4.4. Table VA005—Disability Retirement From Military

**NOTE:** Disability Ret. From Military? (#.362) field of PATIENT (#2) file.

Value	Description
0	NO
1	YES, RECEIVING MILITARY RETIREMENT
2	YES, RECEIVING MILITARY RETIREMENT IN LIEU OF VA COMPENSATION
3	UNKNOWN

Table 4-3. VA005—Disability Retirement From Military

#### 4.5. Table VA006—Eligibility Status

**NOTE:** Eligibility Status (#.3611) field of PATIENT (#2) file.

Value	Description
P	PENDING VERIFICATION
R	PENDING RE-VERIFICATION
V	VERIFIED

Table 4-4. VA006—Eligibility Status

**NOTE:** For information referring to Race, see "Table 3-40. User-defined Table 0005—Race" in this documentation.

## 4.6. Table VA008—Religion

**NOTE:** Code (#3) field of RELIGION (#13) file.

Value	Description
0	CATHOLIC
1	JEWISH
2	EASTERN ORTHODOX
3	BAPTIST
4	METHODIST
5	LUTHERAN
6	PRESBYTERIAN
7	UNITED CHURCH OF CHRIST
8	EPISCOPALIAN
9	ADVENTIST
10	ASSEMBLY OF GOD
11	BRETHREN
12	CHRISTIAN SCIENTIST
13	CHURCH OF CHRIST
14	CHURCH OF GOD
15	DISCIPLES OF CHRIST
16	EVANGELICAL COVENANT
17	FRIENDS
18	JEHOVAH'S WITNESS
19	LATTER-DAY SAINTS
20	ISLAM
21	NAZARENE
22	OTHER
23	PENTECOSTAL
24	PROTESTANT, OTHER
25	PROTESTANT, NO PREFERENCE
26	REFORMED
27	SALVATION ARMY
28	UNITARIAN; UNIVERSALIST

<b>Value</b>	<b>Description</b>
29	UNKNOWN/NO PREFERENCE
30	NATIVE AMERICAN
31	BUDDHIST

**Table 4-5. VA008—Religion**

#### 4.7. Table VA010—Means Test Indicator

Value	Description
AS	This Means Test category includes all compensable service-connected (0-100%) veterans and special category veterans. Special category veterans include: Mexican Border War and World War I veterans; former Prisoners of War; and patients receiving care for conditions potentially related to exposure to either Agent Orange (Herbicides), Ionizing Radiation or Environmental Contaminants. This category also includes 0% non-compensable service-connected veterans when they are treated for a service-connected condition.
AN	This Means Test category includes NSC veterans who are required to complete VA Form 10-10F (Financial Worksheet) and those NSC veterans in receipt of VA pension, aid and attendance, housebound allowance, or entitled to State Medicaid. This category may also include 0% non-compensable service-connected veterans when they are not treated for a service-connected condition and are placed in this category based on completion of a Means Test.
C	This Means Test category includes those veterans who, based on income and/or net worth, are required to reimburse VA for care rendered. This category also includes those pending adjudication. This category may also include 0% non-compensable service-connected veterans when they are not treated for a service-connected condition and are placed in this category based on completion of a Means Test.
N	This Means Test category includes only non-veterans receiving treatment at VA facilities.
X	This Means Test category includes treatment of patients who are not required to complete the Means Test for the care being provided. If the veteran was admitted prior to July 1, 1986 with no change in the level of care being received, (i.e., if the patient was in the Nursing Home Care Unit (NHCU) on June 30, 1986 and has remained in the NHCU since that date with no transfer to the hospital for treatment), the "X" Means Test indicator will be accepted. This category also includes patients admitted to the domiciliary, patients seen for completion of a compensation and pension examination, and Class II dental treatment.

Value	Description
U	This Means Test category includes only those patients who require a Means Test, and the Means Test has not been done/completed. The Austin Automation Center (AAC) will not accept an OPC transaction unless the Means Test has been completed.

Table 4-6. VA010—Means Test Indicator

#### 4.8. Table VA011—Period of Service

Value	Description
0	KOREAN
1	WORLD WAR I
2	WORLD WAR II
3	SPANISH AMERICAN
4	PRE-KOREAN
5	POST-KOREAN
6	OPERATION DESERT SHIELD
7	VIETNAM ERA
8	POST-VIETNAM
9	OTHER OR NONE
A	ARMY - ACTIVE DUTY
B	NAVY, MARINE - ACTIVE DUTY
C	AIR FORCE - ACTIVE DUTY
D	COAST GUARD - ACTIVE DUTY
E	RETIRED, UNIFORMED FORCES
F	MEDICAL REMEDIAL ENLIST
G	MERCHANT SEAMEN - USPHS
H	OTHER USPHS BENEFICIARIES
I	OBSERVATION/EXAMINATION
J	OFFICE OF WORKERS COMP
K	JOB CORPS/PEACE CORPS
L	RAILROAD RETIREMENT
M	BENEFICIARIES-FOREIGN GOV
N	HUMANITARIAN (NON-VET)
O	CHAMPUS RESTORE

Value	Description
P	OTHER REIMBURS. (NON-VET)
Q	OTHER FEDERAL - DEPENDENT
R	DONORS (NON-VET)
S	SPECIAL STUDIES (NON-VET)
T	OTHER NON-VETERANS
U	CHAMPVA - SPOUSE, CHILD
V	CHAMPUS
W	CZECHOSLOVAKIA/POLAND SVC
X	PERSIAN GULF WAR
Y	CAV/NPS
Z	MERCHANT MARINE

**Table 4-7. VA011—Period of Service**

#### 4.9. Table VA012—Type of Insurance

Value	Description
0	NO INSURANCE
1	MAJOR MEDICAL
2	DENTAL
3	HMO
4	PPO
5	MEDICARE
6	MEDICAID
7	CHAMPUS
8	WORKMAN COMP
9	INDEMNITY
10	PRESCRIPTION
11	MEDICARE SUPPLEMENTAL
12	ALL OTHER

**Table 4-8. VA012—Type of Insurance**

#### 4.10. Table VA015—Enrollment Status

Value	Description
1	UNVERIFIED
2	VERIFIED
3	INACTIVE
4	REJECTED
5	SUSPENDED
6	TERMINATED
7	CANCELED/DECLINED
8	EXPIRED
9	PENDING
10	NOT ELIGIBLE
11	REJECTED; FISCAL YEAR
12	REJECTED; MID-CYCLE
13	REJECTED; STOP NEW ENROLLMENTS
14	REJECTED; INITIAL APPLICATION BY VAMC
15	PENDING; NO ELIGIBILITY CODE
16	PENDING; MEANS TEST REQUIRED
17	PENDING; ELIGIBILITY STATUS IS UNVERIFIED
18	PENDING; OTHER
19	NOT ELIGIBLE; REFUSED TO PAY COPAY
20	NOT ELIGIBLE; INELIGIBLE DATE
21	PENDING; PURPLE HEART UNCONFIRMED
22	REJECTED; BELOW ENROLLMENT GROUP THRESHOLD

Table 4-9. VA015—Enrollment Status

### 4.11. Table VA016—Reason Canceled/Declined

Value	Description
1	DISSATISFIED WITH CARE
2	GEOGRAPHIC ACCESS
3	OTHER INSURANCE
4	OTHER

Table 4-10. VA016—Reason Canceled/Declined

### 4.12. Table VA021—Enrollment Priority

Value	Description
1	Priority 1
2	Priority 2
3	Priority 3
4	Priority 4
5	Priority 5
6	Priority 6
7	Priority 7
8	Priority 8

Table 4-11. VA021—Enrollment Priority

### 4.13. Table VA022—Radiation Exposure Method

Value	Description
2	Nagasaki – Hiroshima
3	Nuclear Testing
4	Both

Table 4-12. VA022—Radiation Exposure Method

#### 4.14. Table VA023—Prisoner of War Location

Value	Description
4	WORLD WAR I
5	WORLD WAR II – EUROPE
6	WORLD WAR II – PACIFIC
7	KOREAN
8	VIETNAM
9	OTHER
A	PERSIAN GULF WAR
B	YUGOSLAVIA CONFLICT

Table 4-13. VA023—Prisoner of War Location

#### 4.15. Table VA024—Source of Enrollment

Value	Description
1	VAMC
2	HEC
3	OTHER VAMC

Table 4-14. VA024—Source of Enrollment

#### 4.16. Table VA036—MST Status

Value	Description
U	UNKNOWN, NOT SCREENED
Y	YES, SCREENED REPORTS MST
N	NO, SCREENED DOES NOT REPORT MST
D	SCREENED, DECLINES TO ANSWER

Table 4-15. VA036—MST Status

#### 4.17. Table VA046—Agent Orange Exposure Location

Value	Description
K	KOREAN DMZ
U	UNKNOWN
V	VIETNAM

Table 4-16. VA046—Agent Orange Exposure Location

#### 4.18. Table NPCD 001—National Patient Care Database Error Codes

**NOTE:** Example listing of possible values.

Value	Description
100	EVENT TYPE SEGMENT
200	PATIENT NAME
205	DATE OF BIRTH
210	SEX
215	RACE

Table 4-17. NPCD 001—National Patient Care Database Error Codes

# Glossary

AAC	Austin Automation Center
ACK	General Acknowledgement 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. <sup>4</sup>
ACKNOWLEDGEMENT - 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. <sup>4</sup>
ACKNOWLEDGEMENT - 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. <sup>4</sup>
ACTIVE PATIENTS	Patients who have been seen at a site within the past three years.
ADPAC	Automated Data Processing Application Coordinator.
ADR	The Administrative Data Repository is a centralized database repository for person (PATIENT [#2] and NEW PERSON [#200] files).
ADT	Admission Discharge and Transfer- Part of the Patient Information Management System (PIMS).
ADT/HL7 PIVOT FILE	Changes to any of the fields of patient information will be recorded and an entry created in the ADT/HL7 PIVOT file (#391.71). When an update to a patient's treating facility occurs, this event is to be added to the ADT/HL7 PIVOT file (#391.71) and marked for transmission. A background job will collect these updates and broadcast the appropriate HL7 message (ADT-A08 Patient Update).
ALERTS	Brief online notices that are issued to users as they complete a cycle through the menu system. Alerts are designed to provide interactive notification of pending computing activities, such as the need to reorder supplies or review a patient's clinical test results. Along with the alert message is an indication that the View Alerts common option should be chosen to take further action.
ANCILLARY REVIEWER	This can be a single person or group of people given the responsibility to conduct reviews of potential duplicate record pairs with data in files

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<sup>4</sup> 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™.

## Glossary

other than the PATIENT file (#2). For example, selected personnel in Laboratory, Radiology, and Pharmacy.

### ANSI

American National Standards Institute.

### ANSI MUMPS

The MUMPS programming language is a standard recognized by the American National Standard Institute (ANSI). MUMPS stands for Massachusetts Utility Multi-programming System and is abbreviated as M.

### API

Application Programmer Interface. VistA Application Programmer Interfaces (APIs) are units of programming code provided by a custodial development domain to permit developers outside the custodial domain to accomplish a specified purpose. In some programming languages, APIs are called (sub)routines. APIs in VistA may be defined as extrinsic functions, extrinsic special variables, or label references to routines. VistA APIs fall into the following three categories:

- The first category is "Supported API" These are callable routines, which are supported for general use by all VistA applications.
- The second category is "Controlled Subscription API." These are callable routines for which you must obtain an Integration Agreement (IA - formerly referred to as a DBIA) to use.
- The third category is "Private API," where only a single application is granted permission to use an attribute/function of another VistA package.

These IAs are granted for special cases, transitional problems between versions, and release coordination.

### APPLICATION

VistA software and documentation that supports the automation of a service (e.g., Laboratory or Pharmacy) within the Veterans Health Administration (VHA).

### APPLICATION COORDINATOR

Designated individuals responsible for user-level management and maintenance of an application package such as IFCAP, Lab, Pharmacy, Mental Health, etc.

### APPLICATION PROGRAMMER 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.

### BATCH

The format of a HL7 batch acknowledgement message consists entirely

ACKNOWLEDGEMENTS	of a group of ACK (acknowledgment) messages. In the case of MPI, batch acknowledgements are returned during the initialization process and during the Local/Missing ICN Resolution job. The background job files the ICN, ICN checksum and CMOR, updates the MPI, and then the associated treating facilities and systems. Data returned from this process constitute the acknowledgment of the batch message.
BATCH MESSAGES	There are instances when it is convenient to transfer a batch of HL7 messages. Common examples related to MPI are queries sent to the MPI for an ICN during the initialization process, the resolution of Local or Missing ICNs, and CMOR Batch Comparisons. Such a batch could be sent online using a common file transfer protocol. In the case of the MPI, the HL7 Batch Protocol uses the Batch Header Segment (BHS) and Batch Trailer Segment (BTS) message segments to delineate the batch.
BATCH PROTOCOL, HL7	Protocol utilized to transmit a batch of HL7 messages. The protocol generally uses File Header Segment (FHS), BHS, BTS, and File Trailer Segment (FTS) segments to delineate the batch. In the case of the MPI, the protocol only uses the BHS and BTS segments.
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.
CALLABLE ENTRY POINT	An authorized programmer call that may be used in any VistA application package. The DBA maintains the list of DBIC-approved entry points.
CE	Coded Element 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. <sup>4</sup>
CHUI	CHaracter-based User Interface (i.e., roll-and-scroll).
CLINICAL PATIENT RECORD SYSTEM (CPRS)	Clinical Patient Record System provides a computer-based patient record and organizes and presents all relevant data on a patient in a way that directly supports clinical decision-making. CPRS integrates the extensive set of clinical and administrative applications available within VistA.
CM	Composite data type. A field that is a combination of other meaningful data fields. Each portion is called a component. <sup>4</sup>
CMOR	The Coordinating Master Of Record site is the designated "owner" of the patient's clinical and descriptive data. A patient only has one CMOR at a time, but the CMOR can change. Initially, the MPI assigns

	the CMOR 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. The CMOR is a field that can be found in the PATIENT file (#2).
CO	Central Office.
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. <sup>4</sup>
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.
COORDINATING MASTER OF RECORD (CMOR)	<b>CMOR Business Rules Obsolete, Replaced with Primary View</b> As part of Changes Project, Iteration 4, the concept of a "CMOR facility" is being phased out and will be replaced by the Primary View when Patch MPI*1.0*40 is installed on the Austin MPI. VistA Patch MPIF*1*44 sets all VistA options related to "CMOR" out of order, rendering them obsolete. The OUT OF ORDER MESSAGE field for these options is marked as "Obsolete with Patch MPIF*1.0*44." Obsolete options will be removed from the Coordinating Master of Record (CMOR) Request [MPIF CMOR MGR] menu at a future date.
CQ	Composite Quantity with Units data type. The first component is a quantity and the second is the units in which the quantity is expressed. <sup>4</sup>
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 Data Dictionary is a global containing a description of the kind of data that is stored in the global corresponding to a particular file. VA FileMan uses the data internally for interpreting and processing files.  It contains the definitions of a file's elements (fields or data attributes), relationships 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.
DATA DICTIONARY ACCESS	A user's authorization to write/update/edit the data definition for a computer file. Also known as DD Access.
DATABASE	A set of data, consisting of at least one file, that is sufficient for a given purpose. The VistA database is composed of a number of VA FileMan files. A collection of data about a specific subject, such as the PATIENT file (#2); a data collection has different data fields (e.g. patient name, SSN, Date of Birth, and so on). An organized collection of data about a particular topic.
DATABASE MANAGEMENT SYSTEM	A collection of software that handles the storage, retrieval, and updating of records in a database. A Database Management System (DBMS) controls redundancy of records and provides the security, integrity, and data independence of a database.
DBA	Database Administrator, 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	Database Integration Agreement, 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.
DEMOGRAPHIC DATA	Identifying descriptive data about a patient, such as: name, sex, date of birth, marital status, religious preference, SSN, address, etc.
DEPARTMENT OF	The Department of Veterans Affairs, formerly called the Veterans

## Glossary

VETERANS AFFAIRS	Administration.
DEVICE	Peripheral connected to the host computer, such as a printer, terminal, disk drive, modem, and other types of hardware and equipment associated with a computer. The host files of underlying operating systems may be treated like devices in that they may be written to (e.g., for spooling).
DHCP	Decentralized Hospital Computer Program now known as Veterans Health Information Systems and Technology Architecture (VistA).
DIRECT CONNECT	<p>The Direct Connect is a real-time TCP/IP connection to the MPI to allow for an immediate request for an ICN. Direct Connect is activated when using any of the following PIMS options:</p> <ul style="list-style-type: none"><li>• Register A Patient,</li><li>• Load/Edit Patient Data,</li><li>• Electronic 10-10EZ Processing,</li></ul> <p>and when using the:</p> <ul style="list-style-type: none"><li>• Display Only Query</li></ul>
DIRECT MODE UTILITY	A programmer 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	Department of Defense.
DT	Data Type or Date data type. Always in the format YYYYMMDD. <sup>4</sup>
DUPLICATE RECORD MERGE: PATIENT MERGE	<p>Patient Merge is a VistA application that provides an automated method to eliminate duplicate patient records within the VistA database (i.e., the VistA PATIENT file (#2)). It consists of three steps:</p> <ul style="list-style-type: none"><li>• Search for potential duplicate records pairs</li><li>• Review, verification, and approval of those pairs</li><li>• Merge process</li></ul>
DUZ	Local variable holding the user number that identifies the signed-on user.
ELECTRONIC SIGNATURE CODE	Secret password that some users may need to establish in order to sign documents via the computer.
ELIGIBILITY CODES	Codes representing the basis of a patient's eligibility for care.
ENCRYPTION	Scrambling data or messages with a cipher or code so that they are unreadable without a secret key. In some cases encryption algorithms are one directional, that is, they only encode and the resulting data

	cannot be unscrambled (e.g. access/verify codes).
ENTRY	VA FileMan record. An internal entry number (IEN, the .001 field) uniquely identifies an entry in a file.
ERROR TRAP	A mechanism to capture system errors and record facts about the computing context such as the local symbol table, last global reference, and routine in use. Operating systems provide tools such as the %ER utility. The Kernel provides a generic error trapping mechanism with use of the ^%ZTER global and ^XTER* routines. Errors can be trapped and, when possible, the user is returned to the menu system.
ESR	Enrollment Systems Redesign is a centralized and Reengineered enrollment system.
EVC	Enrollment VistA Changes
EXCEPTION MESSAGE	MPI/PD VistA generates messages and bulletins to alert the user to problems that occur in generating or processing HL7 messages. The MPI/PD Message Exception Menu contains options to manage the problems.
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. <sup>4</sup>  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). <sup>4</sup>
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. <sup>4</sup>
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	Formatted Text 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. <sup>4</sup>
GAL	Global Address List.
GLOBAL VARIABLE	Variable that is stored on disk (M usage).
GUI	Graphical User Interface.
HD	Hierarchic Designator data type. <sup>4</sup>
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.
HLO	<b>HL7 Optimized</b>
HEC	Health Eligibility Center.
HINQ	Hospital Inquiry- The HINQ module provides the capability to request and obtain veteran eligibility data via the VA national telecommunications network. Individual or group requests are sent from a local computer to a remote Veterans Benefits Administration (VBA) computer where veteran information is stored. The VBA network that supports HINQ is composed of four computer systems located in regional VA payment centers.

HIPAA	Health Insurance Portability and Accountability Act
HL7	Health Level 7 is a standard for electronic data exchange/messaging protocol.
HSD&D (Formerly SD&D—System Design and Development)	Health Systems Design and Development
HSITES	Health Systems Implementation Training and Enterprise Support
ICN	Patients are assigned a unique identifier, known as an Integration Control Number, within the process of being added to the MPI database. This number links patients to their records across VHA systems.
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. <sup>4</sup>
IMDQ	The Identity Management Data Quality Team is a group of information technology specialists committed to improving and safeguarding the quality and accessibility of patient data throughout the VA enterprise. They are involved in many data quality initiatives, but their primary role is to assist VHA facilities in all matters related to the MPI.
INPATIENT	Patient who has been admitted to a hospital in order to be treated for a particular condition.
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)	Integration Agreements define agreements between two or more VistA software applications to allow access to one development domain by another. VistA software developers are allowed to use internal entry points (APIs) or other software-specific features that are not available to the general programming public. 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. The DBA maintains and records all IAs in the Integration Agreement database on FORUM. Content can be viewed using the DBA menu or the Health Systems Design & Development's Web page.
INTEGRATION CONTROL	The Integration Control Number is a unique identifier assigned to

## Glossary

NUMBER (ICN)	patients when they are added to the MPI. 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.
IP	Integration Point
IRA	Initial Request Analysis.
IRM	Information Resource Management. A service at VA medical centers responsible for computer management and system security.
IS	Coded value for user defined table's data type. <sup>4</sup>
ISO	Information Security Officer.
ISS	Infrastructure and Security Services (now known as Security Services).
ITAC	Information Technology Approval Committee 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	Independent Validation and Verification team acts to ensure the functional integrity and technical correctness of HSD&D software, processes, and documentation.
KERNEL	VistA software that functions as an intermediary between the host operating system and other VistA software applications so that VistA software can coexist in a standard operating-system-independent computing environment. Kernel provides a standard and consistent user and programmer interface between software applications and the underlying M implementation.
LAN	Local Area Network.
LDAP	Lightweight Directory Access Protocol.
LINK	Non-specific term referring to ways in which files may be related (via pointer links). Files have links into other files.
M (FORMERLY NAMED MUMPS)	Massachusetts General Hospital Utility Multi-Programming System is a software package, which consists of a high level programming language and a built-in database.
MAIL MESSAGE	An entry in the MESSAGE file (#3.9). The VistA electronic mail system (MailMan) supports local and remote networking of messages.

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.
MANAGER ACCOUNT	UCI that can be referenced by non-manager accounts such as production accounts. Like a library, the MGR UCI holds percent routines and globals (e.g., ^%ZOSF) for shared use by other UCIs.
MANDATORY FIELD	Field that requires a value. A null response is not valid.
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. <sup>4</sup>
MASTER PATIENT INDEX (AUSTIN)	The Master Patient Index (MPI) is a database located on a system at the Austin Automation Center in Austin, Texas that holds over 8 million VA Patient entries. The role of the MPI is to uniquely identify a patient and "link" that patient's data throughout Veterans Health Administration (VHA) facility and corporate databases through the Integration Control Number (ICN). The MPI is the authoritative source for a patient's ICN and the ICN is the enterprise-wide identifier for a veteran and the key to accessing a patient's record across multiple databases.
MASTER PATIENT INDEX/PATIENT DEMOGRAPHICS (MPI/PD) VistA	Master Patient Index/Patient Demographics (MPI/PD) software initializes entries in the PATIENT file (#2) with the Master Patient Index, itself. The initialization process assigns an Integration Control Number (ICN), Coordinating Master of Record (CMOR), and creates a Treating Facility list of all sites at which the patient has received care. This information is then updated in the PATIENT file (#2) at all sites where the patient has been treated.
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. <sup>4</sup>
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. <sup>4</sup>
MESSAGE SEGMENTS	Each HL7 message is composed of segments. Segments contain logical groupings of data. Segments may be optional or repeatable. A [ ] indicates the segment is optional, the { } indicates the segment is repeatable. For each message category, there will be a list of HL7 standard segments and/or "Z" segments used for the message.
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. <sup>4</sup>
MFN	Master Files Change Notification message.
MPI AUSTIN	The Master Patient Index (MPI) is a database located on a system at the Austin Automation Center in Austin, Texas that holds over 8 million VA Patient entries. The role of the MPI is to uniquely identify a patient and "link" that patient's data throughout Veterans Health Administration (VHA) facility and corporate databases through the Integration Control Number (ICN). The MPI is the authoritative source for a patient's ICN and the ICN is the enterprise-wide identifier for a veteran and the key to accessing a patient's record across multiple databases.
MPI/PD	Master Patient Index/Patient Demographics (MPI/PD) software initializes entries in the PATIENT file (#2) with the Master Patient Index, itself. The initialization process assigns an Integration Control Number (ICN), Coordinating Master of Record (CMOR), and creates a Treating Facility list of all sites at which the patient has received care. This information is then updated in the PATIENT file (#2) at all sites where the patient has been treated.
MUMPS (ANSI STANDARD)	A programming language recognized by the American National Standards Institute (ANSI). The acronym MUMPS stands for Massachusetts General Hospital Utility Multi-programming System and is abbreviated as M.
NAMESPACE	A convention for naming VistA package elements. The Database Administrator (DBA) assigns unique character strings for package developers to use in naming routines, options, and other package elements so that packages may coexist. The DBA also assigns a separate range of file numbers to each package.

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.
NDBI	National Database Integration
NM	Numeric 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. <sup>4</sup>
NODE	In a tree structure, a point at which subordinate items of data originate. An M array element is characterized by a name and a unique subscript. Thus the terms: node, array element, and subscripted variable are synonymous. In a global array, each node might have specific fields or "pieces" reserved for data attributes such as name.
NON CMOR SITES	Sites that are not the CMOR for a given patient but which nevertheless have an interest in the patient.
NUMERIC FIELD	Response that is limited to a restricted number of digits. It can be dollar valued or a decimal figure of specified precision.
EVS	Enterprise VistA Support.
OBX	Observation/result message. OBX is intended to cover all types of patient specific observation reports except pharmacy. <sup>4</sup>
OIFO	Office of Information Field Office.
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."
PIMS	Patient Information Management System- VistA software package that includes Registration and Scheduling packages.
PL	Patient Location data type. <sup>4</sup>
PN	Person Name data type. A name includes multiple free text components: family name, given name, middle initial or name, suffix, prefix, and degree. <sup>4</sup>

**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.

**PRIMARY VIEW** Patch MPI\*1\*40 constitutes a change in the business process that updates the patient identity fields across VA facilities referred to as the Primary View of the MPI, overview as follows:

- Primary View is an update to the patient identity fields across VA facilities.
- Primary View creates a centralized view of the patient data aka a Primary View
- Primary View has the best data from any combination of sites for the patient
- Synchronizing the patient identity fields becomes centralized under a new set of business rules on the MPI.
- Primary View is a transition from and *disassociated* with the Coordinating Master of Record (CMOR) view of the MPI.
- Primary View removes the burden placed on sites to process the Patient Data Review (PDR) entries.
- Primary View allows for:
  - VistA sites to continue to edit their own patient data.
  - Patient data is sent to a central system (i.e., the Master Patient Index) to determine validity and quality

This is an enterprise view of the most current data for a patient based on authority scoring and the latest data rules. Edits to patient identity traits are evaluated based on the same. The highest score achieves the best quality of data updates to the Primary View.

**Primary View Initialization** Primary View Initialization is a process that occurs on the MPI. This process applies significant enhancements to the MPI business logic to support a more centralized approach to creating and maintaining an Enterprise "Primary View" of the Patient record based on Business Rules instead of CMOR values. "Primary View" is the new centralized Enterprise "View" of a patient on the MPI after the initialization process has been executed, making existing patients on the MPI "Primary View Initialized". Any subsequent records created after "Primary View Initialization" has been run on the MPI will automatically be "Primary View" based.

**PRIVATE INTEGRATION** Where only a single application is granted permission to use an attribute/function of another VistA package. These IAs are granted for

AGREEMENT	special cases, transitional problems between versions, and release coordination. A Private IA is also created by the requesting package based on their examination of the custodian package's features. Example: one package distributes a patch from another package to ensure smooth installation.
PROMPT	The computer interacts with the user by issuing questions called prompts, to which the user issues a response.
PROTOCOL	Entry in the PROTOCOL file (#101). Used by the Order Entry/Results Reporting (OE/RR) package to support the ordering of medical tests and other activities.
PSEUDO-SSNs	False Social Security Numbers that are calculated internally to VistA and cannot be mistaken for valid SSNs because they end in P.
PSIM	Person Service Identity Management
QRY	Query message. <sup>4</sup>
RECEIVING SITE	Receiving Site- As it relates to HL7 Messages, it is the site that the message was sent to.
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).
REGISTRATION PROCESS	During a registration, if a patient does not have an ICN, the patient is checked against the entries in the MPI to determine if the patient already is established or needs to be added. The MPI may return a list of patients who are possible matches. If the patient is truly new and there are no potential matches on the MPI, the MPI will assign an ICN and assigns the requesting site as the CMOR. If the patient is already known at the MPI, the ICN and CMOR is returned and a HL7 message is sent to the CMOR to add this new facility to the list of Treating Facilities for this patient. Registration for patients who already have an ICN at the Facility. At the CMOR site, ADT-A04 Registration HL7 messages are sent to the MPI and the MPI then sends updates to those sites where the patient is known. These messages update the date of last activity and any changes to descriptive data. At a non-CMOR site an ADT-A04 message is sent to the CMOR, via the MPI.
REMOTE PROCEDURE CALL (RPC)	Remote Procedure Call is a protocol that one program can use to request a service from a program located on another computer network. Essentially M code may take optional parameters to do some work and then return either a single value or an array back to the client application.
REPEATED VALUE	Some fields may contain many repeat fields. For example, the diagnoses

field may contain many different diagnoses.<sup>4</sup>

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. <sup>4</sup>
REQUESTING SITE	Requesting Site- As is relates to HL7 Messages, it is the site initiating a message to another site requesting some action be taken.
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	Standards and Conventions. 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 Standards and Conventions Committee. This Committee is responsible for maintaining the SAC.
SCHEDULING OPTIONS	The technique of requesting that Task Manager run an option at a given time, perhaps with a given rescheduling frequency.
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.
SECURITY KEY	The purpose of Security Keys is to set a layer of protection on the range of computing capabilities available with a particular software package. The availability of options is based on the level of system access granted to each user.
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. <sup>4</sup>
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. <sup>4</sup>
SEGMENT TERMINATOR	The segment terminator is the last character of every segment. It is always the ASCII CR character (hex 0D). <sup>4</sup>
SENSITIVE PATIENT	Patient whose record contains certain information, which may be deemed sensitive by a facility, such as political figures, employees, patients with a particular eligibility or medical condition. If a shared patient is flagged as sensitive at one of the treating sites, a bulletin is sent to the DG SENSITIVITY mail group at each subscribing site telling where, when, and by whom the flag was set. Each site can then review whether the circumstances meet the local criteria for sensitivity flagging.
SEPG	Software Engineering Process Group.
SHARED PATIENT	Patient who has been seen at more than one site. The CMOR keeps the Treating Facility list updated every time a new facility where the patient has been seen identifies itself to the MPI. The CMOR then broadcasts, through the MPI, the updated lists to all the other facilities that share this patient.
SI	Sequence ID data type. A positive integer in the form of a NM field. <sup>4</sup>
SITE MANGER/IRM CHIEF	At each site, the individual who is responsible for managing computer systems, installing and maintaining new modules, and serving as a liaison to the CIO Field Offices.
SOFTWARE	The set of programs, files, documentation, help prompts, and

	<p>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).</p>
SPACEBAR RETURN	<p>You can answer a VA FileMan prompt by pressing the spacebar and then the Return key. This indicates to VA FileMan that you would like the last response you were working on at that prompt recalled.</p>
SPECIAL QUEUING	<p>Option attribute indicating that Task Manager should automatically run the option whenever the system reboots.</p>
SS	<p>Security Services (formerly known as Infrastructure and Security Services).</p>
ST	<p>String data type. String Data is left justified with trailing blanks optional. Any printable ASCII characters are allowed.<sup>4</sup></p>
SUBCOMPONENT SEPARATOR	<p>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 "&amp;" 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.<sup>4</sup></p>
SUBSCRIPT	<p>A symbol that is associated with the name of a set to identify a particular subset or element. In M, a numeric or string value that is enclosed in parentheses, is appended to the name of a local or global variable, and identifies a specific node within an array.</p>
SUPPORTED REFERENCE INTEGRATION AGREEMENT	<p>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 package 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 packages to request an IA to use these references; they are open to all by default.</p>
TASK MANAGER	<p>Kernel module that schedules and processes background tasks (also called TaskMan)</p>
TCP/IP	<p>Transaction Control Protocol/Internet Protocol. A set of protocols for Layers 3 (Network) and 4 (Transfer) of the OSI network model. TCP/IP</p>

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.<sup>4</sup>

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).
TREATING FACILITY	Any facility (VAMC) where a patient has applied for care, or has been added to the local PATIENT file (#2) (regardless of VISN) and has identified this patient to the MPI will be placed in the TREATING FACILITY LIST file (#391.91).
TREATING FACILITY LIST	Table of institutions at which the patient has received care. This list is used to create subscriptions for the delivery of patient clinical and demographic information between sites.
TRIGGER	A type of VA FileMan cross-reference. Often used to update values in the database given certain conditions (as specified in the trigger logic). For example, whenever an entry is made in a file, a trigger could automatically enter the current date into another field holding the creation date.
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. <sup>4</sup>
TS	Time Stamp data type. Contains the exact time of an event, including the date and time. <sup>4</sup>
TX	Text data type. String data meant for user display on a terminal or printer. <sup>4</sup>
UCI	User Class Identification, a computing area. The MGR UCI is typically the Manager's account, while VAH or ROU may be Production accounts.
USER ACCESS	This term is used to refer to a limited level of access, to a computer system, which is sufficient for using/operating a package, but does not allow programming, modification to data dictionaries, or other

operations that require programmer access. Any option, for example, can be locked with the key XUPROGMODE, which means that invoking that option requires programmer access.

The user's access level determines the degree of computer use and the types of computer programs available. The System Manager assigns the user an access level.

VA	Department of Veterans Affairs
VA FILEMAN	VistA's Database Management System (DBMS). The central component that defines the way standard VistA files are structured and manipulated.
VAMC	Veterans Affairs Medical Center.
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	VistA Data Systems & Integration.
VERIFY CODE	The Kernel's Sign-on/Security system uses the Verify code to validate the user's identity. This is an additional security precaution used in conjunction with the Access code. Verify codes shall be at least eight characters in length and contain three of the following four kinds of characters: letters (lower- and uppercase), numbers, and, characters that are neither letters nor numbers (e.g., "#", "@", or "\$"). If entered incorrectly, the system does not allow the user to access the computer. To protect the user, both codes are invisible on the terminal screen.
VHA	Veterans Health Administration.
VISN	Veterans Integrated Service Network
VISTA	<p>Veterans Health Information Systems and Technology Architecture (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. It is both roll-and-scroll- and GUI-based software that undergoes a quality assurance process to ensure conformity with namespacing and other VistA standards and conventions (see <u>SAC</u>).</p> <p>Server-side code is written in M, and, via Kernel, runs on all major M implementations regardless of vendor. Client-side code is written in Java or Borland Delphi and runs on the Microsoft operating system.</p>

WAN	Wide Area Network.
XCN	Extended Composite ID Number and Name data type. In version 2.3, use instead of the CN datatype. <sup>4</sup>
XON	Extended composite name and ID number for organizations data type. <sup>4</sup>
XPN	Extended person name data type. In version 2.3, replaces the PN data type. <sup>4</sup>
XTN	Extended telecommunications number data type. In version 2.3, replaces the TN data type. <sup>4</sup>
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. <sup>4</sup>

**NOTE:** For a comprehensive list of commonly used infrastructure- and security-related terms and definitions, please visit the Security and Other Common Services (S&OCS) Glossary Web page at the following Web address:

<http://vista.med.va.gov/iss/glossary.asp>

For a comprehensive list of acronyms, please visit the Security and Other Common Services (S&OCS) Acronyms Web site at the following Web address:

<http://vaww.vista.med.va.gov/iss/acronyms/index.asp>



# Appendix A—Communication with MPI Specification Agreement

The table below shows a list of messages found in the MPI HL7 Specification. Each HL7 message indicates if it applies to a non-VistA system. All messages must be processed and all messages expect Commit and Application Level Acknowledgements.

**NOTE:** Currently, VistA applications update demographic information on the MPI using the following HL7 messages:

- ADT-A04—Register a Patient
- ADT-A08—Update Patient Information
- ADT-A31 – Update Person Information

In the future, enterprise level applications coming from Person Services that need to update demographic information on the MPI in coordination with the enterprise view of patient record will use the following HL7 message:

- ADT-A31—Update Person Information

Trigger Event	Event Supported HL7 V2.4 Message	Description
Query MPI for match	<a href="#">VTQ-Q02</a>  <a href="#">QBP-Q22/RSP-K22</a> <a href="#">MFN-M05</a>	<p>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 (changed from ADT-A31 in patches MPI*1.0*32 and MPIF*1.0*38) (<b>NOTE:</b> supported for internal VistA VAMC messaging)</p> <p>This find Candidates query is used to return a list of one ICN candidates for a given local identifier (i.e. dfn/station#). The query can also be used to establish a correlation to an ICN and/or an association to an existing correlated id (i.e. dfn/station#).</p> <p><b>NOTE:</b> Supported for external VistA VAMC messaging.</p>
Add new patient to the MPI	<a href="#">ADT-A28</a>  <a href="#">VQQ-Q02</a> (via Local/Missing ICN Resolution Job) <a href="#">MFN-M05</a>	<p>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.</p> <p>The MPI will add a new patient if the VQQ-Q02 is sent in the form of the Local/Missing ICN Resolution Job and the patient is not found. The MPI will return the ICN in the ACK/Q02 Local/Missing ICN Resolution job response.</p>
Link to an existing patient on the MPI	<a href="#">ADT-A24</a> <a href="#">MFN-M05</a>	<p>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.</p>

Update to fields on an existing MPI entry	<a href="#">ADT-A04</a> , <a href="#">ADT-A08</a> <a href="#">MFN-M05</a>	The MPI will accept patient updates via ADT-A04 (register a patient) or ADT-A08 (update patient information) and will broadcast out to the authoritative source system if the update came from a non-authoritative source system and to all systems if it came from the authoritative source system.
Update Person Information outside of an event	<a href="#">ADT-A31</a>	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]).  The MPI also broadcast out an ADT-A31 message to synchronize the identity management elements to the MPI Patient "primary view".
Update to date last treated	<a href="#">ADT-A01</a> , <a href="#">ADT-A03</a> , <a href="#">MFN-M05</a>	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
Resolution of duplicates at the site where both entries exist on the MPI	<a href="#">ADT-A40</a> , <a href="#">ADT-A24</a> <a href="#">MFN-M05</a>	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).
Resolution of duplicates on the MPI	<a href="#">ADT-A24</a> <a href="#">MFN-M05</a>	The MPI will notify sites of a duplicate resolution via ADT-A24 (link patient information).
Identification and resolution of a mismatched patient	<a href="#">ADT-A43</a> <a href="#">MFN-M05</a>	The MPI will notify sites of a mismatched patient via ADT-A43 (move patient - patient identifier list) This maintenance message is used to update a records ICN (i.e. enterprise ID trait)
Change of CMOR assignment	<a href="#">ADT-A31</a>	The MPI will accept a change in CMOR assignment via an ADT-A31 from the current CMOR via ADT-A31 (update person information)
Patient Query	<a href="#">QRY/ADR-A19</a>	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.
Unlink Patient	<a href="#">ADT-A37</a> <a href="#">MFN-M05</a>	The sending site is requesting to unlink its patient record from an ICN. This action reverses the Link.
Treating Facility List Update	<a href="#">MFN-M05</a>	The MPI will send out an MFN-M05 if the treating facility list is modified or if the date last treated or event reason changes.  This message can be generated as a result of another message being processed on the MPI or maybe triggered manually.

Table Appendix A-1. HL7 messages for non-VistA systems

# Index

## A

- A01 Event, 2-6
- A03 Event, 2-8
- A04 Event, 2-27
- A08 Event, 2-29
- A19 Event, 2-44
- A24 Event, 2-10, 2-14
- A28 Event, 2-4
- A31 Event, 2-32, 2-36, 2-39
  - message sent requesting CMOR change, 2-36, 2-39
- A37 Event, 2-52
- A40 Event, 2-22
- A43 Event, 2-24
- Accept Acknowledgment Type, MSH, 3-36
- Acknowledgment Code, MSA, 3-25
- Acronyms (SS)
  - Web page address, Glossary, 21
- Add Person or Patient Information
  - ADT-A28, 2-4
    - App ACK sent from MPI to sending system, 2-5
    - Commit ACK returned to MPI from sending system, 2-6
    - Commit ACK sent from MPI to sending system, 2-5
      - sent to MPI, 2-5
- Administrative sex, 3-52
  - PID, 3-52
- Admit a Patient option, 2-6
- Admit/Visit Notification
  - ADT-A01, 2-6
    - App ACK sent from MPI to sending system, 2-7
    - Commit ACK returned to MPI from sending system, 2-7
    - Commit ACK sent from MPI to sending system, 2-7
      - sent to MPI, 2-7
- Adobe
  - Web page address, xxiv
- Adobe Acrobat Quick Guide
  - Web page address, xxiv
- ADT/HL7 PIVOT File (#391.71), 1-3, 2-29
- ADT-A01 (Admit/Visit Notification), 2-6
  - App ACK sent from MPI to sending system, 2-7
  - Commit ACK returned to MPI from sending system, 2-7
  - Commit ACK sent from MPI to sending system, 2-7
    - msg sent to MPI, 2-7
- ADT-A03 (Discharge/End Visit), 2-8
  - App ACK sent from MPI to sending system, 2-9
  - Commit ACK returned to MPI from sending system, 2-9
  - Commit ACK sent from MPI to sending system, 2-9
    - sent to MPI, 2-9
- ADT-A04 (Register a Patient), 2-27
  - App ACK sent from MPI to sending system, 2-29
  - Commit ACK returned to MPI from sending system, 2-29
  - Commit ACK sent from MPI to sending system, 2-28
- ADT-A04 Register a Patient
  - msg sent to MPI, 2-28
- ADT-A08 (Update Patient Information), 2-29
  - App ACK sent from MPI to receiving system, 2-31
  - Commit ACK returned to MPI from receiving system, 2-32
  - Commit ACK sent from MPI to receiving system, 2-31
- ADT-A08Update Patient Information)
  - msg sent to MPI, 2-31
- ADT-A24 (Link Patient Information), 2-10
  - App ACK sent from MPI to sending system, 2-12, 2-15
  - App ACK sent to MPI, 2-13, 2-14
  - attempting to Subscribe to ICN, 2-11
  - Commit ACK returned from MPI to sending system, 2-13, 2-14, 2-15
  - Commit ACK returned to MPI from sending system, 2-12
  - Commit ACK sent from MPI to sending system, 2-12
    - Commit ACK sent to MPI, 2-13, 2-14
    - msg sent from MPI to sending system, 2-13
    - msg sent to MPI, 2-11
    - msg sent to MPI from site to Link PID2 ICN to PID1 ICN, 2-15
    - notify sending system of change to ICN assignment, 2-13
- ADT-A24 (Link Patient Information) sent from the MPI to site, notifying sending system of duplicate record merge, 2-14
- ADT-A28 (Add Person or Patient Information), 2-4
  - App ACK sent from MPI to sending system, 2-5
  - Commit ACK returned to MPI from sending system, 2-6
  - Commit ACK sent from MPI to sending system, 2-5
  - msg sent to MPI, 2-5

## Index

- ADT-A31 (Enterprise Update Person Information), 2-39
  - ADT-A31 (Update CMOR), 2-36
    - Commit ACK sent to MPI from CMOR, 2-37
    - Commit ACK sent to MPI from VistA, 2-37
    - msg received at CMOR for
      - approving/disapproving CMOR change request, 2-37
  - ADT-A31 (Update Person Information), 2-32
    - App ACK sent from MPI to VistA, 2-34
    - App ACK sent to VistA from MPI, 2-34, 2-40
    - Commit ACK returned to MPI from VistA, 2-34
    - Commit ACK sent from MPI to VistA, 2-33
    - Commit ACK sent to VistA from MPI, 2-34, 2-40
    - msg sent from MPI to VistA, 2-34, 2-40
  - ADT-A37 (Add Person or Patient Information), 2-52
  - ADT-A37 (Unlink Patient Information)
    - App ACK sent to MPI, 2-53
    - Commit ACK sent from MPI to sending system, 2-53
    - Commit ACK sent to MPI, 2-53
    - msg sent to MPI, 2-53
  - ADT-A40 (Merge Patient—Patient Identifier List), 2-22
    - App ACK sent from MPI to sending system, 2-23
    - Commit ACK returned to MPI from sending system, 2-24
    - Commit ACK sent from MPI to sending system, 2-23
    - msg sent to MPI, 2-23
  - ADT-A43 (Move Patient Information—Patient Identifier List), 2-24
    - App ACK sent to MPI, 2-26
    - Commit ACK returned to MPI from receiving system, 2-26
    - Commit ACK sent to MPI, 2-26
    - msg from MPI to receiving system, 2-25
  - Alternate patient ID, 3-50
    - PID, 3-50
  - Appendix A
    - Communication with MPI Specification Agreement, 1
  - Application Acknowledgment Type, MSH, 3-36
  - Application and Commit Level Acknowledgement requirements, 1-2
  - Appointment Check-in/Check-out option, 2-8
  - ASSOCIATED FACILITY File (#985.5), 2-2, 2
  - Assumptions About the Reader, xxiii
- ## B
- Background Messages
    - Local/Missing ICN Resolution Background Job, 1-3
    - UPDATE BATCH JOB FOR HL7 v2.3, 1-3
- Batch Comment
    - BHS, 3-5
    - BTS, 3-7
  - Batch Control ID, BHS, 3-5
  - Batch Creation Date/Time, BHS, 3-5
  - Batch Encoding Characters, BHS, 3-4
  - Batch Field Separator, BHS, 3-3
  - Batch Header Segment, 3-2
  - Batch Message Count, BTS, 3-7
  - Batch Messages
    - real-time connection query sent to MPI, 2-51
  - Batch Name/ID/Type, BHS, 3-5
  - Batch Receiving Application, BHS, 3-4
  - Batch Receiving Facility, BHS, 3-4
  - Batch Security, BHS, 3-5
  - Batch Sending Application, BHS, 3-4
  - Batch Sending Facility, BHS, 3-4
  - Batch Totals, BTS, 3-7
  - Batch Trailer Segment, 3-7
  - BHS, 3-2, 3-7
    - Batch Comment, 3-5
    - Batch Control ID, 3-5
    - Batch Creation Date/Time, 3-5
    - Batch Encoding Characters, 3-4
    - Batch Field Separator, 3-3
    - Batch Name/ID/Type, 3-5
    - Batch Receiving Application, 3-4
    - Batch Receiving Facility, 3-4
    - Batch Security, 3-5
    - Batch Sending Application, 3-4
    - Batch Sending Facility, 3-4
    - Field Definitions, 3-3
    - Reference Batch Control ID, 3-6
  - Birth order, 3-58
    - PID, 3-58
  - Birth place, 3-57
    - PID, 3-57
  - Breed Code
    - PID, 3-59
  - BTS
    - Batch Comment, 3-7
    - Batch Message Count, 3-7
    - Batch Totals, 3-7
    - Field Definitions, 3-7
- ## C
- Citizenship, 3-58
    - PID, 3-58
  - Column Description, RDF, 3-84
  - Column Value, RDT, 3-87
  - Comment, NTE, 3-39
  - Commit and Application Level Acknowledgement requirements, 1-2

Communication with MPI Specification Agreement,  
1  
Contents, ix  
Continuation pointer, 3-8  
Continuation style, 3-8  
Country code, MSH, 3-36  
County code, 3-53  
PID, 3-53

## D

Date/time of birth  
PID, 3-51  
Date/Time of birth, 3-51  
Date/Time of Message, MSH, 3-34  
Deferred Response Type, QRD, 3-76  
Deferred Response Date/Time, QRD, 3-76  
Delayed Acknowledgment Type, MSA, 3-26  
Delimiter(s) Included Data in Field Value, HL7, 1-2  
DG ADMIT PATIENT option, 2-6  
DG DISCHARGE PATIENT option, 2-8  
DG REGISTER A PATIENT option, 2-27  
Direct Connect, 1-4  
Discharge a Patient option, 2-8  
Discharge/End Visit  
ADT-A03, 2-8  
App ACK sent from MPI to sending system, 2-9  
Commit ACK returned to MPI from sending system, 2-9  
Commit ACK sent from MPI to sending system, 2-9  
msg sent to MPI, 2-9  
Display Only Query option, 1-4  
Documentation Revisions, iii  
Driver's license number—Patient, 3-57  
DSC, 3-8  
Field Definitions, 3-8

## E

Effective Date/Time  
MFE, 3-18  
Encoding Characters, MSH, 3-32  
Enterprise Update Person Information  
ADT-A31, 2-39  
ERR, 3-9  
Error Code and Location (CM), 3-9  
Field Definitions, 3-9  
Error Code and Location (CM), ERR, 3-9  
Error Condition, MSA, 3-26  
Error Segment, 3-9  
Ethnic group, 3-57  
PID, 3-57  
Event Facility, EVN, 3-13  
Event Occurred, EVN, 3-12

Event Reason Code Name, ZET, 3-96, 3-100  
Event Reason Code, EVN, 3-11  
Event Reason for Date of Last Treatment, 3-96  
Event Type Code, EVN, 3-10  
Event Type Segment, 3-10  
Example, 3-12  
eventsA01, 2-6  
eventsA03, 2-8  
eventsA04, 2-27  
eventsA08, 2-29  
eventsA19, 2-44  
eventsA24, 2-10  
eventsA28, 2-4  
eventsA31, 2-32, 2-36, 2-39  
eventsA37, 2-52  
eventsA40, 2-22  
eventsA43, 2-24  
eventsK22, 2-17  
eventsM05, 2-42  
eventsQ02, 2-48  
eventsQ22, 2-17  
EVN, 3-10  
Event Facility, 3-13  
Event Occurred, 3-12  
Event Reason Code, 3-11  
Event Type Code, 3-10  
Example, 3-12  
Field Definitions, 3-10  
Operator ID, 3-12  
Recorded Date/Time, 3-11  
example messages  
Add Person or Patient Information (App ACK sent from MPI to sending system), 2-5  
Add Person or Patient Information (Commit ACK returned to MPI from sending system), 2-6  
Add Person or Patient Information (Commit ACK sent from MPI to sending system), 2-5  
Add Person or Patient Information (sent to MPI), 2-5  
Admit/Visit Notification (App ACK sent from MPI to sending system), 2-7  
Admit/Visit Notification (Commit ACK returned to MPI from sending system), 2-7  
Admit/Visit Notification (Commit ACK sent from MPI to sending system), 2-7  
Admit/Visit Notification (sent to MPI), 2-7  
Discharge/End Visit (App ACK sent from MPI to sending system), 2-9  
Discharge/End Visit (Commit ACK returned to MPI from sending system), 2-9  
Discharge/End Visit (Commit ACK sent from MPI to sending system), 2-9  
Discharge/End Visit (sent to MPI), 2-9  
EVN—Event Type Segment, 3-12

- Find Candidates query (Commit ACK returned from MPI to sending system), 2-19
- Find Candidates query (Commit ACK sent from MPI to sending system), 2-18
- Find Candidates query (Commit ACK sent to MPI), 2-20, 2-21
- Find Candidates query (sent to MPI), 2-18
- Find Candidates query (sent to MPI)—create site association, 2-20
- Find Candidates query—sending facility unknown to MPI (sent to MPI), 2-19
- Link Patient Information
  - attempting to Subscribe to ICN, 2-11
  - notify sending system of change to ICN assignment, 2-13
  - sent from MPI to site, notifying sending system of duplicate record merge, 2-14
  - sent to MPI from site to Link PID2 ICN to PID1 ICN, 2-15
- Link Patient Information (App ACK sent from MPI to sending system), 2-12, 2-15
- Link Patient Information (App ACK sent to MPI), 2-13, 2-14
- Link Patient Information (Commit ACK returned from MPI to sending system), 2-13, 2-14, 2-15
- Link Patient Information (Commit ACK returned to MPI from sending system), 2-12
- Link Patient Information (Commit ACK sent from MPI to sending system), 2-12
- Link Patient Information (Commit ACK sent to MPI), 2-13, 2-14
- Link Patient Information (sent from MPI to sending system), 2-13
- Link Patient Information (sent to MPI), 2-11
- Merge Patient—Patient Identifier List (App ACK sent from MPI to sending system), 2-23
- Merge Patient—Patient Identifier List (Commit ACK returned to MPI from sending system), 2-24
- Merge Patient—Patient Identifier List (Commit ACK sent from MPI to sending system), 2-23
- Merge Patient—Patient Identifier List (sent to MPI), 2-23
- Move Patient Information—Patient Identifier List (App ACK sent to MPI), 2-26
- Move Patient Information—Patient Identifier List (Commit ACK returned to MPI from receiving system), 2-26
- Move Patient Information—Patient Identifier List (Commit ACK sent to MPI), 2-26
- Move Patient Information—Patient Identifier List (sent from MPI to receiving system), 2-25
- Patient Query (Commit ACK sent from MPI), 2-46, 2-47
- Patient Query (Commit ACK sent to MPI), 2-45, 2-47
- Patient Query (patient is known at queried facility), 2-45
- Patient Query (patient not known at queried facility), 2-47
- Patient Query (sent from MPI), 2-45, 2-47
- Query for Patient Matches (real-time connection query sent to MPI), 2-48
- Query for Patient Matches (real-time connection query sent to MPI—batch message example), 2-51
- Register a Patient (App ACK sent from MPI to sending system), 2-29
- Register a Patient (Commit ACK returned to MPI from sending system), 2-29
- Register a Patient (Commit ACK sent from MPI to sending system), 2-28
- Register a Patient (sent to MPI), 2-28
- Response (Commit ACK returned from MPI to sending system), 2-21
- Response (Commit ACK sent from MPI to sending system), 2-20
- Response—Site/DFN pair found on MPI (sent to sending system), 2-19, 2-21
- RSP-K22 (Response)—site not found in MPI SITE MONITOR file sent to the site, 2-20
- Unlink Patient Information (App ACK sent to MPI), 2-53
- Unlink Patient Information (Commit ACK sent from MPI to sending system), 2-53
- Unlink Patient Information (Commit ACK sent to MPI), 2-53
- Unlink Patient Information (sent to MPI), 2-53
- Update CMOR (Commit ACK sent to MPI from CMOR), 2-37
- Update CMOR (Commit ACK sent to MPI from VistA), 2-37
- Update CMOR (received at CMOR for approving/disapproving CMOR change request), 2-37
- Update Patient Information (App ACK sent from MPI to receiving system), 2-31
- Update Patient Information (Commit ACK returned to MPI from receiving system), 2-32
- Update Patient Information (Commit ACK sent from MPI to receiving system), 2-31
- Update Patient Information (sent to MPI), 2-31
- Update Person Information
  - sent requesting CMOR change, 2-36, 2-39
- Update Person Information (App ACK sent from MPI to VistA), 2-34
- Update Person Information (App ACK sent to VistA from MPI), 2-34, 2-40

Update Person Information (Commit ACK returned to MPI from VistA), 2-34  
 Update Person Information (Commit ACK sent from MPI to VistA), 2-33  
 Update Person Information (Commit ACK sent to VistA from MPI), 2-34, 2-40  
 Update Person Information (sent from MPI to VistA), 2-34, 2-40  
 Update Treating Facility (App ACK sent to MPI), 2-43  
 Update Treating Facility (Commit ACK returned from MPI to sending system), 2-43  
 Update Treating Facility (Commit ACK sent to MPI), 2-43  
 Update Treating Facility (received from MPI), 2-43  
 Execution and delivery time, 3-82  
 Expected admit date, 3-67

## F

### Field Definitions

BHS, 3-3  
 BTS, 3-7  
 DSC, 3-8  
 ERR, 3-9  
 EVN, 3-10  
 MFA, 3-14  
 MFE, 3-17  
 MFI, 3-19  
 MRG, 3-21  
 MSA, 3-25  
 MSH, 3-32  
 NTE, 3-38  
 PD1, 3-44  
 PID, 3-49  
 PV1, 3-63, 3-67  
 QAK, 3-69  
 QPD, 3-71  
 QRD, 3-75  
 RDF, 3-84  
 RDT, 3-87  
 RPC, 3-80  
 VTQ, 3-89  
 ZET, 3-96  
 ZPD, 3-100  
 Field Separator, MSH, 3-32  
 Figures and Tables, xiii  
 File-Level Event Code, MFI, 3-20  
 files  
   ADT/HL7 PIVOT (#391.71), 1-3, 2-29  
   INSTITUTION (#4), 3-18  
   PATIENT (#2), 1-3, 1-5  
   TREATING FACILITY (#391.91), 1-4, 3-11, 3-12  
 Find Candidates (QBP) and Response (RSP)

QBP-Q22 and RSP-K22, 2-17  
 Find Candidates query  
   Commit ACK returned from MPI to sending system, 2-19  
   Commit ACK sent from MPI to sending system, 2-18  
   Commit ACK sent to MPI, 2-20, 2-21  
   sending facility unknown to MPI (msg sent to MPI), 2-19  
   sent to MPI, 2-18  
   sent to MPI—create site association, 2-20

## G

Glossary, 1  
 SS Web page address, Glossary, 21

## H

Health Systems Design & Development  
   Web page address, xxiii  
 Help at Prompts, xxii  
 Hit count total, 3-70  
 HL7 Attribute Table - PV2 – Patient visit – additional information, 3-65  
 HL7 Attribute Table—QPD, 3-71  
 HL7 Commit and Application Level Acknowledgement, 1-2  
 HL7 Delimiter(s) Included Data in Field Value, 1-2  
 HL7 Interface Specifications, 1-1  
 HL7 interface standards, Version 2.4, 1-1  
**HL7 Optimized**, 8  
 HL7 Optimized (HLO), 1-1  
 HL7 Standards Documentation  
   Web page address, xxiv  
 HL7 tables  
   0003 EVN—ADT/R Event Type Codes, 3-11  
   0005—Race, 4-1  
   0008—Acknowledgement Code, 3-25  
   0048—What Subject Filter, 3-78  
   0091—Query priority, 3-80  
   0091—Query Priority, 3-76  
   0102—Delayed Acknowledgement type, 3-26  
   0103—Processing ID, 3-35  
   0104—Version ID, 3-36  
   0105—Source of Comment, 3-39  
   0106—Query/Response Format Code, 3-76  
   0126—Quantity limited request, 3-81  
   0126—Quantity Limited Request, 3-77  
   0136—Yes/no indicator, 3-44  
   0155—Accept/Application Acknowledgement Conditions, 3-36  
   0175—Master File Identifier Code, 3-19  
   0178—File Level Event Code, 3-20  
   0179—Response Level, 3-20

## Index

0180—Record-level Event Code, 3-17  
0200—Name type, 3-51  
0202—Telecommunication Equipment Type, 3-54  
0203—Identifier type, 3-50  
0208—Query Response Status, 3-69  
0209—Relational operator, 3-91  
0210—Relational conjunction, 3-92  
0355—Primary key value type, 3-15  
0357—Message Error Condition Codes, 3-26  
0391—Segment group, 3-83  
0394—Response modality, 3-81  
0395—Modify indicator, 3-82  
0398—Continuation style code, 3-8  
0399—Country Code, 3-37  
BHS—Batch Header, 3-2  
BTS—Batch Trailer, 3-7  
DSC—Continuation Pointer, 3-8  
ERR—Error, 3-9  
EVN—Event Type, 3-10  
HL7 field designation numbers and translations, 3-85, 3-87  
MFA—Master File Acknowledgement, 3-14  
MFE—Master File Entry, 3-17  
MFI—Master File Identification, 3-19  
MRG—Merge Patient Information, 3-21  
MSA—Message Acknowledgement, 3-24  
MSH—Message Header, 3-28  
NTE—Notes and Comments, 3-38  
OBX—Observation/Result, 3-40  
PD1—Patient Additional Demographic, 3-43  
PID—Patient Identification, 3-46  
PVI Patient Visit, 3-60  
QAK—Query Acknowledgement, 3-68  
QPD—Query Parameter Definition, 3-71  
QRD—Original-Style Query Definition, 3-75  
RCP—Response Control Parameter, 3-80  
RDF—Table Row Definition, 3-84  
RDT—Table Row Data, 3-87  
VTQ—Virtual Table Query Request, 3-89  
HLO, 8  
HLO (HL7 Optimized), 1-1  
How to  
    Obtain Technical Information Online, xxii  
    Use this Manual, xxi

## I

Identity Unknown Indicator  
    PID, 3-58  
INSTITUTION File (#4), 3-18  
Introduction, 1-1

## K

K22 Event, 2-17

## L

Last Update Date/Time  
    PID, 3-59  
Last Update Facility  
    PID, 3-59  
Link Patient Information  
    ADT-A24, 2-10  
    App ACK sent from MPI to sending system, 2-12, 2-15  
    App ACK sent to MPI, 2-13, 2-14  
    attempting to Subscribe to ICN, 2-11  
    Commit ACK returned from MPI to sending system, 2-13, 2-14, 2-15  
    Commit ACK returned to MPI from sending system, 2-12  
    Commit ACK sent from MPI to sending system, 2-12  
    Commit ACK sent to MPI, 2-13, 2-14  
    msg sent from MPI to site, notifying sending system of duplicate record merge, 2-14  
    msg sent to MPI from site to Link PID2 ICN to PID1 ICN, 2-15  
    notify sending system of change to ICN assignment, 2-13  
    sent from MPI to sending system, 2-13  
    sent to MPI, 2-11

## M

M05 Event, 2-42  
Marital status, 3-55  
    PID, 3-55  
Master File Acknowledgment Segment, 3-14  
Master File Entry Segment, 3-17  
Master File Identification Segment, 3-19  
Master File Identifier, MFI, 3-19  
Merge Patient Information Segment, 3-21  
Merge Patient—Patient Identifier List  
    ADT-A40, 2-22  
    App ACK sent from MPI to sending system, 2-23  
    Commit ACK returned to MPI from sending system, 2-24  
    Commit ACK sent from MPI to sending system, 2-23  
    sent to MPI, 2-23  
Message Acknowledgment Segment, 3-24  
Message Control ID  
    MSA, 3-25  
    MSH, 3-35  
Message Header Segment, 3-28  
Message query name, 3-68, 3-70, 3-71  
Message Type, MSH, 3-34  
Messages  
    ADT-A01 (Admit/Visit Notification), 2-6

- App ACK sent from MPI to sending system, 2-7
- Commit ACK returned to MPI from sending system, 2-7
- Commit ACK sent from MPI to sending system, 2-7
  - sent to MPI, 2-7
- ADT-A03 (Discharge/End Visit), 2-8, 2-9
  - App ACK sent from MPI to sending system, 2-9
  - Commit ACK returned to MPI from sending system, 2-9
  - Commit ACK sent from MPI to sending system, 2-9
- ADT-A04 (Register a Patient), 2-27
  - App ACK sent from MPI to sending system, 2-29
  - Commit ACK returned to MPI from sending system, 2-29
  - Commit ACK sent from MPI to sending system, 2-28
- ADT-A04 Register a Patient
  - sent to MPI, 2-28
- ADT-A08 (Update Patient Information), 2-29
  - App ACK sent from MPI to receiving system, 2-31
  - Commit ACK returned to MPI from receiving system, 2-32
  - Commit ACK sent from MPI to receiving system, 2-31
    - sent to MPI, 2-31
- ADT-A24 (Link Patient Information), 2-10
  - App ACK sent from MPI to sending system, 2-12, 2-15
  - App ACK sent to MPI, 2-13, 2-14
  - Commit ACK returned from MPI to sending system, 2-13, 2-14, 2-15
  - Commit ACK returned to MPI from sending system, 2-12
  - Commit ACK sent from MPI to sending system, 2-12
    - Commit ACK sent to MPI, 2-13, 2-14
- ADT-A24 Link Patient Information)
  - sent from MPI to sending system, 2-13
  - sent MPI, 2-11
- ADT-A28 (Add Person or Patient Information), 2-4
  - App ACK sent from MPI to sending system, 2-5
  - Commit ACK returned to MPI from sending system, 2-6
  - Commit ACK sent from MPI to sending system, 2-5
    - sent to MPI, 2-5
- ADT-A31 (Enterprise Update Person Information), 2-39
- ADT-A31 (Update CMOR), 2-36
  - Commit ACK sent to MPI from CMOR, 2-37
  - Commit ACK sent to MPI from VistA, 2-37
- ADT-A31 (Update Person Information), 2-32
  - App ACK sent from MPI to VistA, 2-34
  - App ACK sent to VistA from MPI, 2-34, 2-40
  - Commit ACK returned to MPI from VistA, 2-34
  - Commit ACK sent from MPI to VistA, 2-33
  - Commit ACK sent to VistA from MPI, 2-34, 2-40
- ADT-A31 Update Person Information)
  - sent from MPI to VistA, 2-34, 2-40
- ADT-A31 Update CMOR)
  - received at CMOR for approving/disapproving CMOR change request, 2-37
- ADT-A37 (Add Person or Patient Information), 2-52
- ADT-A37 (Unlink Patient Information)
  - App ACK sent to MPI, 2-53
  - Commit ACK sent from MPI to sending system, 2-53
  - Commit ACK sent to MPI, 2-53
    - sent to MPI, 2-53
- ADT-A40 (Merge Patient—Patient Identifier List), 2-22
  - App ACK sent from MPI to sending system, 2-23
  - Commit ACK returned to MPI from sending system, 2-24
  - Commit ACK sent from MPI to sending system, 2-23
    - sent to MPI, 2-23
- ADT-A43 (Move Patient Information—Patient Identifier List), 2-24
  - App ACK sent to MPI, 2-26
  - Commit ACK returned to MPI from receiving system, 2-26
  - Commit ACK sent to MPI, 2-26
- ADT-A43 Move Patient Information—Patient Identifier List)
  - sent from MPI to receiving system, 2-25
- Find Candidates query—create site association
  - sent to MPI, 2-20
- Link Patient Information
  - attempting to Subscribe to ICN, 2-11
  - notify sending system of change to ICN assignment, 2-13
  - sent from MPI to site, notifying sending system of duplicate record merge, 2-14
  - sent to MPI from site to Link PID2 ICN to PID1 ICN, 2-15
- MFN-M05 (Update Treating Facility), 2-42

## Index

- App ACK sent to MPI, 2-43
- Commit ACK returned from MPI to sending system, 2-43
- Commit ACK sent to MPI, 2-43
- received from MPI, 2-43
- QBP-Q22 (Find Candidates query), 2-17
  - Commit ACK returned from MPI to sending system, 2-19
  - Commit ACK sent from MPI to sending system, 2-18
  - Commit ACK sent to MPI, 2-20, 2-21
  - sending facility unknown to MPI (sent to MPI), 2-19
  - sent to MPI, 2-18
- QRY-A19 (Patient Query), 2-44
  - Commit ACK sent from MPI, 2-46, 2-47
  - Commit ACK sent to MPI, 2-45, 2-47
- QRY-A19 Patient Query
  - patient is known at queried facility, 2-45
  - patient not known at queried facility, 2-47
  - sent from MPI, 2-45, 2-47
- Query for Patient Matches
  - real-time connection query sent to MPI (batch message example), 2-51
- RSP-K22 (Response), 2-17
  - Commit ACK returned from MPI to sending system, 2-21
  - Commit ACK sent from MPI to sending system, 2-20
- RSP-K22 (Response)—Site/DFN pair found on MPI sent to sending system, 2-19, 2-21
- RSP-K22 (Response)—site not found in MPI SITE MONITOR file
  - sent to the site, 2-20
- segments, 3-2
- Update Person Information
  - sent requesting CMOR change, 2-36, 2-39
- VQQ-Q02 (Query for Patient Matches), 2-48
- VQQ-Q02 Query for Patient Matches
  - real-time connection query sent to MPI, 2-48
- MFA, 3-14
  - Completion Date/Time, 3-15
  - Field Definitions, 3-14
  - MFN control ID, 3-14
  - MFN Record Level Error Return, 3-15
  - Primary Key Value, 3-15
  - Primary Key Value Type, 3-16
  - Record-Level Event Code, 3-14
- MFA Completion Date/Time
  - MFA, 3-15
- MFA Primary Key Value
  - MFA, 3-15
- MFA Primary Key Value Type
  - MFA, 3-16
- MFE, 3-17
  - Effective Date/Time, 3-18
  - Field Definitions, 3-17
  - MFN Control ID, 3-18
  - Primary Key Value, 3-18
  - Primary Key Value Type, 3-18
  - Record-level Event Code, 3-17
- MFI, 3-19
  - Field Definitions, 3-19
  - File-Level Event Code, 3-20
  - Master File Identifier, 3-19
  - Response Level Code, 3-20
- MFN Control ID
  - MFA, 3-14
  - MFE, 3-18
- MFN Record Level Error Return, MFA, 3-15
- MFN-M05 (Update Treating Facility), 2-42
  - App ACK sent to MPI, 2-43
  - Commit ACK returned from MPI to sending system, 2-43
  - Commit ACK sent to MPI, 2-43
- Modify indicator, 3-82
- Mother's identifier, 3-57
  - PID, 3-57
- Mother's maiden name, 3-51
  - PID, 3-51
- Move Patient Information—Patient Identifier List
  - ADT-A43, 2-24
  - App ACK sent to MPI, 2-26
  - Commit ACK returned to MPI from receiving system, 2-26
  - Commit ACK sent to MPI, 2-26
  - sent from MPI to receiving system, 2-25
- MPI VETERAN/CLIENT File (#985), 2-2, 2
- MRG, 3-21
  - Field Definitions, 3-21
  - Prior Alternate Patient ID, 3-22
  - Prior Alternate Visit ID, 3-23
  - Prior Patient Account Number, 3-22
  - Prior Patient ID, 3-22
  - Prior Patient Identifier List, 3-21
  - Prior Patient Name, 3-23
  - Prior Visit Number, 3-23
- MSA, 3-24
  - Acknowledgment Code, 3-25
  - Delayed Acknowledgment Type, 3-26
  - Error Condition, 3-26
  - Field Definitions, 3-25
  - Message Control ID, 3-25
  - Text message, 3-26
- MSH, 3-28
  - Accept Acknowledgment Type, 3-36
  - Application Acknowledgment Type, 3-36
  - Country code, 3-36
  - Date/Time of Message, 3-34
  - Encoding Characters, 3-32

- Field Definitions, 3-32
- Field Separator, 3-32
- Message Control ID, 3-35
- Message Type, 3-34
- Processing ID, 3-35
- Receiving Application, 3-34
- Receiving Facility, 3-34
- Sending Application, 3-32
- Sending Facility, 3-33
- Version ID, 3-35
- Multiple birth indicator
  - PID, 3-57
- Multiple Birth Indicator, 3-57

## N

- Nationality, 3-58
  - PID, 3-58
- Notes and Comments Segment, 3-38
- NTE, 3-38
  - Comment, 3-39
  - Field Definitions, 3-38
  - Set ID–NTE, 3-38
  - Source of Comment, 3-38
- Number of Columns Per Row, RDF, 3-84

## O

- Observation/Result Segment, 3-40
- Obtain Technical Information Online, How to, xxii
- Obtaining Data Dictionary Listings, xxii
- OBX, 3-40
- Operator ID, EVN, 3-12
- options
  - Admit a Patient, 2-6
  - Appointment Check-in/Check-out, 2-8
  - DG ADMIT PATIENT, 2-6
  - DG DISCHARGE PATIENT, 2-8
  - DG REGISTER A PATIENT, 2-27
  - Discharge a Patient, 2-8
  - Display Only Query, 1-4
  - Register a Patient, 2-27
  - SDAM APPT CHECK IN/OUT, 2-8
- Orientation, xxi
- Original-style Query Definition Segment, 3-75

## P

- Patch Revisions, viii
- patient & user names
  - test data, xxi
- Patient account number
  - PID, 3-56
- Patient Account Number, 3-56
- Patient Additional Demographic Segment, 3-43

- Patient address, 3-52
  - PID, 3-52
- Patient alias, 3-52
  - PID, 3-52
- Patient death date and time, 3-58
  - PID, 3-58
- Patient Death Indicator
  - PID, 3-58
- PATIENT File (#2), 1-3, 1-5
- Patient ID
  - PID, 3-49
- Patient ID, 3-49
- Patient Identification Segment, 3-45
  - example, 3-45
- Patient identifier list, 3-49
  - PID, 3-49
- Patient name, 3-51
  - PID, 3-51
- Patient Primary Facility
  - PD1, 3-44
  - ZET, 3-96
- Patient Query
  - Commit ACK sent from MPI, 2-46, 2-47
  - Commit ACK sent to MPI, 2-45, 2-47
  - patient is known at queried facility, 2-45
  - patient not known at queried facility, 2-47
  - QRY-A19, 2-44
  - sent from MPI, 2-45, 2-47
- Patient Visit Segment, 3-60
- PD1, 3-43
  - Field Definitions, 3-44
  - Patient Primary Facility, 3-44
- Phone number
  - PID, 3-54
- Phone number—business
  - PID, 3-54
- Phone Number—business, 3-54
- Phone number—home, 3-54
- PID, 3-45
  - Administrative sex, 3-52
  - Alternate patient ID, 3-50
  - Birth order, 3-58
  - Birth place, 3-57
  - Breed Code, 3-59
  - Citizenship, 3-58
  - County code, 3-53
  - Date/time of birth, 3-51
  - Ethnic group, 3-57
  - example, 3-45
  - Field Definitions, 3-49
  - Identity Unknown Indicator, 3-58
  - Last Update Date/Time, 3-59
  - Last Update Facility, 3-59
  - Marital status, 3-55
  - Mother's identifier, 3-57

## Index

- Mother's maiden name, 3-51
  - Multiple birth indicator, 3-57
  - Nationality, 3-58
  - Patient account number, 3-56
  - Patient address, 3-52
  - Patient alias, 3-52
  - Patient death date and time, 3-58
  - Patient Death Indicator, 3-58
  - Patient ID, 3-49
  - Patient identifier list, 3-49
  - Patient name, 3-51
  - Phone number, 3-54
  - Phone number—business, 3-54
  - Primary language, 3-55
  - Race, 3-52
  - Religion, 3-55
  - Set ID—PID, 3-49
  - Species Code, 3-59
  - SSN number—patient, 3-57
  - Strain, 3-59
  - Veterans military status, 3-58
  - Previous service date, 3-67
  - Primary Key Value
    - MFE, 3-18
  - Primary Key Value Type
    - MFE, 3-18
  - Primary language, 3-55
    - PID, 3-55
  - Primary View Initialization, 2-1
  - Prior Alternate patient ID, MRG, 3-22
  - Prior Alternate Visit ID, MRG, 3-23
  - Prior Patient Account Number, MRG, 3-22
  - Prior Patient ID, MRG, 3-22
  - Prior Patient Identifier List, MRG, 3-21
  - Prior Patient Name, MRG, 3-23
  - Prior Visit Number, MRG, 3-23
  - Processing ID, MSH, 3-35
  - PV1, 3-60
    - Field Definitions, 3-63, 3-67
- ## Q
- Q02 Event, 2-48
  - Q22 Event, 2-17
  - QAK, 3-68
    - Field Definitions, 3-69
    - Query Response Status, 3-69
  - QBP-Q22 (Find Candidates query), 2-17
    - Commit ACK returned from MPI to sending system, 2-19
    - Commit ACK sent from MPI to sending system, 2-18
    - Commit ACK sent to MPI, 2-20, 2-21
      - msg sent to MPI, 2-18, 2-19, 2-20
  - QPD, 3-71
    - Field Definitions, 3-71
    - QRD, 3-75
      - Deferred Response Type, 3-76
      - Deferred Response Date/Time, 3-76
      - Field Definitions, 3-75
      - Quantity Limited Request, 3-77
      - Query Date/Time, 3-75
      - Query Format Code, 3-76
      - Query ID, 3-76
      - Query Priority, 3-76
      - What Data Code Value Qual, 3-78
      - What Department Data Code, 3-78
      - What Subject Filter, 3-78
      - Who subject Filter, 3-77
    - QRY-A19 (Patient Query), 2-44
      - Commit ACK sent from MPI, 2-46, 2-47
      - Commit ACK sent to MPI, 2-45, 2-47
        - patient is known at queried facility, 2-45
        - patient not known at queried facility, 2-47
        - sent from the MPI, 2-45, 2-47
    - Quantity limited request, 3-80
    - Quantity Limited Request, QRD, 3-77
    - Query Acknowledgment Segment, 3-68
    - Query Date/Time, QRD, 3-75
    - Query for Patient Matches
      - real-time connection query sent to MPI, 2-48
      - real-time connection query sent to MPI (batch message example), 2-51
      - VQQ-Q02, 2-48
    - Query Format Code, QRD, 3-76
    - Query ID, QRD, 3-76
    - Query parameter definition, 3-71
    - Query priority, 3-80
    - Query Priority, QRD, 3-76
    - Query Response Status, QAK, 3-69
    - Query tag, 3-72
    - Query Tag
      - VTQ, 3-89
    - Query/Response Format Code, VTQ, 3-89
- ## R
- Race, 3-52
    - PID, 3-52
  - RDF, 3-84
    - Column Description, 3-84
    - Field Definitions, 3-84
    - Number of Columns Per Row, 3-84
  - RDT, 3-87
    - Column Value, 3-87
    - Field Definitions, 3-87
  - Reader, Assumptions About the, xxiii
  - Receiving Application, MSH, 3-34
  - Receiving Facility, MSH, 3-34

Recorded Date/Time, EVN, 3-11  
 Record-level Event Code  
   MFA, 3-14  
   MFE, 3-17  
 Reference Batch Control ID, BHS, 3-6  
 Reference Materials, xxiii  
 References  
   VistA, 1-4  
 Register a Patient  
   ADT-A04, 2-27  
   App ACK sent from MPI to sending system, 2-29  
   Commit ACK returned to MPI from sending system, 2-29  
   Commit ACK sent from MPI to sending system, 2-28  
   option, 2-27  
   sent to MPI, 2-28  
 Religion, 3-55  
   PID, 3-55  
 Response  
   Commit ACK returned from MPI to sending system, 2-21  
   Commit ACK sent from MPI to sending system, 2-20  
   site not found in MPI SITE MONITOR file message example sent to the site, 2-20  
   Site/DFN pair found on MPI (msg sent to sending system), 2-19, 2-21  
 Response Level Code, MFI, 3-20  
 Response modality, 3-81  
 Revision History, iii  
   Documentation, iii  
   Patches, viii  
 RPC  
   Field Definitions, 3-80  
 RSP-K22 (Response), 2-17  
   Commit ACK returned from MPI to sending system, 2-21  
   Commit ACK sent from MPI to sending system, 2-20  
   msg sent to MPI, 2-19, 2-21  
   msg sent to sending system, 2-20

## S

SDAM APPT CHECK IN/OUT option, 2-8  
 Segment group inclusion, 3-82  
 segments, 3-2  
   BHS, 3-2  
   BTS, 3-7  
   DSC, 3-8  
   ERR, 3-9  
   EVN, 3-10  
   MFA, 3-14

MFE, 3-17  
 MFI, 3-19  
 MRG, 3-21  
 MSA, 3-24  
 MSH, 3-28  
 NTE, 3-38  
 OBX, 3-40  
 PD1, 3-43  
 PID, 3-45  
   example, 3-45  
 PV1, 3-60  
 QAK, 3-68  
 QPD, 3-71  
 QRD, 3-75  
 RDF, 3-84  
 RDT, 3-87  
 VTQ, 3-89  
 ZCT, 3-93  
 ZEM, 3-95  
 ZET, 3-96  
 ZFF, 3-97  
 ZSP, 3-101  
 Selection Criteria, VTQ, 3-90  
 Sending Application, MSH, 3-32  
 Sending Facility, MSH, 3-33  
 Set ID—NTE, NTE, 3-38  
 Set ID—PID, 3-49  
   PID, 3-49  
 Social Security Numbers  
   test data, xxi  
 Sort-by field, 3-82  
 Source of Comment, NTE, 3-38  
 Species Code  
   PID, 3-59  
 SS  
   Acronyms  
     Web page address, Glossary, 21  
   Glossary  
     Web page address, Glossary, 21  
 SSN number—patient, 3-57  
   PID, 3-57  
 Strain  
   PID, 3-59

## T

Table Row Data Segment, 3-87  
 Table Row Definition Segment, 3-84  
 tables  
   0002—Marital status, 3-55  
   0003 EVN—ADT/R Event Type Codes, 3-11  
   0005—Race, 3-52, 4-1  
   0006—Religion, 3-55  
   0008—Acknowledgement Code, 3-25  
   0048—What Subject Filter, 3-78

## Index

- 0062—Event Reason, 3-11
  - 0091—Query priority, 3-80
  - 0091—Query Priority, 3-76
  - 0102—Delayed Acknowledgement type, 3-26
  - 0103—Processing ID, 3-35
  - 0104—Version ID, 3-36
  - 0105—Source of Comment, 3-39
  - 0106—Query/Response Format Code, 3-76
  - 0126—Quantity limited request, 3-81
  - 0126—Quantity Limited Request, 3-77
  - 0136—Yes/no indicator, 3-44
  - 0155—Accept/Application Acknowledgement Conditions, 3-36
  - 0175—Master File Identifier Code, 3-19
  - 0178—File Level Event Code, 3-20
  - 0179—Response Level, 3-20
  - 0180—Record-level Event Code, 3-17
  - 0181—MFN Record-level Error Return, 3-15
  - 0188—Operator ID, 3-12
  - 0189—Ethnic group, 3-57
  - 0200—Name type, 3-51, 3-52
  - 0202—Telecommunication Equipment Type, 3-54
  - 0203—Identifier type, 3-50
  - 0208—Query Response Status, 3-69
  - 0209—Relational operator, 3-91
  - 0210—Relational conjunction, 3-92
  - 0355—Primary key value type, 3-15
  - 0357—Message Error Condition Codes, 3-26
  - 0361—Sending/Receiving Application, 3-33
  - 0362—Sending/Receiving Facility, 3-34
  - 0391—Segment group, 3-83
  - 0394—Response modality, 3-81
  - 0395—Modify indicator, 3-82
  - 0398—Continuation style code, 3-8
  - 0399—Country Code, 3-37
  - 0445—Identity Reliability Code, 3-58
  - BHS—Batch Header, 3-2
  - BTS—Batch Trailer, 3-7
  - DSC—Continuation Pointer, 3-8
  - ERR—Error, 3-9
  - EVN—Event Type, 3-10
  - HL7 field designation numbers and translations, 3-85, 3-87
  - MFA—Master File Acknowledgement, 3-14
  - MFE—Master File Entry, 3-17
  - MFI—Master File Identification, 3-19
  - MRG—Merge Patient Information, 3-21
  - MSA—Message Acknowledgement, 3-24
  - MSH—Message Header, 3-28
  - NPCD 001—National Patient Care Database Error Codes, 4-12
  - NTE—Notes and Comments, 3-38
  - OBX—Observation/Result, 3-40
  - PD1—Patient Additional Demographic, 3-43
  - PID—Patient Identification, 3-46
  - PV1—Patient Visit, 3-60
  - QAK—Query Acknowledgement, 3-68
  - QPD—Query Parameter Definition, 3-71
  - QRD—Original-Style Query Definition, 3-75
  - RCP—Response Control Parameter, 3-80
  - RDF—Table Row Definition, 3-84
  - RDT—Table Row Data, 3-87
  - VA Patient identifiers, 3-78
  - VA001—Yes/No, 4-1
  - VA002—Current Means Test Status, 4-1
  - VA004—Eligibility, 4-2
  - VA005—Disability Retirement From Military, 4-3
  - VA006—Eligibility Status, 4-3
  - VA008—Religion, 4-4
  - VA010—Means Test Indicator, 4-6
  - VA011—Period of Service, 4-7
  - VA012—Type of Insurance, 4-8
  - VA015—Enrollment Status, 4-9
  - VA016—Reason Canceled/Declined, 4-10
  - VA021—Enrollment Priority, 4-10
  - VA022—Radiation Exposure Method, 4-10
  - VA023—Prisoner of War Location, 4-11
  - VA024—Source of Enrollment, 4-11
  - VA036—MST Status, 4-11
  - VA046—Agent Orange Exposure Location, 4-12
  - VTQ—Virtual Table Query Request, 3-89
  - ZCT—VA Specific Emergency Contact, 3-93
  - ZEL—VA Specific Patient Eligibility, 3-94
  - ZEM—VA Specific Employment Information, 3-95
  - ZET—Event Reason for Date of Last Treatment, 3-96
  - ZFF—VA Specific File/Field, 3-97
  - ZPD—VA Specific Patient Information, 3-98
  - ZSP—VA Specific Service Period, 3-101
  - test data
    - patient & user names, xxi
    - Social Security Numbers, xxi
  - Text message, 3-26
    - MSA, 3-26
  - TREATING FACILITY File (#391.91), 1-4, 3-11, 3-12
- ## U
- Unlink Patient Information
    - ADT-A37, 2-52
    - App ACK sent to MPI, 2-53
    - Commit ACK sent from MPI to sending system, 2-53
    - Commit ACK sent to MPI, 2-53
    - sent to MPI, 2-53
  - UPDATE BATCH JOB FOR HL7 v2.3, 1-3
  - Update CMOR
    - ADT-A31, 2-36

- Commit ACK sent to MPI from CMOR, 2-37
- Commit ACK sent to MPI from VistA, 2-37
- received at CMOR for approving/disapproving CMOR change request, 2-37
- Update Patient Information
  - ADT-A08, 2-29
  - App ACK sent from MPI to receiving system, 2-31
  - Commit ACK returned to MPI from receiving system, 2-32
  - Commit ACK sent from MPI to receiving system, 2-31
  - sent to MPI, 2-31
- Update Person Information
  - ADT-A31, 2-32
  - App ACK sent from MPI to VistA, 2-34
  - App ACK sent to VistA from MPI, 2-34, 2-40
  - Commit ACK returned to MPI from VistA, 2-34
  - Commit ACK sent from MPI to VistA, 2-33
  - Commit ACK sent to VistA from MPI, 2-34, 2-40
  - Event A31, 2-39
  - message example
    - sent requesting CMOR change, 2-36, 2-39
    - sent from MPI to VistA, 2-34, 2-40
- Update Treating Facility
  - App ACK sent to MPI, 2-43
  - Commit ACK returned from MPI to sending system, 2-43
  - Commit ACK sent to MPI, 2-43
  - MFN-M05, 2-42
  - received from MPI, 2-43
- URLs
  - SS
    - Acronyms Web page address, Glossary, 21
    - Glossary Web page address, Glossary, 21
- User parameters, 3-72, 3-73, 3-74
- User-defined Table 0004 - Patient Class, 3-63
- User-defined tables
  - 0002—Marital status, 3-55
  - 0005—Race, 3-52
  - 0006—Religion, 3-55
  - 0062—Event Reason, 3-11
  - 0181—MFN Record-level Error Return, 3-15
  - 0188—Operator ID, 3-12
  - 0189—Ethnic group, 3-57
  - 0200—Name type, 3-52
  - 0361—Sending/Receiving Application, 3-33
  - 0362—Sending/Receiving Facility, 3-34
  - 0445—Identity Reliability Code, 3-58
  - VA Patient identifiers, 3-78
- NPCD 001—National Patient Care Database Error Codes, 4-12
- VA001—Yes/No, 4-1
- VA002—Current Means Test Status, 4-1
- VA004—Eligibility, 4-2
- VA005—Disability Retirement From Military, 4-3
- VA006—Eligibility Status, 4-3
- VA008—Religion, 4-4
- VA010—Means Test Indicator, 4-6
- VA011—Period of Service, 4-7
- VA012—Type of Insurance, 4-8
- VA015—Enrollment Status, 4-9
- VA016—Reason Canceled/Declined, 4-10
- VA021—Enrollment Priority, 4-10
- VA022—Radiation Exposure Method, 4-10
- VA023—Prisoner of War Location, 4-11
- VA024—Source of Enrollment, 4-11
- VA036—MST Status, 4-11
- VA046—Agent Orange Exposure Location, 4-12
- ZCT—VA Specific Emergency Contact, 3-93
- ZEL—VA Specific Patient Eligibility, 3-94
- ZEM—VA Specific Employment Information, 3-95
- ZET—Event Reason for Date of Last Treatment, 3-96
- ZFF—VA Specific File/Field, 3-97
- ZPD—VA Specific Patient Information, 3-98
- ZSP—VA Specific Service Period, 3-101
- VA Specific Emergency Contact Segment, 3-93
- VA Specific Employment Information Segment, 3-95
- VA Specific File/Field Segment, 3-97
- VA Specific Service Period Segment, 3-101
- VDL
  - Web page address, xxiv
- Version ID, MSH, 3-35
- Veterans military status, 3-58
  - PID, 3-58
- Virtual Table Name, VTQ, 3-90
- Virtual Table Query Request Segment, 3-89
- VistA References, 1-4
- VQQ-Q02 (Query for Patient Matches), 2-48
  - real-time connection query sent to MPI, 2-48
  - real-time connection query sent to MPI (batch message example), 2-51
- VT Query Name, VTQ, 3-90
- VTQ, 3-89
  - Field Definitions, 3-89
  - Query Tag, 3-89
  - Query/Response Format Code, 3-89
  - Selection Criteria, 3-90
  - Virtual Table Name, 3-90
  - VT Query Name, 3-90

## V

VA HL7 tables

## W

### Web pages

- Adobe Acrobat Quick Guide Web page address, xxiv
- Adobe Web page address, xxiv
- Health Systems Design & Development Web page address, xxiii
- HL7 Standards Documentation Web page address, xxiv
- SS
  - Acronyms Web page address, Glossary, 21
  - Acronyms Web Page address, Glossary, 21
  - Glossary Web page address, Glossary, 21
  - VDL Web page address, xxiv
- What Data Code Value Qual, QRD, 3-78

- What Department Data Code, QRD, 3-78
- What Subject Filter, QRD, 3-78
- Who subject Filter, QRD, 3-77

## Z

- ZCT, 3-93
- ZEM, 3-95
- ZET, 3-96
  - Event Reason Code Name, 3-96, 3-100
  - Field Definitions, 3-96
- ZFF, 3-97
- ZPD
  - Field Definitions, 3-100
- ZSP, 3-101