MASTER PATIENT INDEX PATIENT DEMOGRAPHICS (MPI/PD)

TECHNICAL MANUAL

Version 1.0

April 1999

Revised July 2013

Department of Veterans Affairs
Office of Information Technology
Product Development

Revision History

Table i. Documentation Revision History

Date	Description	Author
7/2013	Documentation updates: Patch DG*5.3*863: • When a patient's current residential address is located in a foreign country (e.g., for a Department of Defense (DoD) patient) the following foreign address fields, from the VistA PATIENT file (#2), are displayed in the Patient MPI/PD Data Inquiry and Display Remote Patient Data Query options: – PROVINCE field #.1171 – POSTAL CODE field #.1172 – COUNTRY field #.1173 Patch RG*1.0*60: • Include the PATIENT file (#2) ALIAS (#.01) and ALIAS SSN (#1) fields in the list of fields audited for changes by the MPI/PD software. • The obsolete report *"National ICN Statistics [RG NATIONAL ICN STATISTICS]"* was removed from the Management Reports [RG MGT REPORTS] menu. This report was exported for deletion at the sties with Patch RG*1.0*60. • Organization references and links were updated in this manual to reflect the most current changes in the Dept of Veterans Affairs.	Susan Strack, Technical Writer, Oakland OIFO; Chris Chesney, Team Lead, Chris Link, and Paulette Davis, all from the Birmingham OIFO; Gregory St. Julien, Project Manager
7/2012	Documentation updates *not* related to a patch release: • Replaced VistA Logo w/VA Seal on title page. • Updated appendix titled: "Data Stored on the MPI in Austin" to reflect current MPI VETERAN/CLIENT file (#985). • Updated appendix and table titled: "Primary View Identity Traits" to reflect Primary View of the MPI. • Updated Glossary based on HC IdM feedback.	Susan Strack, Technical Writer, Oakland OIFO; Chris Chesney, Team Lead, Birmingham OIFO; Gregory St. Julien, Project Manager
1/2012	Documentation updates: • As of Patch DG*5.3*837, the following Data Dictionary changes were made to the TREATING FACILITY LIST file (#391.91): – The ASSIGNING AUTHORITY field (#1) was removed and replaced by the ASSIGNING AUTHORITY field (#10). – The SOURCE ID multiple (#20) containing the SOURCE ID (#.01) and IDENTIFIER STATUS (#1) fields was removed and replaced by identical fields at the file level: SOURCE ID (#11) and IDENTIFIER STATUS (#12). • As of Patch DG*5.3*837, MPI will no longer update the VAFC ASSIGNING AUTHORITY file (#391.92). That data is stored directly	Susan Strack, Oakland OIFO; Donnie Canham, Carl Hebron, Project Manager

Date	Description	Author
	into the new ASSIGNING AUTHORITY field (#10) in the TREATING FACILITY LIST file (#391.91). This file is being deleted. • A number of patients at each VA facility that have not been assigned an ICN for a number of reasons. In an effort to support an automated enumeration of these remaining patients, two new Remote Procedures (RPCs) have been created. – MPIF REMOTE FULL ICN STATS – MPIF REMOTE LOCAL ICN ASSIGN • As of Patch RG*1*59, the following two fields were added to the VistA PATIENT file (#2) in support of the Defense Eligibility Enrollment Reporting System (DEERS). These fields are used by the Master Veteran Index to support the linking of patient records across VA and DoD. – TEMPORARY ID NUMBER (#991.08) – FOREIGN ID NUMBER (#991.09) **NOTE:** Both new fields are turned on for auditing in the PATIENT file (#2) for MPI/PD.	
12/2010	Final updates to formatting for Patch DG*5.3*825 release. Documented new RPC: **VAFC AA UPDATE REMOTE PROCEDURE** Routine: PDAT^VAFCRPC When a new entry is added to the MPI ASSIGNING AUTHORITY (#985.55) file on the MPI, the VAFC AA UPDATE REMOTE PROCEDURE is called. The RPC triggers an update message to those Treating Facilities where the patient's Integration Control Number (ICN) is known and creates an identical entry in the VistA VAFC ASSIGNING AUTHORITY (#391.92) file.	Susan Strack, Oakland OIFO; Gregory St. Julien (SPAWAR), Project Manager
09/2010	As of Patch DG*5.3*825 updates as follows: • A new file was created named VAFC ASSIGNING AUTHORITY with file number #391.92. File #391.92 expands the capability of VA Identity Management Service (IdM) to support future initiatives, (e.g., National Health Information Network (NHIN) and non-Patient Identity Management, etc.). This file stores information used to assemble fully qualified identifiers used for either the Health Level Seven v2.4 or v3.0 standard. • The following two updates were made to the TREATING FACILITY LIST file (#391.91): o The length of the SOURCE ID field (#.01) in the SOURCE ID multiple (#20) was changed from 40 to 150 characters to accommodate identifiers for National Health Information Network (NHIN) facilities. o The following new fields were created in the TREATING FACILITY LIST field (#391.91):	Susan Strack, Oakland OIFO; Paulette Davis, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager

Date	Description	Author
	- SOURCE ID TYPE (#.09) defines the data source and comes from the HL7 Table 0203, Identifier Type; set of codes (NI, PI, EI, PN, SS, NPI) - ASSIGNING AUTHORITY field (#1); pointer to the new VAFC ASSIGNING AUTHORITY file (#391.92). It identifies the entity that established the identification number for the patient.	
07/2010	Patch DG*5.3*821 updates support the James A Lovell Joint VA/DOD Medical Center in North Chicago are listed as follows: • The SOURCE ID (#20) multiple has been added to the TREATING FACILITY LIST (#391.91) file on VistA. The SOURCE ID (#.01) and IDENTIFIER STATUS (#1) fields are updated by a Treating Facility update from the Master Patient Index (MPI) and facilitate the addition of the Department of Defense (DoD) as a treating facility correlation. • New Remote Procedure Calls (RPC), which are documented in the RPC section in this manual: – RPC: VAFC LOCAL GETCORRESPONDINIGIDS returns Treating Facility information. – RPC: VAFC NEW NC TREATING FACILITY adds active Department of Defense Correlations to Treating Facility List file (#391.91).	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Paulette Davis, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
12/2009	MPI_CodeCR1841): Create MPI RPC to support the return an array of VAMC correlations with a Date Last Treated Create MPI RPC to support the return an array of VAMC correlations with a Date Last Treated. This RPC will be called by the PSIM GetCorrespondingIDs WebService calls initiated by the North Chicago Registration UI for the purposes of obtaining and mimicking the Register Once functionality in the new North Chicago Joint Registration UI. Based on performance there might be a need to only return the site with the most recent DLT, however for this release return all entries in 985.5 for a given ICN.	Susan Strack, Oakland OIFO; Chris Link, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
11/2009	Final updates to documentation implementing feedback from Product Support (PS) for national release.	Susan Strack, Oakland OIFO; Danila Manapsal, Oakland OIFO, Project Manager
8/2009	Remedy Ticket: HD0000000244806 RG QUEUE documentation updated and exported as part of Patch RG*1*54. Included is a new Troubleshooting topic on How to Clear Tasks Waiting in the RG Queue in the Implementation and Maintenance section.	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
7/2009	MPI_CodeCR1713: Identity Management Data Quality (IMDQ) name change to Healthcare Identity Management (HC IdM).	Susan Strack, Oakland OIFO; Danila Manapsal,

Date	Description	Author
		Oakland OIFO, Project Manager
7/2009	Updates via Patch DG*5.3*712: • Healthcare Identity Management (HC IdM) requested that BAD ADDRESS INDICATOR field (#.121) be added to the fields monitored and stored on the MPI for use by the matching logic. This VistA field has been added to the existing VistA field trigger mechanism. • The Patient MPI/PD Data Inquiry option has been updated to display a Bad Address Indicator data, if available. This update is being released with Patch DG*5.3*712. The data is derived from the BAD ADDRESS INDICATOR field (#.121) in the PATIENT file (#2). • A new style cross-reference has been added to the following three fields in the VistA PATIENT file (#2) so that when the field is edited, that information is included in the ADT/HL7 PIVOT file (#391.71) in order to update the Master Patient Index: – BAD ADDRESS INDICATOR (#.121) – EMAIL ADDRESS (#.133) – PHONE NUMBER [CELLULAR] (#.134) • Obsolete MPI Options Removed from the OPTION file (#19): – Patient Data Review [VAFC EXCEPTION HANDLER] – Purge Patient Data Reviews [VAFC PDR PURGE] • Healthcare Identity Management (HC IdM) requested that AUDITING be turned on for the ALIAS (#2.01) multiple, and the ALIAS (#.01) and ALIAS SSN (#1) fields in the PATIENT file (#2). • Identity Management Data Quality (IMDQ) name change to Healthcare Identity Management (HC IdM).	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Tami Winn; Oakland OIFO; Danila Manapsal, Oakland OIFO, Project Manager
2/2009	MPI_CR1499(MPI_CodeCR1527): IMDQ requested that BAD ADDRESS INDICATOR be added to the fields monitored and stored on the MPI for use by the matching logic. In order to support the MPI request, added the BAD ADDRESS INDICATOR VistA field (.121) to the existing VistA field trigger mechanism released with Patch dg*5.3*712.	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
1/2009	MPI_CR1073 (MPI_CodeCR1429): 3.2.2 - Master Patient Index/Patient Demographics (MPI/PD) VistA Enhancements released with Patch MPIF*1*52: • Prevent logging of local exceptions for potential matches. • Auto-resolve existing VistA Potential Match exceptions. • Remove from the MPI/PD Exception Handler the action for resolving a Potential Match Exception and all associated screens and actions. This functionality will be supported by the IMDQ Toolkit.	Susan Strack, Oakland OIFO; Danny Reed, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
6/2008	Patch RG*1*52 makes the following changes in the MPI/PD software: • MPI/PD Patient Admin User Menu Removed The MPI/PD Patient Admin User Menu [RG ADMIN USER MENU] was distributed with patch RG*1.0*49 (released 4/10/08) as	Susan Strack, Oakland OIFO; Paulette Davis, Birmingham OIFO;

Date	Description	Author
	obsolete with an Out of Order message. This option is being distributed in this build as DELETE AT SITE in order to remove it from the menu structure. There are other MPI/PD options in the MPIF* and VAFC* namespaces that are also obsolete that will be removed in future MPIF* and DG* patches. • The following Date of Death exceptions in the MPI/PD Exception Handler have been made obsolete: - **Exception Type:** Death Entry on MPI not in VISTA. **Description:** MPI had Date of Death field populated. Vista did not have Date of Death. **Exception number:** 215. - **Exception Type:** Death Entry on Vista not in MPI. **Description:** VISTA had Date of Death field populated. MPI did not have Date of Death. **Exception number**: 216. - **Exception Type:** Death Entries on MPI and Vista DO NOT Match. **Description:** MPI and VistA had different dates of death for this patient. **Exception number:** 217. • REMOTE DATE OF DEATH INDICATED Bulletin Made Obsolete: - The Remote Date of Death Indicated notification message generated from the MPI has been made obsolete. This bulletin indicated that the patient had a date of death entered from the sending site but not at the receiving site. • Obsolete Data Removed from the Unresolved Exception Summary report: Data referencing the Patient Data Review and CMOR Requests Status has been removed from the Unresolved Exception Summary report. Those issues were made obsolete in earlier patches.	Danila Manapsal, Oakland OIFO, Project Manager
4/2008	As of Patch RG*1*49 and DG*5.3*766, the Patient Data Review option has been disabled by placing the MPI/PD Patient Admin User Menu Out of order.	Susan Strack, Oakland OIFO; Paulette Davis, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
3/2008	As of Patch DG*5.3*756, the ALIAS [#1] multiple in the PATIENT (#2) file will be updated in VistA resulting from the edits made to that information on the MPI by the IMDQ team. The VistA data will be synchronized to match the MPI values. Additionally, when a facility revises their local ALIAS data, the information will be transmitted to the MPI, which in turn will update all treating facilities where the patient is known. NOTE: Patch DG*5.3*756 was released on September 6, 2007.	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Danila Manapsal, Oakland OIFO, Project Manager
12/2007	Identity Management Data Quality's (IMDQ) request that the MPI/PD Exception Purge option, [RG EXCEPTION PURGE], be changed to process Primary View Reject exceptions similar to other MPI/PD exception types. Now, the purge job RG EXCEPTION PURGE eliminates duplicate exceptions for the same patient/exception type for	Susan Strack, Oakland OIFO; Paulette Davis, Birmingham OIFO; Danila Manapsal,

Date	Description	Author
	all MPI/PD exception types, keeping only the most recent occurrence.	Oakland OIFO, Project Manager
8/2007	Documentation updates for the Patches RG*1*48 and MPIF*1*48, including functionality from Patch DG*5.3*756, which is part of the Master Patient Index (MPI) Changes Project, Iteration 4. • VA facilities now have the ability to remotely view Primary View patient identity fields on the Master Patient Index (MPI). This information is available on the MPI in the MPI Patient Data Inquiry [MPI DATA MGT PDAT MPI] option. The report generated by this option displays the current activity scores for individual patient identity fields (i.e., Primary View of the MPI). • In the Primary View of the MPI, the ALIAS multiple (#50) is stored in the MPI VETERAN/CLIENT file (#985). In VistA, the ALIAS multiple (#1) is stored in the PATIENT file (#2). All edits made by Identity Management Data Quality (IMDQ) staff to any of the fields in the ALIAS multiple on the MPI via the Edit PV Alias Values [MPI DATA MGT EDIT PV ALIAS] option, including any pre-existing alias data in that same patient entry that was not edited, is sent to the Primary View of the MPI and now synchronized out to all systems of interest (e.g., VistA treating facilities) for that patient. Site updates to the ALIAS multiple (#1) in the VistA PATIENT file (#2) will be updated in VistA and synchronized to match the MPI values. Additionally, when a VA facility updates their local ALIAS data, the information is sent to the Primary View of the MPI and synchronized back out to all other treating facilities (systems of interest) in which that patient has been seen for care. • The CIRN HL7 EXCEPTION LOG file (#991.1) has been modified to record VA facility personnel who use the MPI/PD Exception Handling option to resolved exceptions and the date/time the resolution occurred. Patch RG*1*48 adds the following new fields to File #991.1: - DATE/TIME PROCESSED field (#7) - WHO MARKED PROCESSED field (#8) This data is now being captured and Identity Management Data Quality (IMDQ) staff will have the capability to view this information. • A change has been made in the MPI/PD EXCEPTION HANDLING [RG EXCEPTION HANDLING] option. Upon selecting the MPI/PD Exception Handling option, instead of being prompted to run the exception purge, you are now notified when the last purge took place. The purge process runs automatically if it has not run within the past two hours; however, the MPI/PD EXCEPTION PURGE [RG EXCEPTION PURGE] option should be scheduled to run once an hour via Taskman. It can take a few minutes to run, but once the job is finished, you can go back to the Message Exception Menu and choose MPI/PD Exception Handling to view the results of the purge process. • A stand-alone option named View VistA Exceptions for Patient [MPI DATA MGT VISTA EXCEPTION] has been implemented on the MPI in Austin for the Identity Management Data Quality (IMDQ) team allowing them to query a VistA site for a selected patient and view all the existing VistA exceptions for a given date range. The VistA side	Susan Strack, Oakland OIFO; Danny Reed, Paulette Davis, Chris Chesney, Chris Link, and Dan Ihlenfeld, all from Birmingham OIFO; Dan Soraoka, Oakland OIFO, Project Manager

Date	Description	Author
	support for this new MPI option came in as part of Patch RG*1*48.	
3/2007	As of Patches MPIF*1*46 and RG*1*44, this documentation has been updated to reflect the following: Patch MPIF*1*46: • Processing to account for the HL7 PID segment message being greater than 245 characters. • Resume correct prompting for identity fields in the first part of PIMS Registration options for new patients. • Updated screening to prevent Primary View Reject exceptions from entering the Potential Matches Returned logic. • Changed exception text for the new Primary View Reject exception. Patch RG*1*44: • Functionality incorporated into the MPI/PD Exception Handling RG EXCEPTION HANDLING option to automatically process the "Primary View Reject" exceptions. Name change for exception action that processes reject exceptions "PVR View PV Rej Detail." • MPI/PD Exception Purge process updated. For every date that an exception occurs for a patient, the exception occurs in the Exception Handler for review. However, if more than one active Primary View Reject exception occurs during the same day for the same patient, the purge will remove the duplicate occurrences, leaving only the most recent. • Alias Social Security Numbers included in the HL7 ADT-A31 update message. • Processing to ensure that pending updates to the Primary View waiting in the ADT/HL7 PIVOT file (#391.71) are not lost in IMDQ override process.	Susan Strack, Oakland OIFO; Chris Chesney, Birmingham OIFO; Dan Soraoka, Oakland OIFO, Project Manager
1/2007	As of Patches MPIF*1*44 and RG*1*45, this documentation has been updated to reflect the following: • The concept of a "CMOR facility" is being phased out and will be replaced by the Primary View when Patch MPI*1*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*44." • As of Patch MPIF*1*44, the Site Parameters Edit for CMOR MPIF SITE PARAMETER option, located on the MPI/PD Patient Admin Coordinator Menu, is obsolete and has been placed out of order. • As of Patch MPIF*1*44, the AUTO CHANGE CMOR NIGHT JOB MPIF CMOR REQUEST AUTO JOB option is obsolete. Sites that have this option scheduled to run via TaskMan, should unschedule it. • SSN VERIFICATION STATUS field (#.0907) is now synchronized out to Sites when updated by Enrollment System Redesign (ESR) as of Patch RG*1*45.	Susan Strack, Oakland OIFO; Danny Reed, Birmingham OIFO; Paulette Davis, Birmingham OIFO; Chris Chesney, Birmingham OIFO; Dan Ihlenfeld, Birmingham OIFO; Dan Soraoka, Oakland OIFO, Project Manager
4/2006	Updates to documentation based on Patches MPIF*1*43 and RG*1*43, which comprise the changes to the MPI/PD software resulting from the Health Eligibility Center (HEC) Enumeration to the Master Patient Index (MPI).	Susan Strack, Oakland OIFO; Christine Chesney,

Date	Description	Author
		Birmingham OIFO; Paulette Davis, Birmingham OIFO; Dan Soraoka, Oakland OIFO, Project Manager
6/2005	Updated with Patch DG*5.3*648 to include the following fields in the list of fields monitored by the VAFC BATCH UPDATE JOB: • POW STATUS INDICATED? (#.525) • ELIGIBILITY (#0361,.01)	Susan Strack, Oakland OIF
12/2004	Updated Orientation section to include conventions for displaying TEST data. See Orientation section for details.	Susan Strack, Oakland OIFO
8/2004	The MPI Data Quality Team has requested to be able to remotely request a PUSH of CMOR. A Remote Procedure Call (RPC) will be added to the local VistA system to support this request. The MPIF CMOR REQUEST file (#984.9) will be updated to include these requests for tracking purposes. Routine MPIFRCMP supports this effort. New Remote Procedure MPIF CMOR PUSH REMOTE will be added to the REMOTE PROCEDURE file (#8994) as part of this patch.	Susan Strack, Oakland OIFO; Christine Chesney, Oakland OIFO
5/2004	MPI/PD VistA Version 1.0 User Manual released in conjunction with patches MPIF*1*33, RG*1*35 and DG*5.3*589 to support the MPI Changes Iteration 2 project	Susan Strack, Oakland OIFO; Christine Chesney, Oakland OIFO; Christine Link, Birmingham OIFO; Paulette Davis, Birmingham OIFO
06/2003	MPI/PD VistA Version 1.0 User Manual released in conjunction with patches DG*5.3*505, and MPIF*1*28 of the MPI Changes Iteration I project	Lauren Hardeen, Bay Pines OIFO, Susan Strack, Oakland OIFO
04/1999	Initial MPI/PD and MPI VistA Technical Manuals were created for release with the MPI/PD V.1.0 software in April 1999.	Dianne Barker, Silver Spring OIFO, Susan Strack, Oakland OIFO

Patch History

For the current patch history related to this software, please refer to the Patch Module (i.e., Patch User Menu A1AE USER) on FORUM.

Contents

Figures

Tables

Orientation

This manual is intended for use in conjunction with the Master Patient Index/Patient Demographics Version 1.0 package. It is a merge of the *Master Patient Index (MPI) Technical Manual V. 1.0* with the *Master Patient Index/Patient Demographics (MPI/PD) Technical Manual V. 1.0.* These packages were distributed and installed together and will be referred to in this manual as Master Patient Index/Patient Demographics (MPI/PD) VistA.

How to Use this Manual

This manual uses several methods to highlight different aspects of the material. The following symbols are used in the manual to alert the reader about special information:

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

Table ii. Documentation Symbol Descriptions

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

- Descriptive text is presented in a proportional font (as represented by this font).
- "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.
    - Author's comments are displayed in italics or as "callout" boxes.

NOTE: Callout boxes refer to labels or descriptions usually enclosed within a box, which point to specific areas of a displayed image.

- 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,[fictitious given name] and [Application Name]USER,[fictitious given name] respectively

The "Fictitious given name" represents a fabricated given name for the patient or user. This is done to more clearly represent patient and user names used in descriptive text in this documentation. For example, for the Master Patient Index (MPI) test patient and user names would be documented as follows: MPIPATIENT,NANCY; MPIPATIENT,SAM; MPIPATIENT,DEBRA; etc. and MPIUSER,RICH; MPIUSER,JOHN; etc.

Assumptions About the Reader

This manual has been written with many job functions in mind. Personnel responsible for registering patients, data integrity, Patient Information Management System (PIMS) Automated Data Processing Application Coordinators (ADPACs), and IRM personnel involved with using all aspects of the Master Patient Index (MPI) should read this manual. If you need more information, it is suggested that you look at the various OIT Product Development Web pages for a general orientation to VistA at this address:

http://vaww.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 OIT Product Development Web site:

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

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

- VA Software Document Library at the following address:

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

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

  - *Master Patient Index/Patient Demographics (MPI/PD) User Manual*
  - *Master Patient Index/Patient Demographics (MPI/PD) HL7 Interface Specifications*
  - *Master Patient Index/Patient Demographics (MPI/PD) Technical Manual*
  - *Master Patient Index/Patient Demographics (MPI/PD) Exception Handling*
  - *Master Patient Index/Patient Demographics (MPI/PD) Programmer Manual*
  - *Master Patient Index (MPI) Monograph*

  Also see the following Duplicate Record Merge product documentation, found at the following link http://www.va.gov/vdl/application.asp?appid=2 , includes the following manuals:

  - *Duplicate Record Merge: Patient Merge Release Notes for Kernel Toolkit Patch XT*7.3*113.*
  - *Duplicate Record Merge: Patient Merge User Manual, Version 7.3, Patch XT*7.3*113*

- *Duplicate Record Merge: Patient Merge Technical Manual, Version 7.3, Patch XT*7.3*113*

- Master Patient Index (MPI) Web site:

  http://vista.med.va.gov/mpi/index.asp
  NOTE: *This is an internal VA Web site and is not available to the public.*

- Healthcare Identity Management (HC IdM) team at:

  http://vaww.vhadataquality.va.gov/index.php?lang=en
  NOTE: *This is an internal VA Web site and is not available to the public.*

Installation Information and Procedures

The Master Patient Index and Patient Demographics were distributed and installed together. All installation information and procedures involved with the MPI is included in the *CIRN Patient Demographics (CIRN-PD) Pre-Installation and Implementation Guide v.5* document on the VA Software Document Library at the following address:

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

NOTE: One of the major pre-implementation tasks is the merging of duplicate patient records at a site. The *"Duplicate Record Merge: Patient Merge (Patch XT*7.3*23) User Manual"* is required for this task. Patches XT*7.3*49, RG*1*6, and RG*1*10 allow sites with MPI/PD to resolve duplicate records. If you do not have these patches installed, it is recommended that the option to merge patient records be placed out of order.

Interaction Between MPI/PD and Other Packages

Because of the close interaction between MPI/PD and other packages, you may also find it helpful to review the documentation for the following VistA software:

- *VistA HL7 V. 1.6*
- *PIMS V. 5.3 Admission, Discharge and Transfer (ADT)*

VistA documentation is made available online in Microsoft Word format and in Adobe Acrobat Portable Document Format (PDF). Adobe Acrobat Portable 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/

How to Obtain Technical Information Online

Online documentation about the Master Patient Index VistA package may be obtained in any one of the following ways.

NOTE: Methods of obtaining specific technical information online will be indicated where applicable under the appropriate topic.

Help at Prompts

VistA M-based software provides online help and commonly used system default prompts. 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 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 that may be stored in Help Frames.

Obtaining Data Dictionary Listings

Technical information about files and their associated fields 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.

NOTE: 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*.

DISCLAIMER: The appearance of 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 the VA.

Chapter 1: Introduction

Overview of Master Veteran Index (MVI)

The Master Veteran Index (MVI) is the authoritative source for *person identity data*. It maintains identity data for persons across VA systems, provides a unique universal identifier for each person, stores identity data as correlations for each system where a person is known, provides a probabilistic matching algorithm, and includes the Master Patient Index (MPI), Person Service Identity Management (PSIM), and Toolkit (TK). It maintains a "gold copy" known as a "Primary View" of the person's identity data. Broadcasts identity trait updates to systems of interest.

The MPI is the data store of patient records and one of the component pieces of the Master Veteran Index. It is a cross-reference or index of patients that includes the patient's related identifiers and other patient identifying information. The MPI is used to associate a patient's identifiers among multiple ID-assigning entities, possibly including a Health Data Repository, to support the consolidation and sharing of a patient's health care information across VHA. The MPI is the authoritative source for *patient identity*.

REF(S): For more information on the Master Veteran Index (MVI):

- See the Identity Services TSPR Project Notebook at the following address:

  http://tspr.vista.med.va.gov/warboard/anotebk.asp?proj=1385&Type=Active
  NOTE: *This is an internal VA Web site and is not available to the public.*
- See the "Glossary" in this manual, specifically the entries for Person Service Identity Management (PSIM), Master Patient Index (MPI), and Toolkit (TK).
- See Chapter 2 "Product Description—What Comprises the Master Patient Index?"

Overview of Master Patient Index/Patient Demographics

This is the documentation for the Master Patient Index/Patient Demographics (MPI/PD) software.

MPI/PD was developed to initialize active patients to the Master Patient Index (MPI) and to establish the framework for the sharing of patient information between sites. During the process of initialization to the Master Patient Index, each active patient received:

- An Integration Control Number (ICN)
- A Coordinating Master of Record (CMOR)
- A Treating Facility List of sites where the patient is also known by this ICN

Each site becomes part of the network of sites that share key demographic data for patients via HL7 messaging. Master Patient Index VistA (MPI) and Patient Demographics (PD) were distributed and installed together. This manual covers the functionality of both packages.

The objectives of the MPI/PD are to:

- Create an index that uniquely identifies each active patient treated by the Veterans Administration.
- Identify the sites where a patient is receiving care.

This is crucial to the sharing of patient information across sites.

Master Patient Index Patch MPI*1*40 constituted a change in the business process that updates the patient identity fields across VA facilities. As of Patch MPI*1*40, the Primary View methodology was introduced, phasing out the use of the facility Coordinating Master of Record (CMOR) concept. Primary View is an enterprise view of the most current data for a patient based on authority scoring and the latest data rules.

History

MPI/PD was originally part of the Clinical Information Resource Network (CIRN) project. CIRN was to be a three-phase project consisting of Phase 1: Pre Implementation (site cleanup), Phase 2: Master Patient Index/Patient Demographics (Master Patient Index seeding for VHA-wide patient identification and patient demographics synchronization), and Phase 3: CIRN Clinical Repository. Master Patient Index/Patient Demographics is now a separate, independent package. Due to its beginnings, you will still notice references to CIRN (e.g., shared name and number spaces, file names, package terminology, etc.). The clinical repository is now a separate, independent project called Health Data Repository (HDR).

NOTE: During the 1980s, the policy for creating patients in the PATIENT file (#2) that were also employees was to enter them as EEE followed by their social security number (SSN). That policy was subsequently revoked but did not include any cleanup of the existing EEE patients. During the implementation phase of the Master Patient Index/Patient Demographics (MPI/PD) application, a report was generated to identify these patients. Some of them were changed to their correct names, but many still had not been resolved. It was possible for these EEE patients to be assigned an ICN, either local or national. Since this data does not assist in the identification or sharing of patient data, it was decided that these patients should not be assigned an ICN of any kind, nor should an exception be logged that they have been touched. Prior to Patch MPIF*1*33, patients who had both an "EEE" as the first three characters of their last name and an ICN (local or National) were inactivated (following the rules for inactivation) from the MPI during the post initialization for Patch MPIF*1*21. These EEE patients were included in the screen of patients *not* to be sent to the MPI.

This screen on EEE patients was reviewed again in the MPI Changes 2 project and removed in Patch MPIF*1*33. Patients with last names beginning with "EEE" will no longer be screened from getting a local or national ICN. In addition, no exception message will be logged in the local VistA exception handler when these patient entries are touched.

Distinguishing MPI (Austin) from MPI/PD at the VA Facilities

The actual index referred to as the *Master Patient Index (MPI)* is located at the Austin Information Technology Center (AITC). *Master Patient Index/Patient Demographics (MPI/PD)* refers to the software that resides at the VA facilities, which sends patient data to the MPI (Austin). These terms [i.e., MPI (Austin) and MPI/PD] are used throughout this manual only when it is not obvious which component of the MPI the documentation is referring. Otherwise, the reader should assume the information is referring to MPI/PD.

MPI Identity Hub for the Healthcare Identity Management (HC IdM) Team

As of the release of MPI/PD Patches MPIF*1*52 and RG*1*54, the MPI Identity Hub for Healthcare Identity Management (HC IdM) was implemented enabling the change from the current MPI patient deterministic lookup to an Identity Hub based probabilistic patient lookup.

Initiate was purchased to be integrated with the MPI and Person Service Identity Management (PSIM) for the purpose of improving the matching of patients and persons across VHA. PSIM will serve as the interface to the commercial Identity Management system and the MPI will interact with PSIM.

The Initiate centralized probabilistic search algorithm will replace the local VistA KERNEL DUPLICATE RECORD MERGE search process for identifying local potential duplicate PATIENT file (#2) records. When the search algorithm identifies potential duplicates, they are automatically added to the VistA DUPLICATE RECORD file (#15).

NOTE: For more information on the VistA DUPLICATE RECORD MERGE release, please refer to Kernel Toolkit Patch XT*7.3*113.

Installation Information

The Master Patient Index VistA and Master Patient Index/Patient Demographics (MPI/PD) were distributed and installed together. All installation information and procedures involved with MPI have been referenced in the following MPI/PD documents:

- *CIRN Patient Demographics (CIRN-PD) Pre Installation and Implementation Guide V. 5*
- *Master Patient Index/Patient Demographics (MPI/PD) Installation and Implementation Guide V. 2.*

In October 2002, the three-phase release of patches for the MPI/PD software enhancement began. Phase I consisting of three patches, contains the protocols and routines to execute a new messaging structure. The overall objective of the new messaging is to reduce the amount of facility-to-facility messaging by using the Master Patient Index (MPI), rather than the CMOR, as the source for update messages.

The second phase of patches updates the necessary routines to call the new trigger events using the updated messaging structure. The trigger events include the following:

- Add new patient to the MPI.
- Link to an existing patient on the MPI.
- Update to non-key fields on an existing MPI entry.
- Update to key fields on an existing MPI entry.
- Update to date last treated.
- Resolution of duplicates at the site where both entries exist on the MPI.
- Resolution of duplicates on the MPI.
- Identification and resolution of a mismatched patient.
- Inactivation of existing entry on the MPI.

This phase also includes a data synchronization process to populate new fields in the MPI FACILITY ASSOCIATION file (#985.5) on the MPI for each facility associated with a national integration control number (ICN). Before this is done though, all facilities must install the patches for the second phase.

The third phase of patches contains additional messaging functionality that cannot be implemented until the synchronization process has completed. This final group of patches will clean up obsolete routines, protocols, and options that are no longer used.

Chapter 2: Product Description—What Comprises the Master Patient Index?

Master Patient Index (Austin)

The Master Patient Index (MPI) is located at the Austin Information Technology Center (AITC). It is composed of a unique list of patients and an associated list of VAMCs (Veterans Affairs Medical Centers) and other systems of interest where each patient has been seen. This enables the sharing of patient data between operationally diverse systems. Each patient record (or index entry) on the MPI contains multiple demographic fields which are updated to the Primary View of the MPI.

When a patient is first presented into the MPI for an Integration Control Number (ICN) assignment, that patient's identifying information (i.e., name, Social Security Number (SSN), date of birth, gender, mother's maiden name, multiple birth indicator, place of birth city and state) is passed to the MPI.

The MPI checks to see if an exact match on Name (first and last), SSN, date of birth, and gender is found. A check is also made to see if the patient's internal entry number (DFN) from the querying site is already known to the MPI. If so, this is also considered an exact match. If an exact match is found, the ICN, and ICN Checksum are returned to the requesting site. The requesting site is added to the list of treating facilities (TF) in which this patient has been seen and the updated list is broadcasted to all systems of interest, including VAMCs.

If an exact match is not found, the MPI returns a message indicating this. The patient entry is then added to the MPI. If a potential match is found, a potential match exception is logged for the HC IdM group to review, the patient is still added to the MPI.

NOTE: The term "systems of interest" refers to VA facilities that have seen patients and entered them as entries onto the MPI. This also refers to non-VistA systems that have a registered interest in a patient (e.g., Federal Health Information Exchange [FHIE], HomeTeleHealth, Person Service Identity Management [PSIM], Health Data Repository [HDR], etc).

HC IdM Team is Data Steward for the Master Patient Index (MPI)

The Healthcare Identity Management (HC IdM) team is the Data Steward for the Master Patient Index (MPI). The HC IdM team is comprised of analysts who have considerable experience working with the MPI and patient data updates. They have the ability to perform the following functions on the Primary View of the MPI:

- View and/or edit the authority values for the Primary View business rules criterion.
- Override Primary View identity traits for selected identity fields in the MPI VETERAN/CLIENT file (#985) and broadcast the new Primary View out to the systems of interest.
- View the Primary View Reject Report from the data in the MPI REJECTED UPDATE file (#985.65).

Master Patient Index/Patient Demographics (VistA)

The Master Patient Index/Patient Demographics (MPI/PD) software resides in VistA enabling sites to:

- Request an ICN assignment
- Resolve a potential duplicate on the MPI.
- Review and process exceptions received from MPI including Primary View Reject exceptions.
- Query the MPI (Austin) for known data.
- Update the MPI when changes occur to demographic fields stored on the MPI or of interest to other facilities/systems of interest.

Requesting an ICN Assignment

During the initialization of the MPI database in Austin, each VA Medical Center sent batch HL7 messages to the MPI (Austin) requesting ICNs for all of its patients whose records reflected activity in the past three fiscal years (i.e., active patient records).

In day-to-day operations, patients are presented to the MPI via:

- PIMS options:
  - Load/Edit Patient Data
  - Register a Patient
  - Electronic 10-10EZ Processing
- Local/Missing ICN Resolution background job

When a new patent record is created via the PIMS options, a real-time connection is established to the MPI requesting an ICN assignment. If communication cannot be established or is lost with the MPI before the ICN assignment process has completed, a local ICN is assigned. Otherwise, a national ICN is assigned to the patient. The ICN can either be newly created or already on the MPI for that patient. The ICN, ICN checksum, and list of facilities, including other systems of interest (e.g., FHIE and HDR), are updated in the site's VistA system.

If an existing patient record is edited via the PIMS options, and if this patient does not have an ICN (national or local), the same process occurs as was illustrated for a newly created patient.

If a patient record is edited or created outside of the PIMS options, they are presented to the MPI for ICN assignment via the Local/Missing ICN Resolution background job.

If an exact match is not found the MPI returns a message indicating this and that the patient is being added to the MPI. If potential matches are found, a new ICN is assigned to the patient, and an exception is logged for the Health Care Identify Management (HC IdM) group to review and provide the appropriate action. If the patients are truly the same person, then the records will be linked together with one ICN becoming the primary ICN that all records will be linked under and the other will be deactivated. The sites that had the deactivated ICN will be updated to the primary ICN.

NOTE: As of MPI/PD Patch MPIF*1*52, all screens and actions associated with the MPI/PD Exception Handler functionality for resolving Potential Match Exceptions have been removed from MPI/PD. This functionality is now supported in the Identity Management Toolkit.

NOTE: MPI/PD updates as of VistA Patches MPIF*1*43 and RG*1*43:

- The only times local ICNs are assigned to patient records are when:
  - The connection to the MPI cannot be established, or has been lost before the ICN assignment was completed.

    This happens regardless of which process is used to present the patient to the MPI for ICN assignment (i.e., Register a Patient, Load/Edit Patient Data, Electronic 10-10EZ Processing, and/or the Local/Missing ICN Resolution Background Job).
  - The site edits an existing patient or adds a new patient using an option that doesn't directly interact with the MPI (e.g., VistA Lab or VA FileMan).
- All existing exceptions that were active in the CIRN HL7 EXCEPTION LOG file (#991.1) of the types listed below, were marked with a status of PROCESSED:
  - Required field(s) missing for patient sent to MPI
  - SSN Match Failed
  - Name Doesn't Match

  These three exceptions listed are no longer generated.
- As part of RG*1*43, the View Potential Match Patient [RG EXCEPTION POTENTIAL MATCH] option has been removed from the Message Exception Menu [RG EXCEPTION MENU] as it is obsolete.

The Display Only Query option allows the site to query the MPI to see what the MPI would return if the patient was presented for ICN assignment without actually making the request. The patient can be an existing patient or the user can choose to enter the name, date of birth and SSN (not required) and see what the MPI returns.

NOTE: More information about the "Potential Duplicate PATIENT records found by MPI" message is available via the installation of VistA Kernel Toolkit Patch XT*7.3*113.

Primary View Replaces Obsolete CMOR View

As part of the MPI 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*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*44." Obsolete options will be removed from the Coordinating Master of Record (CMOR) Request [MPIF CMOR MGR] menu at a future date.

Systems of Interest to the MPI—Treating Facilities and Non-VistA Systems

The term "systems of interest" refers to VA facilities that have seen patients and entered them as entries onto the MPI. This also refers to non-VistA systems that have a registered interest in a patient (e.g., Federal Health Information Exchange [FHIE], HomeTeleHealth, Person Service Identity Management [PSIM], Health Data Repository [HDR], etc).

A facility's relationship to a patient determines what information it receives and sends. MPI/PD stores this information.

Any facility where a patient is identified by the same ICN (regardless of VISN) is placed on the Treating Facility List. The list may contain other systems of interest that are not VAMCs (e.g., FHIE and HDR).

NOTE: The Treating Facility List is utilized by several other VistA applications, including Inter-facility Consults and Remote Data Views in CPRS.

Chapter 3: Primary View—How are VistA Sites Affected by this Change to the MPI?

What is the Primary View?

Patch MPI*1*40 constituted a change in the business process that updates the patient identity fields across VA facilities referred to as the Primary View of the MPI. It 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, Edits to patient identity traits see "Primary View Identity Traits" are evaluated based on the same. The highest score achieves the best quality of data updates to the Primary View. Overview:

- 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 allows for:
    - VistA sites to continue to edit patient data at their site.
    - Patient data is sent to a central system (i.e., the Master Patient Index) to determine validity and quality

How Does the Primary View Work?

Before Patch MPI*1*40, patient data reviews were done at the CMOR sites. All VA facilities nation-wide had responsibility to manage and maintain their set of patients. With the release of Patch MPI*1.0*40, patient updates are controlled by centralized business rules and Primary View scoring on the Master Patient Index (MPI). HC IdM staff have the ability to override the rejection process of any valid edits.

In the transition to Primary View, when a patient is new to the MPI or an existing patient is initialized under the latest business rule changes, the CMOR process for resolving Patient Data Reviews will no longer exist. Instead, edits will be processed against the centralized data rules and Primary View scoring on the MPI. If the data update is rejected, the editing site will receive a Primary View Reject Exception report. This takes the burden off CMOR sites to review other sites' edits for acceptance or rejection.

Business Rules for Data Validity and Integrity

The Healthcare Identity Management (HC IdM) team has developed two spreadsheets that dictate business rules for the Primary View:

- "Business Processes That Update Person Identity"—Authority score

- "Primary View Data Rules"—Data rules

Patient identity fields in the Primary View of the MPI are evaluated and updated based on scoring and data rules. The Primary View score is evaluated based on criteria captured from patient encounters at VA facilities (e.g., active prescriptions, admission or registration in the last year, lab test, or radiology exam in the last year) that are sending the inbound update (i.e., data entered by users or sent from a system of interest) to the MPI. The score is calculated from data updates coming from the site. Data is weighed on a field-by-field basis against any differences on the MPI to determine if the score for the inbound edits is equal to or greater than the score for the existing Primary View. Next, the inbound edit is evaluated against Primary View data rules.

Edits to key patient identity fields accepted for the update to the Primary View are broadcasted out to all systems of interest that subscribe to updates for that patient that do not already have the updated data. Data that does not meet or exceed the current score and pass the data rules generate reject exceptions, which are sent back to the site that attempted the edit. As of Patch MPI*1*40, sites received a new exception type in their MPI/PD Exception Handling option and a new exception action named View PV Rej Detail (PVR). This new exception shows them when their edit was rejected and why.

NOTE: The term "systems of interest" refers to VA facilities that have seen patients and entered them as entries onto the MPI. This also refers to non-VistA systems that have a registered interest in a patient (e.g., Federal Health Information Exchange [FHIE], HomeTeleHealth, Person Service Identity Management [PSIM], Health Data Repository [HDR], etc).

REF: For a list of the patient identity fields that make up the Primary View on the MPI, see the section titled "Appendix G: Primary View Identity Traits" in this documentation.

NOTE: For information on Primary View Reject exceptions, see the following topics:

- "MPI/PD Exception Handling: Primary View Reject Type and View PV Rej Detail (PVR) Action"
- "Primary View Reject Exception Type and View PV Rej Detail (PVR) Exception Action"

NOTE: The MPI VETERAN/CLIENT file (#985) comprises the Primary View and is resident on the Austin MPI.

Primary View Auto-Updates Patient Identity Fields in the VistA Patient File

The following fields are auto-updated from the MPI to the VistA PATIENT file (#2) and broadcast by the MPI to systems of interest:

- Name
- Social Security Number

- Date of Birth
- Gender
- Multiple birth indicator (Sent and updated to Primary View as of Patch RG*1*45. Added to the list of fields auto-updated [synchronized] in VistA as of Patch RG*1*47.)
- SSN Verification Status (Verified, Invalid Per SSA, and null) (Added to File #985 as of Patch MPI*1*40. Populated to the Primary View of the MPI and systems of interest to the MPI as of DG*5.3*688 [EVC R2].)
- Pseudo SSN Reason (Added to File #985 as of Patch MPI*1*40. Populated to the Primary View of the MPI and systems of interest to the MPI as of RG*1*47 and DG*5.3*653 [EVC R1].)
- Alias (As of Patch DG*5.3*756, the ALIAS [#1] multiple in the PATIENT (#2) file is updated in VistA resulting from the edits made to that information on the MPI by the HC IdM team. The VistA data is synchronized to match the MPI values. Additionally, when a facility revises their local ALIAS data, the information is transmitted to the MPI, which in turn updates all treating facilities where the patient is known.)

The concept of the Primary View was introduced with Patch MPI*1*40, which utilizes central business rules and removes the manual review process (Patient Data Review) from the sites. This allows for faster updates and the ability to have the best data from multiple locations. The site-to-HC IdM communication happens when there is a need for an override of a valid edit that received a Primary View Reject exception to the centralized business rules.

Site edits to patient identity fields *must* pass the Primary View data rules as well as meet or exceed the current authority score value for that field *before* updating the Primary View on the MPI. If local data fails because the authority score has not weighed in high enough, the edit is rejected. Sites receive an exception message for rejected edits on their MPI/PD Exception Handling option named Primary View Reject. This exception informs sites why edits failing the initial tests were not accepted for update to the MPI.

NOTE: The term "auto-update" refers to fields that are updated from a central database (i.e., the Master Patient Index).

Primary View Identity Traits

The following is the list of fields that are stored in the Primary View of the MPI.

NOTE: Not all Primary View fields are synchronized to the systems of interest.

Table 3-1. Primary View Identity Traits

Name and Number	Description
INTEGRATION CONTROL NUMBER (ICN) (#.01)	Based on ASTM E-1714 format is 16 digits, delimiter character, 6 checksum digits. When the ICN is displayed in the MPI, it appears as 10 digits followed by the

Name and Number	Description
	delimiter character (“V”) followed by the 6 checksum digits.
SURNAME (#1)	Family name, also known as last name.
FIRST NAME (#2)	Patient’s first given name.
MIDDLE NAME (#3)	Patient’s middle name or middle initial.
NAME PREFIX (#4)	Commonly, Dr., Ms., Sir, or other appropriate titles. NOTE: Not currently populated on the MPI.
NAME SUFFIX (#5)	Examples are Jr., Sr., PhD, etc.
MOTHERS MAIDEN NAME (#6)	Mother’s Surname at her birth.
DATE OF BIRTH (#7)	Date of patient’s birth.
PLACE OF BIRTH CITY (#8)	Name of the city or town (or nearest) where the patient was born. NOTE: Not synchronized to the systems of interest.
PLACE OF BIRTH STATE (#9)	If USA, 2 character state abbreviation. If not USA, the country state. Pointer to the STATE file (#5). NOTE: Not synchronized to the systems of interest.
DATE OF DEATH (#10)	The date of the person's death. As of Patch MPI*1*90, Increment 7, Date of Death will be on the Primary View when supplied from one of NCA’s systems, BOSS, or AMAS. Date of Death *will not* be synched from PV to the correlations for Increment 8.
DEATH VERIFICATION STATUS (#11)	One of four criteria must exist to flag this as Verified: • Patient death under VA auspices • DoD casualty report • Receipt of certified death certificate • Burial benefits by NCS NOTE: Not currently populated on the MPI.
GENDER (#12)	• M = MALE • F = FEMALE
SOCIAL SECURITY NUMBER (#13)	Patient’s Social Security Number (SSN) NOTE: Pseudo SSNs aren't stored on the MPI.
SSN VERIFICATION STATUS (#14) NOTE: Added to File #985 as of Patch MPI*1*40. Populated to the Primary View of the MPI and systems of interest to the MPI as of DG*5.3*688 [EVC R2].	Status of the verification of a patient's SSN. This value is stored on the MPI, derived from an update from the ESR application after interaction with SSA (Social Security Administration). Possible values synchronized to sites are: • Null • INVALID PER SSA • VERIFIED Possible values used on the MPI for the ESR correlation are: • NEW RECORD • IN-PROCESS • INVALID PER SSA • RESEND TO SSA

Name and Number	Description
	• VERIFIED
PSEUDO SSN REASON (#14.1) NOTE: Added to File #985 as of Patch MPI*1*40. Populated to the Primary View of the MPI and systems of interest to the MPI as of RG*1*47 and DG*5.3*653 [EVC R1].)	Used to document the reason an individual was assigned a pseudo SSN. Available reasons are: • (R) Refused to Provide—Individual was asked for his/her SSN but refused to provide the number. • (S) SSN Unknown/Follow-up required—Individual is not available to ask/answer the request for SSN. The facility should initiate follow-up activity to obtain the SSN. • (N) No SSN Assigned—Individual has not been assigned an SSN. This generally applies to spouse or dependents of veterans who are not US citizens, and infrequently, non-citizen beneficiaries.
COORDINATING MASTER OF RECORD (#16)	Pre-Primary View Coordinating Site for patient. POINTER TO INSTITUTION file (#4).
SENSITIVITY (#17)	Sensitivity is used to assist in sensitive management audit reports for unusual activity. NOTE: This field is not utilized.
PRIMARY ICN (#18)	As of patch MPI*1.0*40, this field will be used as the value of the Primary ICN for a deactivated ICN. The field will only be populated for an entry that has an ID STATE of deactivated. It is basically telling which ICN should be used instead.
DATE/TIME OF ORIGINAL CREATION (#19)	Date/time that the patient was added to the MPI VETERAN/CLIENT (#985) file. This information will be used for reports and analysis by the Healthcare Identity Management (HC IdM) team.
FACILITY OF ORIGINAL CREATION (#20)	Facility that originally added the patient to the MPI VETERAN/CLIENT (#985) file. This information will be used for reports and analysis by the Healthcare Identity Management (HC IdM) team.
CREATED BY (#21)	The CREATED BY field identifies the person at the FACILITY OF ORIGINAL CREATION who added the patient to the MPI VETERAN/CLIENT (#985) file. This information will be used for reports and analysis by the Healthcare Identity Management (HC IdM) team.
RESOLUTION JOURNAL CASE NUMBER (#22)	If a case exists in the MPI DATA MGT RESOLUTION JOURNAL file (#985.2) for this ICN it will be stored in this field regardless of the status of the case. Resolution Journal cases hold the history of any resolution work done by the Healthcare Identity Management (HC IdM) on this ICN.
PRIMARY VIEW DATE LAST UPDATED (#23)	The PRIMARY VIEW DATE LAST UPDATED field is the date/time that any of the patient's identity element fields were last updated in the MPI VETERAN/CLIENT (#985) file.
IDENTITY THEFT (#24)	The IDENTITY THEFT field is used to designate that a specific record has been confirmed by Health Care Identity Management (HC IdM) staff to be involved in an identity theft occurrence. Once it has been marked, the IDENTITY THEFT field will prevent good records from being linked or matched to the identify theft record.
TEMPORARY ID NUMBER (#25)	The Department of Defense (DoD) Defense Eligibility Enrollment Reporting System (DEERS) uses a Temporary Identification Number for individuals (e.g., babies) who do not have or have not provided a Social Security Number

Name and Number	Description
	(SSN) when the record is added to DEERS. It is used for military dependents only.
FOREIGN ID NUMBER (#26)	The Department of Defense (DoD) Defense Eligibility Enrollment Reporting System (DEERS) uses a Foreign Identification Number for foreign military and foreign nationals when the record is added to DEERS.
STREET ADDRESS [LINE 1] (#31)	First line of patient's residence street address (3-35 characters). NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
STREET ADDRESS [LINE 2] (32#)	Second line of patient's residence street address (3-30 characters) if the space provided in "street address" was not sufficient. NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
STREET ADDRESS [LINE 3] (33#)	Third line of patient's residence street address (3-30 characters) if the space provided in "street address" and "street address 2" was not sufficient. NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
CITY [RESIDENCE] (#34)	City in which patient resides (3-28 characters). NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
STATE [RESIDENCE] (#35)	State in which patient resides. NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
ZIP+4 [RESIDENCE] (#36)	Five or Nine digit Zip Code. NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
PHONE NUMBER [RESIDENCE] (#37)	Telephone number (4-23 characters) to patient's place of residence. NOTE: Not part of the Primary View originally. As of Patch MPI*1*90, this field will begin being populated from ESR.
MULTIPLE BIRTH INDICATOR (#39) NOTE: Added to the list of fields auto-updated in VistA as of Patch RG*1*47.	The MULTIPLE BIRTH INDICATOR will designate whether or not the patient is part of a multiple birth (i.e. to identify twins, etc.). Possible values are: • N = NO • Y = MULTIPLE BIRTH • Null (not the same as No)
PROVINCE (#40)	Enter a PROVINCE if the patient has provided one for his/her foreign address. The entry can be alphanumeric and up to 20 characters in length. NOTE: As of Patch MPI*1*90, this field was added to the Primary View and is populated from ESR.
POSTAL CODE (#41)	Enter the patient's POSTAL CODE if the patient has provided one for his/her foreign address. The entry can be alphanumeric and up to 10 characters in length. NOTE: As of Patch MPI*1*90, this field was added to the Primary View and is populated from ESR.
COUNTRY (#42)	Enter the COUNTRY where the patient's permanent address is located. If

Name and Number	Description
	entering an Army/Air Force Post Office (APO) or a Fleet Post Office (FPO) address, select United States as the country. NOTE: As of Patch MPI*1*90, this field was added to the Primary View and is populated from ESR.
ALIAS (#50)	If this patient is known by any name other than that entered in the name field enter that/those other name(s) here. (Multiple field)
ALIAS SURNAME (#02,.01)	Patient's last name (aka family name). If this patient is known by any name other than that entered in the Name field, enter the other name(s) here. NOTE: Once in Primary View, will be an aggregated list from all treating facilities.
ALIAS FIRST NAME (#.02,1)	Patient's first name. NOTE: Once in Primary View, will be an aggregated list from all treating facilities.
ALIAS MIDDLE NAME (#.02,2)	Patient's middle name or middle initial. NOTE: Once in Primary View, will be an aggregated list from all treating facilities.
ALIAS PREFIX (#.02,3)	Commonly, Dr., Ms., Sir, or other appropriate titles. NOTE: Not currently populated on the MPI. Once in Primary View, will be an aggregated list from all treating facilities.
ALIAS SUFFIX (#.02,4)	Examples are Jr., Sr., PhD, etc. NOTE: Once in Primary View, will be an aggregated list from all treating facilities.
ALIAS SSN (#.02,5)	If the patient was also known under a name other than that listed in the NAME field of the PATIENT file (#2), enter the social security number used if different when the patient used this alias. Include any different SSNs used by person even if names are the same. NOTE: Alias SSNs that are Pseudo SSNs will not be stored on the MPI. Alias SSN is paired with an Alias Name. There can't be just an alias SSN. Once in Primary View, will be an aggregated list from all treating facilities.
ALIAS DATE LAST UPDATED (#.02,6)	The ALIAS DATE LAST UPDATED field is the date/time that the ALIAS field was last updated in the MPI VETERAN/CLIENT (#985) file.
RACE INFORMATION (#60)	Enter the race that best identifies this patient. NOTE: Not synchronized to the systems of interest. Once in Primary View, will be an aggregated list from all treating facilities. (Multiple field) NOTE: As of Patch MPI*1*91, this field is no longer populated in the Primary View (File #985); however, it continues to be populated in the correlation view (File #985.5).
RACE INFORMATION (#.03,.01)	Enter the races which best identify this patient. NOTE: As of Patch MPI*1*91, this field is no longer populated in the Primary View (File #985); however, it continues to be populated in the correlation view (File #985.5).
RACE DATE LAST UPDATED (#.03,1)	The RACE DATE LAST UPDATED field is the date/time that the RACE field was last updated in the MPI VETERAN/CLIENT (#985) file. NOTE: As of Patch MPI*1*91, this field is no longer populated in the Primary View (File #985); however, it continues to be populated in the correlation view

Name and Number	Description
	(File #985.5).
ETHNICITY INFORMATION (#70)	Enter the ethnicity that best identifies this patient. NOTE: Not synchronized to the systems of interest. Once in Primary View, will be an aggregated list from all treating facilities. (Multiple field setup but only one value stored) NOTE: As of Patch MPI*1*91, this field is no longer populated in the Primary View (File #985); however, it continues to be populated in the correlation view (File #985.5).
ETHNICITY INFORMATION (#.04,.01)	Enter the ethnicity which best identifies this patient. NOTE: As of Patch MPI*1*91, this field is no longer populated in the Primary View (File #985); however, it continues to be populated in the correlation view (File #985.5).
ETHNICITY DATE LAST UPDATED (#.04,1)	The ETHNICITY DATE LAST UPDATED field is the date/time that the ETHNICITY field was last updated in the MPI VETERAN/CLIENT (#985) file. NOTE: As of Patch MPI*1*91, this field is no longer populated in the Primary View (File #985); however, it continues to be populated in the correlation view (File #985.5).
ID STATE (#80)	The following ID STATE definitions are from the Object Management Group (OMG) Person Identification Service (PIDS) Specification. ID STATE designates the status of the entry in the MPI VETERAN/CLIENT (#985) file in accordance with business rules and standards. Values for the patient are: • P = Permanent • T = Temporary • D = Deactivated PERMANENT: This ID State specifies that all required fields are entered and a national ICN is established. When an ID is created as permanent all mandatory traits *must* be provided. A permanent ID can be deactivated but *cannot* be made temporary except for when HC IdM uses the OVR function. TEMPORARY: This ID State specifies that there are not enough fields to make an entry permanent (as defined further in the business rules). An ID can be created as temporary without indicating any mandatory traits. A common usage is to create an ID that data can be bound to a patient before that patient is identified with an appropriate confidence. A temporary ID can be made permanent or deactivated. DEACTIVATED: This ID State specifies that the ICN is no longer used. Once an ID is expected not to be needed any more it can be deactivated (merged or deprecated), which keeps it around for historical purposes. A deactivated ID is in its final state and *cannot* be transitioned to any other state by PIDS operations. NOTE: Not synchronized to the systems of interest.
DATE OF ID STATE (#81)	The DATE OF ID STATE field identifies when the ID STATE field was last updated.
SURNAME PRIMARY VIEW SCORE (#85)	The SURNAME PRIMARY VIEW SCORE field contains the Primary View Authority Score for the SURNAME (#1) identity element.
FIRST NAME PRIMARY VIEW SCORE (#86)	The FIRST NAME PRIMARY VIEW SCORE field contains the Primary View Authority Score for the FIRST NAME (#2) identity element.

Name and Number	Description
MIDDLE NAME PRIMARY VIEW SCORE (#87)	The MIDDLE NAME PRIMARY VIEW SCORE field contains the Primary View Authority Score for the MIDDLE NAME (#3) identity element.
PREFIX PRIMARY VIEW SCORE (#88)	The PREFIX PRIMARY VIEW SCORE field contains the Primary View Authority Score for the NAME PREFIX (#4) identity element. Not currently populated on the MPI.
SUFFIX PRIMARY VIEW SCORE (#89)	The SUFFIX PRIMARY VIEW SCORE field contains the Primary View Authority Score for the NAME SUFFIX (#5) identity element
DOB PRIMARY VIEW SCORE (#90)	The DOB PRIMARY VIEW SCORE field contains the Primary View Authority Score for the DATE OF BIRTH (#7) identity element.
GENDER PRIMARY VIEW SCORE (#91)	The GENDER PRIMARY VIEW SCORE field contains the Primary View Authority Score for the GENDER (#12) identity element.
SSN PRIMARY VIEW SCORE (#92)	The SSN PRIMARY VIEW SCORE field contains the Primary View Authority Score for the SOCIAL SECURITY NUMBER (#13) identity element.
MMN PRIMARY VIEW SCORE (#95)	The MMN PRIMARY VIEW SCORE field contains the Primary View Authority Score for the MOTHER'S MAIDEN NAME (#6) identity element.
MULT BIRTH PRIMARY VIEW SCORE (#96)	The MULT BIRTH PRIMARY VIEW SCORE field contains the Primary View Authority Score for the MULTIPLE BIRTH INDICATOR (#39) identity element.
POB CITY PRIMARY VIEW SCORE (#97)	The POB CITY PRIMARY VIEW SCORE field contains the Primary View Authority Score for the PLACE OF BIRTH CITY (#8) identity element.
POB STATE PRIMARY VIEW SCORE (#98)	The POB STATE PRIMARY VIEW SCORE field contains the Primary View Authority Score for the PLACE OF BIRTH STATE (#9) identity element.

Enhanced MPI-to-VistA Synchronization—Additional Patient Identity Fields

SSN Verification Status Synchronized to Systems of Interest

The SSN Verification Status will be populated on the MPI and broadcast to treating facilities and systems of interest. The field values VERIFIED and INVALID PER SSA are triggered as a result of an update from the ESR application and subsequent update to the Primary View.

The SSN Verification Status is an existing field on the MPI with the current values listed below. In order to bring these values in line with the Enrollment VistA Changes (EVC) requirements and Standard Data Services (SDS) tables as well as support the later migration of data into the Administrative Data Repository (ADR), a change is needed to the internal and external value on the MPI. The current values are listed below; however, only the values of Null, Verified and Invalid Per SSA are synchronized with the sites.

- Null
- New Record
- In-Process
- Invalid Per SSA
- Resend to SSA
- Verified

SSN and Pseudo SSN Reason Synchronized to Systems of Interest

When a VistA instance or Enrollment System Redesign (ESR) updates the Pseudo SSN Reason, the MPI updates the MPI FACILITY ASSOCIATION file (#985.5). If the VistA instance is the Primary View, that value is updated in File #985 and broadcasted out to all sites.

Multiple Birth Indicator Synchronized to Systems of Interest

As of Patch RG*1*45, the MULTIPLE BIRTH INDICATOR field is sent and stored on the MPI; however, it is not synchronized to all of the "systems of interest" (i.e., Treating Facilities). As of Patch RG*1*47, the MULTIPLE BIRTH INDICATOR is included in the list of patient identity fields that are synchronized from the MPI out to all systems of interest.

If synchronization of the MULTIPLE BIRTH INDICATOR field fails, an exception is logged on the MPI. This functionality is in support of the Patient Safety Office's effort to reduce the number of local duplicate record merges on records that are related to patients with similar trait values to their siblings.

NOTE: The Duplicate Record Merge: Patient Merge software has already been modified to display the MULTIPLE BIRTH INDICATOR field value if present.

The ALIAS Multiple Stored on MPI and Synchronized to VistA

In the Primary View of the MPI, the ALIAS multiple (#50) is stored in the MPI VETERAN/CLIENT file (#985) as an aggregated list from all the treating facilities associated with that ICN. In VistA, the ALIAS multiple (#1) is stored in the PATIENT file (#2). All edits made by Healthcare Identity Management (HC IdM) staff to the ALIAS multiple on the MPI via the Edit PV Alias Values [MPI DATA MGT EDIT PV ALIAS] option are updated in the Primary View on the MPI and synchronized out to all systems of interest (e.g., VistA treating facilities) for that patient. Site edits to the ALIAS multiple (#1) in the VistA PATIENT file (#2) are updated in VistA and sent to the MPI for updates to the Primary View. The updates are then synchronized back out to all other treating facilities (systems of interest) associated with that ICN.

Process Sequence for Inbound Edits: How Does the Primary View Work?

In the process for updating the Primary View of the MPI, the first check is for potential catastrophic edits to patient identity, which is defined as an edit to two or more of the following identity traits:

- Name (First, Last)
- Date Of Birth
- Social Security Number (SSN)
- Gender

If the potential catastrophic edit affects two or more identity traits, an exception is generated that becomes a manual HC IdM catastrophic edit review process. HC IdM processes potential catastrophic edits as follows:

- Accept All
- Reject All
- Partial Accept

If there are no catastrophic edits:

- All fields in Primary View are compared to the inbound data sent for that correlation.
- If there are differences, a series of computations begin to "score" the data to determine if it meets the criteria for acceptance. The Primary View score is based on data captured from a patient encounter with a Veterans Affairs facility (e.g., active prescriptions, admission or registration in the last year, lab test, or radiology exam in the last year).
- The score is then calculated from the data update coming from the site.
- Each field is then evaluated against any fields that are different in the current Primary View to see if the score is equal to or greater than the existing Primary View field's score and that the data update meets the business rules for data validity and integrity.
- Any of the fields, all of the fields, or none of the fields may be updated based upon the scoring and the business rules.

NOTE: The MPI FACILITY ASSOCIATION file (#985.5) contains the sites' last update. This correlation should be a duplicate of the same data in the PATIENT file (#2) at the sites.

Instructions for VistA Sites─Primary View Reject Exception and View PV Rej Detail (PVR) Action on the MPI Exception Handling Option

When patient identity fields are edited at VA facilities and sent to the MPI, those edits *must* meet or exceed the existing authority score and pass the Primary View Data Rules on a field-by-field basis. If an edit fails to pass both of these tests, the edit to that patient identity field is rejected. If multiple rejects have occurred for a patient and are still active, a PVR exception is not be generated. When the exception is reviewed and the details reviewed, it shows all the rejections to date.

The transition from the Coordinating Master of Record (CMOR) "view" to the Primary View introduces the following new exception type and exception action to the MPI/PD Exception Handling option [RG EXCEPTION HANDLING]:

- Primary View Reject exception type─Rejected edits to the Primary View on the MPI generate this exception, which is sent back to the site that attempted the edit. Site personnel can use this exception to view more details about rejected data from the MPI in Austin, allowing them to see why their edit was rejected.
- View PV Rej Detail (PVR) exception action─Site personnel can use the View PV Rej Detail (PVR) action to view the Primary View Reject exception type.

NOTE: For more information on the Primary View Reject exception type and exception action on the MPI/PD Exception Handling option, see the "Primary View Reject Exception Type and View PV Rej Detail (PVR) Exception Action" topic located in the "Message Exception Menu" section in this documentation.

Sites can also select the UPD action to change the exception status from NOT PROCESSED to PROCESSED. This clears the reject exception off the MPI/PD Exception Handling option.

If a site determines that the rejected data is a legitimate edit, the only way to get that data updated on the MPI is to contact the Healthcare Identity Management (HC IdM) team and have them make the edit. HC IdM has the ability to overwrite Primary View data.

Remote queries are automatically sent to the MPI, allowing sites to see why their edit was rejected. Primary View Reject exceptions can be used as a training exercise for VistA site personnel, instructing them on how to enter data correctly so that the data is accepted on the MPI, avoiding further rejects.

NOTE: For Healthcare Identity Management (HC IdM) contact information, see the "Contact HC IdM Team if Your Site Determines Rejected Data is Valid" topic in the "Message Exception Menu" section of this documentation.

HC IdM View/Edit Authority Values for Business Rules Criterion

Healthcare Identity Management (HC IdM) staff can view or edit the current authority values for the Primary View business rules criterion. These authority values weigh and score inbound edits to the patient entries on the MPI based on patient activity at the site.

Chapter 4: Implementation and Maintenance

Master Patient Index/Patient Demographics (MPI/PD) VistA is a Kernel Installation and Distribution System (KIDS) software release.

The following software (fully patched) *must* be installed at the site:

Software Requirements

The following software (fully patched) *must* be installed at the site:

Table 4-1. Applications that need to be installed and fully patched for MPI/PD

Application	Version # and Patches
CIRN	Version 0.5 fully patched
Health Level 7 (HL7) VistA	Version 1.6 fully patched NOTE: Place HL*1.6*39 in Production account only.
Kernel	Version 8 fully patched
Kernel Toolkit	Version 7.3 fully patched
MailMan	Version 7.1 fully patched
Master Patient Index/Patient Demographics (MPI/PD)	RG Version 1.0 fully patched MPIF Version 1.0 fully patched
Pharmacy	If running Computerized Patient Record System (CPRS), fully patched version of Outpatient Pharmacy V. 7.0, and Inpatient V. 5.0.
PIMS	Version 5.3 fully patched
Registration	Version 5.3 fully patched
VA FileMan	Version 22 fully patched

CAUTION: DO NOT INSTALL HL*1.6*39 in any TEST account! If you install this patch in your test account, you will link your test account to all the other production accounts. Since there are similarities (e.g. patient names/data) in test and production, it would not be good for data from the test account to be transmitted to the production account at another site.

CAUTION: RG* and MPIF* patches should NOT be installed on legacy systems to avoid issues with the legacy systems ending up as Treating Facilities.

Name and Number Spaces

The MPI/PD software is made up of two applications:

- RG Namespace—File range is 990–995 and 997–999.99.
- MPIF Namespace—File range is 994.

Legal Requirements

This software does not impose any additional legal requirements on the user. All users are reminded that many of the reports generated by this software contain confidential patient information and *must* be treated accordingly.

HL7 Application Parameters File

Check that the correct Station Number is entered in the FACILITY NAME field (#3) of the HL7 APPLICATION PARAMETER file (#771), Figure 4-2. Local modifications to your INSTITUTION file (#4) may conflict with MPI/PD installation setup.

Figure 4-2. HL7 Application Parameter List

```
HL7 APPLICATION PARAMETER LIST                MAR 15,2000  10:45    PAGE 1
NAME             FACILITY NAME
MPIF A29 SERVER  679  <<This should be YOUR station number>>
MPIF A30 SERVER  679
MPIF LOC/MIS     679
MPIF MPI         679
MPIF-STARTUP     679
MPIF TRIGGER       <<< SHOULD NOT be populated
RG ADT             <<< SHOULD NOT be populated
RG CIRN          679
RG CIRN ADT        <<<<Should NOT be populated
RG SITE MERGE      <<<<Should NOT be populated
RG SUBSCRIPTION  679
VAFC PIMS        679
VAFC TRIGGER       <<<<Should NOT be populated
```

Exception Handling Messages

The MPI/PD Exception Handling option generates messages to alert site personnel of problems that occur in generating or processing HL7 messages. See the Master Patient Index/Patient Demographics (MPI/PD) VistA Exception Handling manual on the MPI/PD Web site at the address listed below, for examples of messages that may be received during the implementation phase and how to resolve the problems.

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

MPI/PD Mail Groups

Table 4-2. Mail Groups exported in the MPI/PD package

Mail Group	Suggested Coordinator	Suggested Members	Description
HL7 SITE POC (ON FORUM)	Personnel who monitor MPI/PD HL7 problems.	Personnel who monitor MPI/PD HL7 problems.	This mail group is for personnel who will address HL7 issues.
MPIF EXCEPTIONS	Messages are sent to the MPI Exception Handler on the Austin MPI. There shouldn't be any local members in this mail group.	Messages are sent to the remote mail group G.CIRN EXCEPTION MGT@FORUM.VA.GOV, which is the Exception Handler on the MPI in Austin.	MPI Exception Messages to be addressed are sent to this mail group. These messages are all technical in nature, involving problems with HL7 messages or ICNs not found. There normally isn't anything the site can do about these, so these messages are sent to a remote mail group. This mail group is used by MPI site point of contacts to send the Healthcare Identity Management (HC IdM) team potential duplicates, questions, issues, etc. This is a local VistA mail group forwarded to the CIRN EXCEPTION MGT mail group on FORUM. If necessary, the remote mail group members will contact the site for assistance. Members of the MPIF EXCEPTIONS mail group are notified of problems with HL7 messaging.
RG CIRN DEMOGRAPHIC ISSUES	Health Administration Service (HAS)/MPI/PD Coordinator	Personnel that deal with patient data. NOTE: IRM personnel will be required to use MailMan utilities to add members to the RG CIRN DEMOGRAPHIC ISSUES.	This mail group should contain person(s) responsible for ensuring the integrity of the Patient Information Management Systems (PIMS) data. The members of this group will be notified upon login that there are patients awaiting review. NOTE: Upon logon to the system, members of the RG CIRN DEMOGRAPHIC ISSUES Mail Group now only see the one notification alerting users if there are Primary View Reject exceptions that need to be reviewed (Potential Matches Returned are obsolete). NOTE: PIMS personnel will most likely be the ones reviewing MPI/PD HL7 Exception Messages addressing data issues. They should be added as members of the RG CIRN DEMOGRAPHIC ISSUES mail groups. However, anyone participating in this should be added to these mail groups.
RG CIRN HL7 PROBLEMS	Personnel who monitor MPI/PD HL7 problems.	Personnel who monitor MPI/PD HL7 problems.	This mail group receives notification of problems that CIRN (MPI/PD) has when interacting with the VistA HL7 package.

Exception Mail Groups: MPIF EXCEPTIONS and RG CIRN DEMOGRAPHIC ISSUES

The mail groups MPIF EXCEPTIONS and RG CIRN DEMOGRAPHIC ISSUES are specifically used to receive MPI/PD HL7 Exception Messages. It is important to distinguish the difference between them.

1. Members of the MPIF EXCEPTIONS mail group are automatically notified of technical type problems (e.g., such as data update failures or problems with HL7 messages causing them not to be processed). Messages are sent to the remote mail group G.CIRN EXCEPTION MGT@FORUM.VA.GOV, which is the Exception Handler on the MPI in Austin. There shouldn't be any local members in this mail group.

2. The RG CIRN DEMOGRAPHIC ISSUES mail group is exported with MPI/PD. Members of this mail group are automatically notified of problems relating to data.

   It is recommended that PIMS personnel (i.e., ADPACs and/or Coordinators, etc.) be made members of this mail group.

NOTE: For information on MPI/PD HL7 Exception Messages, see Appendix A.

NOTE: For information on assigning members to mail groups, see the VA Electronic Mail System (MailMan) User Manual V. 8.0.

Bulletin

The RG CIRN DEMOGRAPHIC ISSUES bulletin controls the sending of the following patient related bulletin, Table 4-.

Table 4-3. RG CIRN DEMOGRAPHIC ISSUES bulletin ≚REMOTE SENSITIV

Patient Related Bulletin	Cause	Action to take
REMOTE SENSITIVITY INDICATED	Patient is marked as sensitive at the sending site but not at receiving site.	No action: message is informational

Background Jobs

LOCAL/MISSING ICN RESOLUTION

Background job: [MPIF LOC/MIS ICN RES]

This option starts a background job that assigns ICNs to the following types of patient records, which have not been sent to the MPI:

- Patient records that have local ICNs
- Patient records that have been flagged as being active but do not have an ICN assignment.

It is recommended that this option be scheduled to run via TaskMan every 600 seconds (Patch MPIF*1*35).

NOTE: As of Patch MPI*1*38 (MPI Austin side for the MPIF*1*43 and RG*1*43), this background job no longer automatically adds patients to the MPI.

Previous to the release of this patch, when the Local/Missing ICN Resolution job was processed on the MPI, if a match wasn't found, the patient was added immediately. As of Patch MPI*1*38, this functionality has been changed in that if a match for a patient isn't found on the MPI, a message is sent back to the site indicating this. On the site's side, this triggers an HL7 A28—Add Patient message, which then adds the patient to the MPI.

NOTE: A new field, LOCAL/MISSING DATE LAST RAN (#.04), was created in the CIRN SITE PARAMETER file (#991.8) to hold the last date the Local/Missing ICN Resolution Background job ran. The field will be populated by the routine ^MPIFRES.

Local ICNs

ICNs are created for new patients locally at the site when the MPI is unavailable or when the connection is lost prior to the assignment an ICN (e.g., the Direct Connect could not be established). A local ICN is also assigned as a placeholder when a patient has been sent to the MPI but not yet added. This is to ensure identification of these patients as these records await a response from the MPI. Local ICNs look like a national ICN. They contain the same number of digits as a national ICN. The only difference is that the first three digits are the VAMCs station number.

NOTE: It is not recommended that local ICNs be sent to remote databases as they will only be known at the local facility that assigned them.

Missing ICNs

Missing ICNs result from patient records which have been added to the PATIENT file (#2) via other means than through the Patient Information Management System (PIMS) options that establish the real-time connection with the MPI (Load/Edit Patient Data, Register a Patient, and Electronic 10-10EZ Processing). These records are flagged internally for inclusion in the Local/Missing ICN Resolution job.

Resolution of Local/Missing ICNs

The Local/Missing ICN Resolution background job should be scheduled via TaskMan to run every 600 seconds (Patch MPIF*1*35). The Local/Missing ICN Resolution job will find either of the following:

- All patient entries in the local PATIENT file (#2) with a local ICN
- Patient entries that have been flagged as missing an ICN

It then sends these patients to the MPI for a national ICN assignment. These patient entries are sent to the MPI requesting an ICN, in batch HL7 messages (maximum of 100 patient entries each). They are processed on the MPI in the same manner as the patient entries presented in the real-time connection, only in batch form instead of individual entries.

MPI/PD EXCEPTION PURGE
[RG EXCEPTION PURGE]

This option purges entries from the CIRN HL7 EXCEPTION LOG file (#991.1) . Entries that are purged include duplicate entries, resolved entries over 30 days old, and entries for patients where the name field is null or the patient has been merge (e.g., has a -9 node.) Additionally, only the most recent Primary View Reject exception for a given patient/date is retained.

The MPI/PD EXCEPTION PURGE [RG EXCEPTION PURGE] option should be scheduled to run once an hour via Task Manager. Contact Information Resource Management (IRM) to verify that this job is scheduled and running.

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

The event of updating patient information can take place from several different options within VistA, including VA FileMan. Changes to any of the fields listed in Table 6-1 are recorded and an entry is created in the ADT/HL7 PIVOT file (#391.71) . The entry is then marked as pending transmission. Direct sets to the globals cannot be collected. This background job will periodically collect (via a scheduled job) these marked events and broadcast an ADT-A08 Update Patient Information message. Because it is not possible to determine if the editing of the field is complete, this background job will periodically collect these marked events and broadcast an ADT A08 message (i.e., Update Patient Information). This is a PIMS-generated HL7 message.

Table 4-4. Data elements monitored in the PATIENT file (#2) for changes

Field Number	Field Name
.01	NAME
.02	SEX
.03	DATE OF BIRTH
.05	MARITAL STATUS
.08	RELIGIOUS PREFERENCE
.09	SOCIAL SECURITY NUMBER
.111	STREET ADDRESS [LINE 1]
.1112	ZIP+4
.112	STREET ADDRESS [LINE 2]
.113	STREET ADDRESS [LINE 3]
.114	CITY
.115	STATE
.116	ZIP CODE
.117	COUNTY
.121	BAD ADDRESS INDICATOR
.131	PHONE NUMBER [RESIDENCE]
.132	PHONE NUMBER [WORK]

Field Number	Field Name
.133	EMAIL ADDRESS
.134	PHONE NUMBER [CELLULAR]
.211	K-NAME OF PRIMARY NOK
.219	K-PHONE NUMBER
.2403	MOTHER'S MAIDEN NAME
.301	SERVICE CONNECTED?
.302	SERVICE CONNECTED PERCENTAGE
.31115	EMPLOYMENT STATUS
.313	CLAIM NUMBER
.323	PERIOD OF SERVICE
.351	DATE OF DEATH
.361	PRIMARY ELIGIBILITY CODE
.525	POW STATUS INDICATED? (added with Patch DG*5.3*648)
1	ALIAS (Patch DG*5.3*575)
2	RACE INFORMATION (Patch DG*5.3*575)
6	ETHNICITY INFORMATION (Patch DG*5.3*575)
391	TYPE
991.01	INTEGRATION CONTROL NUMBER
991.02	ICN CHECKSUM
991.03	COORDINATING MASTER OF RECORD
994	MULTIPLE BIRTH INDICATOR (added with Patch DG*5.3*575)
1901	VETERAN (Y/N)?

This background job also sends out Treating Facility "add me" and Treating Facility Update messages.

NOTE: For more information on the ADT A08 Message- Update Patient Information, see the *Master Patient Index (MPI) VistA HL7 Interface Specifications* at the following address:

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

NOTE: This background job was originally exported in patch DG*5.3*91.

Capacity Management and System Diagnostics

The Capacity Management team will work closely with sites to determine whether the workload associated with MPI/PD will affect the system negatively. They have also developed a number of tools that monitor the system to provide benchmarking data for further study and process improvement. These may include the following:

- Statistical Analysis of Global Growth (SAGG) - focuses on package-specific impact on data storage, monitors global and file usage.
- Resource Usage Monitor (RUM) - measures resource consumption by package.

- VAX Performance Analyzer (VPM) - monitors system and stores a key subset of data associated with configuration, database activity, response time, central processing unit (CPU), memory, and Input/Output (I/O) utilization.

The following system diagnostics should also be performed:
Transmission Control Protocol/Internet Protocol (TCP/IP) Testing: For the Digital Equipment Corporation (DEC) Alpha sites which were not old 486 sites, test the TCP/IP connection via a "PING" function or other method. This insures that the software and hardware mechanisms associated with this communications protocol are prepared to function. It is also a preventive diagnostic for communications with the MPI Austin.

Hardware Requirements

MPI/PD is designed to run on standard or upgraded Alpha AXP clusters with Virtual Memory System (VMS) or on New Technology (NT) and Open M. TCP/IP setups will have to be in place.

NOTE: See VistA Health Level Seven (HL7) *Site Manager and Developer Manual* at http://www.va.gov/vdl/application.asp?appid=8

MPI/PD uses TCP/IP as the communications protocol for transmitting and receiving patient information. Use existing system tools for fine-tuning your TCP/IP capabilities.

Auditing

Patch DG*5.3*149 added new cross references to the PATIENT file (#2) fields to assist MPI/PD in monitoring changes made to the fields listed below. During the normal daily operations of MPI/PD, it is possible that these fields may be updated by HL7 Messaging. Patch DG*5.3*231 exported with MPI/PD build, enables auditing for the following fields for monitoring. These fields are the minimal set of fields that should be turned on for auditing in the PATIENT file (#2) for MPI/PD. As of patch DG*5.3*712, auditing has been enabled for the ALIAS (#2.01) multiple, and the ALIAS (#.01) and ALIAS SSN (#1) fields in the PATIENT file (#2).

**NAME
** SEX
** DATE OF BIRTH
TEMPORARY ID NUMBER
FOREIGN ID NUMBER
MARITAL STATUS
RELIGIOUS PREFERENCE
** SOCIAL SECURITY NUMBER
STREET ADDRESS LINE 1
ZIP+4
STREET ADDRESS LINE 2
STREET ADDRESS LINE 3
CITY
STATE
COUNTY
BAD ADDRESS INDICATOR
PHONE NUMBER RESIDENCE
PHONE NUMBER WORK
EMAIL ADDRESS
PHONE NUMBER [CELLULAR]
K-NAME OF PRIMARY NOK
K-PHONE NUMBER
** MOTHER'S MAIDEN NAME
SERVICE CONNECTED?
EMPLOYMENT STATUS
PERIOD OF SERVICE
DATE OF DEATH
TYPE
VETERAN (Y/N)?
MULTIPLE BIRTH INDICATOR (Y/N)?

ALIAS ALIAS SSN

NOTE: The double asterisks (**) denote key fields (in addition to Name and the fields mentioned above) that will be synchronized across sites. This list of key fields is subject to change.

NOTE: The DG SECURITY LOG file (#38.1), Field #2 Security Level is also monitored for changes to patient sensitivity.

Global Information

Globals that were included in the installation of MPI/PD are shown in the File List.

The following globals need to be placed on the system:

- ^RG* (^RGSITE, ^RGHL7 ^RGEQASN, ^RGEQEXC, ^RGSTAT, ^RGEQ) - minimal anticipated growth
- ^MPIF - no anticipated growth

You will need to reboot your system for translations to take effect.
Check disk space for 150 Mb of available space for growth in ^HL Based on Test Site information, projected growth of the ^DIA (audit global) is 400-500Mb over a one year period.

Global Configuration

Open M: Use the GUI Global Utility to add and place the globals. Default global attributes should be used.

Table 4-5. Global Configuration of Alpha (DSM) and Open M

	System Owner	World	Group	UCI/USER NET
Open M	RWD	R	R	RWD

Journaling

Journaling should be off during the installation but should be enabled afterwards for ^RG* and ^MPIF*.

NOTE: HL*1.6*52 has recommendations for HL7 global journaling that should be reviewed. The MPI/PD heavily uses HL7 messaging.

Routine Mapping

Several templates associated with the PATIENT file (#2) were compiled during DG*5.3*231 portion of the MPI/PD installation. If any of the following routine namespaces are mapped at your site, they should

be unmapped prior to starting the installation. If your site cannot map/unmap using the * wildcard, a complete list of the mapped/unmapped routines can be found in Appendix I of the *Master Patient Index/Patient Demographics (MPI/PD) Installation and Implementation Guide.*

A1CKC*	IBXSC1*	DVBHCE*
DGRPTX*	MCARORB*	GMRDSTR*
DGRPXCR*	TIUPREL*	IBXBCR2*
DVBAXA*	DGPTX1*	IBXSC2*
DVBHCG*	DGRPXC*	SDM1T*
GMRDSTV*	DGRPXX7*	

HL7 Management

MPI/PD makes heavy use of HL7 messaging. The HL7 globals should be checked for sufficient room for growth. In addition, check to see if the HL7 patch, HL*1.6*39, properly brought in all of the sites HL LOGICAL LINK file (#870) and set the Queue Size field (#21) to ten. In addition, each site that is running UCX (non-Caché) will need to change their sites (VA<your site's three-letter abbreviation> TCP) HL LOWER LEVEL PROTOCOL PARAMETER file (#869.2) entry, field TCP/IP Service Type (#400.03) to M for Multi Listener Server.

NOTE: See Patch HL*1.6*19 for further instructions.

Troubleshooting the RG QUEUE Resource Device

What is the RG QUEUE Resource Device?

Entry RG QUEUE in the DEVICE file (#3.5) was created by the post-installation routine, RGP26PST in patch RG*1.0*26. This device is used to limit the number of background jobs running on the system at any given time. The RG ADT-A08 TRIGGER and RG ADT-A04 TRIGGER HL7 client protocols hang off of the VAFC ADT-A04/A08 SERVER HL7 server protocols and are used to capture patient events and queue up a subsequent HL7 message. This message follows the new Health Level Seven (HL7) Standard v2.4, which also includes "commit" and "application" level acknowledgements. Since the potential exists for an unlimited number of patient edits to be queued off at any given time from a backlog in the ADT HL7 PIVOT file (#391.71), this resource device prevents more than 10 jobs from running at any given time.

What RG QUEUE Looks Like in the DEVICE File (#3.5)

```
NAME: RG QUEUE                          $I: RG QUEUE
  RESOURCE SLOTS: 10                    OPEN COUNT: 858195
  TYPE: RESOURCES
```

Checking on the RG QUEUE Resource Device

If you have had a system problem that resulted in an unexpected down time, you might have had entries processing on the RG QUEUE resource device. To check, use the Monitor Taskman option to see if you have tasks waiting for device. If you have entries waiting for RG QUEUE, continue to monitor, they shouldn't stay there long. If they do, you might have a resource device slot with a job that is no longer running.

How to Tell Your Resource Device Slot Isn't Working Anymore

Get a display of the RESOURCE file (#3.54) for the RG QUEUE device.

```
NAME: RG QUEUE                          AVAILABLE SLOTS: 0
SLOT IN USE: 1                          CPU/VOL: ROU
  JOB #: 543752250                      TASK #: 2796349
  START TIME: 61598,40492
```

Up to 10 tasks and job numbers may be listed here. Use the TaskMan Management utility to List Tasks and determine if any of these jobs still exist and are active. If they are, then that slot is okay if they aren't active jobs then that slot needs to be cleared. To clear slots, use the Clear all resources option or Clear one Resource option from the Device Management menu.

NOTE: For more information on the use of these options, refer to the Kernel Systems Management Guide of the VHA Documentation Library:

http://www.va.gov/vdl/application.asp?appid=10

Chapter 5: Routines

The following routines distributed with MPI/PD are broken down according to the namespace of the patch they were released with. The routines for the following namespaces: MPIF, Table 5-2, RG, Table 5-3, and VAFC, Table 5-4 are listed on the following pages.

NOTE: For more information on related DG routines and patches, please refer to the Patch User Menu on FORUM.

Routines in the VAFC Namespace

Table 5-1. VistA routines (VAFC namespace)

VAFC Routine Name	Description
VAFCAUD	MPI/PD AUDIT FILE PRINT FOR A SPECIFIED PATIENT
VAFCHFS	BUILD HFS FILE FOR CAPTURING REPORT DATA
VAFCHIS	TESTING CROSS REFERENCE
VAFCLAU	LIST MANAGER ROUTINE FOR MPI/PD VAFC EXCPT LOCAL AUDIT IN PDR

Routines in the MPIF Namespace

Table 5-2. VistA routines (MPIF namespace)

MPIF Routine Name	Description
MPIF001	APIs for ICN, IEN, CMOR Information
MPIF002	APIs for ICN, IEN, CMOR information, continued
MPIFA24	A24 processing routine—Process A24 resulting from A28 add to MPI message or from A40 Merge
MPIFA24B	Build A24 ADD ME Messages
MPIFA28	Build A28 ADD ME Messages
MPIFA31B	Build A31 Messages
MPIFA31I	Process ADT A31 message from API
MPIFA37	Utility for processing an ADT-A37 Un-link ID
MPIFA40	BUILD A40 Merge message
MPIFA43	Utility for processing an ADT-A43 Un-link ID
MPIFACHK	Acknowledgement check
MPIFAPI	APIs for local ICNs

MPIF Routine Name	Description
MPIFAPI1	APIS for local ICNs, continued
MPIFAREQ	This routine will automatically process any CMOR Change Request still pending review as approved.
MPIFBT1	Batch query to MPI
MPIFBT2	Batch response from MPI
MPIFBT3	Batch response from MPI
MPIFCMOR	Set and broadcast CMOR changes
MPIFCMRP	Push CMOR for patient to another site
MPIFD1	Potential duplicate on the MPI
MPIFDEL	Delete Patient from MPI.
MPIFDNL	New Routine as of Patch MPIF*1*52, used to add or inactivate an entry on the MPI DO NOT LINK file (#985.28).
MPIFDUP	RESOLVE DUP ACTION
MPIFDUPS	MPIF RPC APIS
MPIFEDIT	Request a CMOR for patient
MPIFEXT	EXTENDED PDAT - RPC
MPIFEXT2	EXTENDED PDAT - RPC
MPIFEXT3	EXTENDED PDAT 3 - RPC
MPIFFULL	ALLOW ASSIGNMENT OF LOCAL ICNS FOR X PATIENTS
MPIFHL7	Processing incoming HL7 messages
MPIFMER	Merge patient ICN
MPIFNEW	This routine adds a new request for change of CMOR to File #984.9.
MPIFNQ	Miscellaneous functions for CMOR
MPIFP48	POST-INT for MPIF*1*48
MPIFP54	BIRM/CMC-POST INIT FOR MPIF*1*54
MPIFQ0	CIRN Query Handler top level
MPIFQ1	CIRN Query Handler, continued
MPIFQ3	QUERY List Manager functions
MPIFQED	Add patient returned in query
MPIFQUE3	Generate Batch message for comparison of CMOR score
MPIFQUE4	Process the CMOR COMPARISON request
MPIFQUE5	Process the RESULT from CMOR COMPARISON request
MPIFRCMP	CMOR push to another site remotely via RPC
MPIFREQ	Process a CMOR request from Event Queue
MPIFRES	Batch processing to the MPI of locally assigned ICNs and patients added to the PATIENT file (#2) by means other than PIMS options.

MPIF Routine Name	Description
MPIFRESS	Process approve/disapprove CMOR change requests.
MPIFREV	Review CMOR Request.
MPIFRPC2	RPC to Single Patient Initialization on patient with SSN
MPIFRPC3	RPC to return primary patient record
MPIFRTC	This routine is used during the real-time connection with the MPI to send an HL7 message to add a patient to the MPI.
MPIFSA2	Stand Alone Query Part 2
MPIFSA3	Stand Alone Query Part 2
MPIFSAQ	Stand-alone query
MPIFSEED	Seeding of A31s to MPI and sub cleanup
MPIFSPC	This routine computes the checksum for a given ICN.
MPIFUTL	CMOR Utilities
MPIFVTQ	Build data to query MPI response process (ADDPAT)

Routines in the RG Namespace

Table 5-3. VistA routines (RG namespace)

RG Routine Name	Description
RGACTIV	MPI/PD patient activity information
RGADT	ADT message processing/routing
RGADT1	TFL file seeding routine (PD-MPI LOAD)
RGADT2	TFL file seeding routine (PD-MPI LOAD)
RGADTP	ADT processor to retrigger A08 or A04 messages with AL/AL (Commit/Application) Acknowledgements
RGADTP1	ADT processor to retrigger A08 or A04 messages with AL/AL (COMMIT/APPLICATION) Acknowledgements, continued
RGADTP2	ADT processor to retrigger A08 or A04 messages with AL/AL (COMMIT/APPLICATION) Acknowledgements, continued
RGADTP3	RGADTP2, continued
RGADTPC	Continuation of RGADTP routine
RGADTUT	Utility; determine patient subscriptions (A01/A03)
RGEQDMN	Dequeue processor
RGEQDMN1	Dequeue processor, continued
RGEQEXC	Error processor
RGEQSTAT	Statistics
RGEQSUB	Dequeue processor
RGEVPRG	Options to purge MPI/PD exceptions
RGEX01	List Manager for MPI/PD exceptions
RGEX03	List Manager for MPI/PD exceptions
RGEX04	List Manager routine for MPI/PD Exception PDAT Query
RGEX05	List Manager routine for Remote PDAT in Exception Handler
RGEX06	List Manager routine for remote PMI Primary View PDAT
RGEX07	List Manager routine for remote Primary View display
RGEXHND1	MPI/PD Exception Handling utility
RGFIACK	Process Application Acknowledgment
RGFIBM	Send facility integration message
RGFICLN	MPI/PD NDBI site cleanup utility
RGFIPM	Process facility integration message
RGFIPM1	Process Facility Integration Message
RGFIRM	Route Facility Integration Message
RGFIU	MPI/PD NDBI Merge Utility, continued

RG Routine Name	Description
RGHLLOG	Log message processing information
RGHLLOG1	Send exception to MPI Exception Handler
RGHLUT	HL7 message processing utilities
RGJCREC	MPI/PD subscription processor
RGJCSTAT	CIRN interface receiver of QRY message
RGJCSUB	MPI/PD subscription generator
RGJCTS01	Subscription Control Startup Utility To CMOR
RGJUSITE	Routine to hold API for the CIRN PARAMETER file (#991.8)
RGMTAUD	CIRN Audit file Print for a Specified Patient
RGMTAUDP	CIRN Audit file Print of Patient Data
RGMTDPCT	Count Entries for ^DPT in Dup Record file
RGMTDPSC	Count duplicate record entries by CMOR score range
RGMTETOT	Compile totals for site exceptions
RGMTHFS	Build HFS file for capturing report data
RGMTHL2	Compile MPI/PD HL7 data for bi-directional TCP
RGMTHLDB	MPI/PD HL7 ACTIVITY by patient/single protocol
RGMTHLDP	MPI/PD HL7 ACTIVITY by patient/all protocols
RGMTHLP	MPI/PD HL7 Message Status Report
RGMTHLPD	MPI/PD HL7 Message Status Report (detailed)
RGMTMONT	MPI/PD Monitor HL7 Messaging/Filers and Setups
RGMTMONX	MPI/PD Monitor HL7 Messaging/Filers and Setups (CONT)
RGMTRUN	SCAN TaskMan running HL7 tasks
RGMTSTAT	MPI/PD maintenance query
RGMTUT01	MPI/PD Compile and Correct Data Validation Data for Local Sites
RGMTUT02	MPI/PD Compile and Correct Data Validation Data for Local Sites (CON'T)
RGMTUT03	MPI/PD Compile and Correct Data Validation Data for Local Sites (CON'T)
RGMTUT98	Misc. MPI Load COUNTER Utilities
RGPOC	ADD/EDIT POINT OF CONTACT OPTION
RGPOC1	ADD/EDIT POINT OF CONTACT OPTION - CONTINUED
RGPRSSN	CIRN Pseudo/Missing SSN Report
RGPVMPI	Remote Primary View display from MPI
RGPVREJ	Remote Primary View reject (patient)
RGRAS	CIRN PRE-SEEDING REPORT FOR TREATING FACILITY UPDATE
RGRPC	RG RPC API

RG Routine Name	Description
RGRPDAT	ROUTINE TO CALL REMOTE PDAT
RGRSBULL	RGRSTEXT Bulletin routine
RGRSBULL1	RGRSTEXT BULLETIN ROUTINE (PART 2)
RGRSDYN	Build dynamic link list for a patient
RGRSDYN1	Build dynamic link list for a TFU
RGRSDYN2	Build dynamic link list for sensitivity
RGRSENS	Pt sensitivity parser/filer
RGRSMSH	Registration message parser for CIRN
RGRSPAR1	Registration message parser for CIRN TFU
RGRSPAR2	Sensitivity message parser for CIRN
RGRSPARM	Edit SEND/STOP/SUSPEND parameter
RGRSPARS	Registration message parser for CIRN
RGRSPT	High level routine for parsing and filing
RGRSUTIL	CIRN Utilities
RGRSUTL2	Utilities for CIRN
RGRSZZPT	Utility for CIRN
RGSYSTAT	MPI/PD status display
RGVCCMR1	CIRN CMOR activity score generator (part 1)
RGVCCMR2	CIRN CMOR activity score generator (part 2)

Routines in the VAFC Namespace

Table 5-4. VistA routines (VAFC namespace)

VAFC Routine Name	Description
VAFCA04	Creates the Registration Message
VAFCAAUT	ASSIGNING AUTHORITY FILE (#391.92) Utilities
VAFCAUD	MPI/PD AUDIT FILE PRINT FOR A SPECIFIED PATIENT
VAFCHFS	BUILD HFS FILE FOR CAPTURING REPORT DATA
VAFCHIS	TESTING CROSS REFERENCE
VAFCLAU	LIST MANAGER ROUTINE FOR MPI/PD VAFC EXCPT LOCAL AUDIT IN PDR
VAFCMG01	DEMOGRAPHIC MERGE SCREEN
VAFCMGA	DEMOGRAPHIC MERGE SCREEN ACTIONS
VAFCMGA1	DEMOGRAPHIC MERGE SCREEN ACTIONS, continued

VAFC Routine Name	Description
VAFCMGB	DEMOGRAPHIC MERGE SCREEN BUILDER
VAFCMGB0	DEMOGRAPHIC MERGE SCREENS
VAFCMGB1	DEMOGRAPHIC MERGE SCREENS
VAFCMGB2	DEMOGRAPHIC MERGE SCREENS
VAFCMGB3	DEMOGRAPHIC MERGE SCREENS
VAFCMGB4	DEMOGRAPHIC MERGE NOTIFIER
VAFCMGU0	MERGE SCREEN UTILITIES
VAFCMIS	MISSING ICN CROSS REFERENCE
VAFCPDAT	DISPLAY MPI/PD INFORMATION FOR SELECTED PATIENT
VAFCPTED	EDIT EXISTING PATIENT
VAFCPDT2	DISPLAY MPI/PD INFORMATION FOR SELECTED PATIENT
VAFCQRY	BQuery for patient demographics
VAFCQRY1	Query for patient demographics
VAFCQRY2	Query for patient demographics
VAFCRAU	LIST MANAGER ROUTINE FOR MPI/PD VAFC EXCPT REMOTE AUDIT IN PDR
VAFCRAUD	ROUTINE TO CALL VAFC REMOTE AUDIT (PATIENT)
VAFCRPC	RPC ENTRY POINTS
VAFCSB	CONT ADT PROCESSOR TO RETRIGGER A08 or A04 MESSAGES WITH AL/AL (COMMIT/APPLICATION) ACKNOWLEDGEMENTS
VAFCTF	Utility for capturing patient's Date Last Treated and Event Reason
VAFCTFIN	TREATING FACILTIY MFU PROCESSING ROUTINE
VAFCTFMF	Broadcast Master File Update for Treating Facility
VAFCTFPR	MFU PROCESSING ROUTINE
VAFCTFU	UTILITIES FOR THE TREATING FACILITY FILE 391.91
VAFCTFU1	Utilities for the Treating Facility file 391.91, continued
VAFCTR	Monitoring fields for MPI/PD via DG field monitoring
VAFCUTL	Utility for the ADT/HL7 PIVOT file 391.71, etc.
VAFCUTL1	UTILITY ROUTINE FOR CIRN

Chapter 6: File List

Files and Globals

This section lists all the MPI/PD package files with their file numbers, shows their global location, and gives a file description.

391.91 TREATING FACILITY LIST ^DGCN(391.91,
Data Comes with File: No

This file holds the Treating Facility List, which is a list of institutions where the patient has had treatment.

NOTE: As of Patch DG*5.3*837, the following Data Dictionary changes were made to the TREATING FACILITY LIST file (#391.91):

- The ASSIGNING AUTHORITY field (#1), which was a pointer to the VAFC ASSIGNING AUTHORITY file (#391.92) was removed. This field was replaced by the ASSIGNING AUTHORITY field (#10). This is a free text field, containing identifier information for either the Health Level Seven v2.4 or v3.0 standard.
- The SOURCE ID multiple (#20) containing the SOURCE ID (#.01) and IDENTIFIER STATUS (#1) fields was removed. These fields were replaced by identical fields at the file level: SOURCE ID (#11) and IDENTIFIER STATUS (#12).

NOTE: As of Patch DG*5.3*825 the following two updates were made to the TREATING FACILITY LIST file (#391.91):

- The length of the SOURCE ID field (#.01) in the SOURCE ID multiple (#20) was changed from 40 to 150 characters to accommodate identifiers for National Health Information Network (NHIN) facilities.
- The following new fields were created in the TREATING FACILITY LIST field (#391.91):
  - SOURCE ID TYPE (#.09) defines the data source and comes from the HL7 Table 0203, Identifier Type. The data type is a Set of Codes (i.e., NI, PI, EI, PN, SS, NPI)
  - ASSIGNING AUTHORITY field (#1) is a pointer to the new VAFC ASSIGNING AUTHORITY file (#391.92). It identifies the entity that established the identification number for the patient.

NOTE: As of Patch DG*5.3*821, there are new Treating Facility updates. The SOURCE ID (#20) multiple has been added to the TREATING FACILITY LIST (#391.91) file on VistA. The SOURCE ID (#.01) and IDENTIFIER STATUS (#1) fields are updated by a Treating Facility update from the Master Patient Index (MPI) and facilitate the addition of the Department of Defense (DoD) as a treating facility correlation.

The SOURCE ID (#.01) field is a unique system assigned identifier for a patient record. If SOURCE ID is from the Master Patient Index, the value is the Integration Control Number (ICN). If SOURCE ID is from the Department of Defense (DoD), the value is the Electronic Data Interchange Personal Identifier (EDIPI), which is their equivalent of an ICN. In the future, SOURCE ID may come from other sources due to additional initiatives.

The IDENTIFIER STATUS (#1) field indicates whether the record is active on the identifying system (e.g., VAMC or DoD) or if the record was identified as part of a duplicate pair, has been merged, and is no longer active on the identifying system.

391.92 VAFC ASSIGNING AUTHORITY ^DGCN(391.92,
Data Comes with File: Yes

As of Patch DG*5.3*825 the VAFC ASSIGNING AUTHORITY file (#391.92) was created to expand the capability of VA Identity Management Service (IdM) to support future initiatives (e.g., National Health Information Network (NHIN) and non-Patient Identity Management, etc.). File #391.92 stores information used to assemble fully qualified identifiers used for either the Health Level Seven v2.4 or v3.0 standard. The VAFC ASSIGNING AUTHORITY (#391.92) file is exported with five entries and new data will be added as needed for HL7 messaging.

NOTE: As of Patch DG*5.3*837, MPI will no longer update the VAFC ASSIGNING AUTHORITY file (#391.92). That data is stored directly into the new ASSIGNING AUTHORITY field (#10) in the TREATING FACILITY LIST file (#391.91).

Due to this change in the processing logic in MPI, the VAFC ASSIGNING AUTHORITY file (#391.92) was no longer needed.
NOTE: File #391.92 was distributed by the MPI team via DG*5.3*825 on 1/25/11, has no authorized Integration Agreements, and was deleted with DBA approval.

984.1 MASTER PATIENT INDEX (LOCAL NUMBERS) ^MPIF(984.1,
Data Comes with File: Yes

This file is to be used to generate local ICNs when the MPI is down (unreachable).

984.5 MPI CHECKDIGIT ^MPIF(984.5,
Data Comes with File: Yes

This file is used to calculate the check digit (check sum) for an ICN.

984.8 MPI ICN BUILD MANAGEMENT ^MPIF(984.8,
Data Comes with File: Yes

This file is used to track the MPI Initialization process. It is utilized when stopping and restarting the initialization process.

984.9 MPIF CMOR REQUEST ^MPIF(984.9,
Data Comes with File: No

This file holds all requests for change of a patient's Coordinating Master of Record. Requests being sent to remote locations and received from remote locations are stored in this file and updated as new requests are received.

991.1 CIRN HL7 EXCEPTION LOG ^RGHL7(991.1,
Data Comes with File: No

This file contains exception messages logged during the generation of outbound messages and the processing of inbound messages. Some fields apply only for entries logged by message generation routines, others only to message processing routines, and others to both.

This file should not be edited directly. Instead, use the exception management utilities to manage entries in this file.

991.8 CIRN SITE PARAMETER ^RGSITE(991.8,
Data Comes with File: No

This file is used to store generic site parameters for the Master Patient Index/Patient Demographic (MPI/PD) VistA package. Only one entry (entry number 1) should exist in this file.

991.11 CIRN HL7 EXCEPTION TYPE ^RGHL7(991.11,
Data Comes with File: Yes

This file lists the types of exceptions that can be logged and additional information about the exceptions.

You may edit the Action (#2) and Mail Group (#6) fields in this file to suit your needs. No other fields should be modified.

995 CIRN EVENT ASSOCIATION ^RGEQASN(#995,
Data Comes with File: Yes

This file holds definitions of CIRN events that occur. When an event occurs, an entry is placed into a queue and is associated with an entry in this file. This file will determine how the event is processed (i.e., the routine to call to process the event and related HL7 Protocol).

Since each event type is placed on its own queue, this file also determines characteristics of the queue itself.

NOTE: AMPIZZ and ATSSN Cross References Removed From PATIENT File (#2)

As of Patch DG*5.3*589, the AMPIZZ and ATSSN cross-references have been removed from the PATIENT file (#2). These cross-references were used to automatically inactivate patient entries from the MPI if records were found to be ZZ'd and/or if the first five digits of patient Social Security Numbers were replace with zeros.

Support for Department of Defense (DoD) Defense Eligibility Enrollment Reporting System (DEERS)

As of Patch DG*5.3*837, the following two fields were added to the VistA PATIENT file (#2) to support the Defense Eligibility Enrollment Reporting System (DEERS). These fields are Department of Defense (DoD) identifiers used for individuals who do not have a Social Security Number. This data is used by the Master Veteran Index to support the linking of patient records across VA and DoD.

- **Field Name:** TEMPORARY ID NUMBER
  Field Number: #991.08
  Description: The Department of Defense (DoD) Defense Eligibility Enrollment Reporting System (DEERS) uses a Temporary Identification Number for individuals (e.g., babies) who do not have or have not provided a Social Security Number (SSN) when the record is added to DEERS. It is used for military dependents only. This DoD TEMPORARY ID NUMBER is used by the Master Veteran Index to support the linking of patient records across VA and DoD.

- **Field Name:** FOREIGN ID NUMBER
  Field Number: #991.09
  Description: The Department of Defense (DoD) Defense Eligibility Enrollment Reporting System (DEERS) uses a Foreign Identification Number for foreign military and foreign nationals when the record is added to DEERS. This DoD FOREIGN ID NUMBER is used by the Master Veteran Index to support the linking of patient records without a given Social Security Number (SSN) across VA and DoD.

Support for Patients with Residential Addresses Located in Foreign Countries (Department of Defense (DoD) Patients

As of Patch DG*5.3*863, when a patient's current residential address is located in a foreign country (e.g., for a Department of Defense (DoD) patient) the following foreign address fields, from the VistA PATIENT file (#2), are displayed in the Patient MPI/PD Data Inquiry and Display Remote Patient Data Query options:

- PROVINCE field #.1171
- POSTAL CODE field #.1172
- COUNTRY field #.1173

The condition by which these fields are displayed is as follows:

- If the COUNTRY field (#.1173), located in the PATIENT file (#2), is *not* null.

- Or if the CODE field (#.01), in the COUNTRY CODE file (#779.004), is *not* equal to "USA".

Templates

Following is a list of the VA FileMan templates exported with the MPI/PD package. There is a brief description for each template, along with the file name and number that each are located in (if applicable).

List Templates

RG EXCPT ACTION
File: LIST TEMPLATE file (#409.61)
Used to create the List Manager screen for the MPI/PD Exception Handling exception actions for a patient selected.

RG EXCPT PDAT
File: LIST TEMPLATE file (#409.61)
Used to list Patient Data Query, an activity of MPI/PD Exception Handling.

RG EXCPT PV REJECT RDISPLAY
File: LIST TEMPLATE file(#409.61)
Used to create MPI Primary View Reject Display screen for the Primary View Reject exception on the MPI/PD Exception Handling option.

RG EXCPT RPDAT
File: LIST TEMPLATE file (#409.61)
Used to list Remote Patient Data Query, which gets data from shared sites. It is an activity of MPI/PD Exception Handling.

RG EXCPT SUMMARY
File: LIST TEMPLATE file (#409.61)
Used to create the List Manager screen for MPI/PD Exception Handling.

RG EXCPT PV MPI PDAT
File: LIST TEMPLATE file (#409.61)
Used to remotely display the MPI Primary View patient identity fields on the Master Patient Index (MPI). The report generated by this option displays the current activity scores for individual patient identity fields (i.e., Primary View of the MPI) and the primary view data fields.

VAFC EXCPT LOCAL AUDIT
File: LIST TEMPLATE file (#409.61)
Used to display local patient audit data.

VAFC EXCPT REMOTE AUDIT
File: LIST TEMPLATE file (#409.61)
Used to return MPI/PD Remote Audit Data.

Print Templates

MPIF OUTSTANDING REQUESTS
File: MPIF CMOR REQUEST (#984.9)
Allows user to display Pending Approval CMOR Requests.

MPIF REQUEST VIEW
File: MPIF CMOR REQUEST (#984.9)
Allows user to display a single CMOR Request.

Sort Templates

MPIF PENDING REQUESTS
File: MPIF CMOR REQUEST (#984.9)
Sort CMOR requests with STATUS of pending approval, then within that sort by SITE not equal to null.

MPIF REQUEST SORT
File: MPIF CMOR REQUEST (#984.9)
Sort by SITE number not equal to null, then within that sort by the CMOR request STATUS and chronological order by ENTER DATE.

Input Templates

MPIF OPEN REQUEST
File: MPIF CMOR REQUEST (#984.9)
Gives the user edit access to enter a new record in File #984.9 for CMOR requests.

MPIF REQUEST INCOMING
File: MPIF CMOR REQUEST (#984.9)
Allows user to display the CMOR request.

MPIF RESULT INCOMING
File: MPIF CMOR REQUEST (#984.9)
Allows user to approve/disapprove the CMOR request.

MPIF REVIEW AUTO
File: MPIF CMOR REQUEST (#984.9)
Automatically approve the CMOR request.

MPIF REVIEW RESET
File: MPIF CMOR REQUEST (#984.9)
Reverse the approval process. If the user has not completed the approval process the new data won't be saved. (e.g., through an up-arrow or time out).

MPIF REVIEW RESULT
File: MPIF CMOR REQUEST (#984.9)
Automatically saves the approval data to the CMOR request once the user approves request.

MPIF SITE PARAMETERS
File: CIRN SITE PARAMETER (#991.8)
Allow automatic processing of CMOR request.

Chapter 7: Exported Options

This section describes in detail the menus and options comprising the Master Patient Index/Patient Demographics (MPI/PD) VistA. They should be made accessible to authorized IRM, ADPAC (i.e., most likely PIMS ADPACs and/or Coordinators, etc.), and VAMC personnel who will be involved in working with the MPI/PD.

MPI/PD Menus and Options

MPI/PD Master Menu

Figure 7-1. MPI/PD Master Menu

```
MPI/PD Master Menu ... RGMGR
  CORD  MPI/PD Patient Admin Coordinator Menu ... RG ADMIN COORD MENU
  IRM   MPI/PD IRM Menu ... RG IRM MENU
```

MPI/PD Patient Admin Coordinator Menu

Figure 7-2. MPI/PD Patient Admin Coordinator Menu

```
CORD MPI/PD Patient Admin Coordinator Menu ... [RG ADMIN COORD MENU]
     LOG Patient Audit Log Reports ... [RG TRAN/AUD AUD REP]
          Patient Audit File Print [RGMT AUDIT PRINT]
          Single Patient Audit File Print [RGMT AUDIT SINGLE]
     MSG Message Exception Menu ... [RG EXCEPTION MENU]
          MPI/PD Exception Handling [RG EXCEPTION HANDLING]
          Patient MPI/PD Data Inquiry [RG EXCEPTION TF INQUIRY]
          Remote Patient Data Query Menu ... [RG REMOTE PDAT MENU]
             Send Remote Patient Data Query [RG REMOTE PDAT SEND]
             Check Remote Patient Data Query [RG REMOTE PDAT CHECK]
             Display Remote Patient Data Query [RG REMOTE PDAT DISPLAY]
          Display Only Query [MPIF DISPLAY ONLY QUERY TO MPI]
          Primary View Display from MPI [RG PRIMARY VIEW FROM MPI]
     RPT Management Reports ... [RG MGT REPORTS]
          Pseudo-SSN Report [RGPR PRE-IMP SSN REPORT]
          Link and Process Status Display[RG LINKS & PROCESS DISPLAY]
          Unresolved Exception Summary [RG STATUS DISPLAY]
     POC Add/Edit Point of Contact [RG UPDATE POINT OF CONTACT]
```

MPI/PD IRM Menu

Figure 7-3. MPI/PD IRM Menu

```
IRM  MPI/PD IRM Menu ... RG IRM MENU
       Link and Process Status Display [RG LINKS & PROCESS DISPLAY]
       Unresolved Exception Summary [RG STATUS DISPLAY]
```

Menu Assignment

Table 7-1. MPI/PD Menu Assignment

Menu	Assign to:
MPI/PD Master Menu RGMGR	Information Resource Management (IRM) personnel
MPI/PD Patient Admin Coordinator Menu RG ADMIN COORD MENU	Patient Administration/HAS/MPI/PD Coordinator
MPI/PD IRM Menu RG IRM MENU	IRM personnel

Standalone Options

MPI/PD HL7 EXCEPTION NOTIFIER	RG EXCEPTION NOTIFIER

This option is used to notify members of the RG CIRN DEMOGRAPHIC ISSUES Mail Group that there are exceptions to review. It is not a user option and should not be added to user menus.

MPI/PD EXCEPTION PURGE	RG EXCEPTION PURGE

This option purges entries from the CIRN HL7 EXCEPTION LOG (#991.1) file. Entries that are purged include duplicate entries, resolved entries over 30 days old, and entries for patients where the name field is null or the patient has been merged (e.g., has a -9 node.) Additionally, only the most recent Primary View Reject exception for a given patient/date is retained.

The MPI/PD EXCEPTION PURGE [RG EXCEPTION PURGE] option should be scheduled to run once an hour via Task Manager in the Schedule/Unschedule Options [XUTM SCHEDULE] on the Taskman Management [XUTM MGR] menu. In the QUEUED TO RUN AT WHAT TIME field, enter a time that is a few minutes into the future (as soon as possible.) In the RESCHEDULING FREQUENCY field, enter "1H" (1 hour).

LOCAL/MISSING ICN RESOLUTION	MPIF LOC/MIS ICN RES

This option will start the background job of resolving local and missing ICNs against the MPI. It is recommended that this option be scheduled to run via TaskMan every 600 seconds (patch MPIF*1*35).

NOTE: A new field, LOCAL/MISSING DATE LAST RAN (#.04), was created in the CIRN SITE PARAMETER file (#991.8) in patch RG*1*23 to hold the last date the Local/Missing ICN Resolution Background job ran. The field will be populated by the routine ^MPIFRES.

MPI/PD HL7 DIAGNOSTIC MENU	RGMT DIAG MGR

This standalone menu contains a diagnostic tool and reports to assist with problem resolution for MPI/PD HL7 messaging. It should not be attached to any menu. This diagnostic tool will be used primarily by the MPI/PD development team and EPS.

Figure 7-4. MPI/PD HL7 Diagnostic Menu options

```
MPI/PD HL7 Diagnostic RGMT DIAG MGR
   CMP  Compile MPI/PD HL7 Data RGMT DIAG COMPILE HL7 DATA
   RPT  MPI/PD HL7 Message Status Report RGMT DIAG STATUS REPORT
   SNG  MPI/PD HL7 Activity by Patient/Single Protocol RGMT DIAG SINGLE PROTOCOL
   ALL  MPI/PD HL7 Activity by Patient/All Protocols RGMT DIAG ALL PROTOCOLS
```

COMPILE MPI/PD HL7 DATA	RGMT DIAG COMPILE HL7 DATA

This utility searches the HL7 MESSAGE TEXT file (#772) for a selected date range. Each HL7 message in the date range is examined. If the RELATED EVENT PROTOCOL field contains the MPI/PD protocols (e.g., "VAF", "RG", or "MPI") data is compiled into the ^XTMP("RGMT","HL" array.

A cross-reference is built on patient ICN and DFN for faster data retrieval for the associated reports.

MPI/PD HL7 MESSAGE STATUS REPORT	RGMT DIAG STATUS REPORT

This option prints information found during the COMPILE MPI/PD HL7 DATA option. The MPI/PD HL7 MESSAGE STATUS REPORT is generated from the ^XTMP("RGMT","HL" array. The report is sorted by RELATED EVENT PROTOCOL, date, transmission type, and status.

Either a detailed or summary report can be printed for a selected date range. The summary report displays the total number of messages for each date, transmission type, and status. The right margin for this report is 80.

The detailed report can be printed for a single or all protocols and includes information from each HL7 message. The detailed report displays the related event protocol date, transmission type, status, message header date, date processed, internal entry number (IEN) from the HL7 MESSAGE TEXT file (#772), message identification number, and whether or not the message has been purged. The right margin for this report is 132.

MPI/PD HL7 ACTIVITY BY PATIENT/SINGLE PROTOCOL	RGMT DIAG SINGLE PROTOCOL

This option allows you to search for activity related to a specific protocol in the HL7 MESSAGE TEXT file (#772) for a patient during a selected period of time. This search is accomplished using data set into a temporary global built by the option "Compile MPI/PD HL7 Data".

The report prints the patient's name, protocol, date range, transmission type, internal entry number (IEN) from the HL7 MESSAGE TEXT file (#772), the date and status. The HL7 message data found in the MESSAGE TEXT field is displayed. The right margin for this report is 80.

MPI/PD HL7 ACTIVITY BY PATIENT/ALL PROTOCOLS	RGMT DIAG ALL PROTOCOLS

This option allows you to search for ALL activity in the HL7 MESSAGE TEXT file (#772) for a specific patient during a selected period of time. This search is accomplished using data set into a temporary global built by the option "Compile MPI/PD HL7 Data".

The report prints the patient's name, date range, protocol, transmission type, internal entry number (IEN) from the HL7 MESSAGE TEXT file (#772), the date and status. The HL7 message data found in the MESSAGE TEXT field is displayed. The right margin for this report is 80.

Security Keys

There is no security keys exported with the MPI/PD package.

Chapter 8: Archiving and Purging

Archiving

There are no application specific archiving procedures or recommendations for the MPI/PD package.

Purging

The MPI/PD EXCEPTION PURGE is a background job that purges entries from the CIRN HL7 EXCEPTION LOG file (#991.1). Entries that are purged include duplicate entries, resolved entries over 30 days old, and entries for patients where the name field is null or the patient has been merge (e.g., has a -9 node.) Additionally, only the most recent Primary View Reject exception for a given patient/date is retained.

A change has been made in the MPI/PD EXCEPTION HANDLING [RG EXCEPTION HANDLING] option. Upon selecting the MPI/PD Exception Handling option, instead of being prompted to run the exception purge, you are now notified when the last purge took place. The purge process runs automatically if it has not run within the past two hours; however, the MPI/PD EXCEPTION PURGE [RG EXCEPTION PURGE] option should be scheduled to run once an hour via Taskman. It can take a few minutes to run, but once the job is finished, you can go back to the Message Exception Menu and choose MPI/PD Exception Handling to view the results of the purge process.

If for any reason the task becomes unscheduled, the time that the purge process last ran will be displayed upon entry into the Exception Handler. Please notify IRM if the MPI/PD EXCEPTION PURGE [RG EXCEPTION PURGE] job needs to be rescheduled.

Figure 8-1. MPI/PD Exception Purge process

```
Select Message Exception Menu Option: MPI/PD Exception Handling

The MPI/PD Exception Purge process last ran May 29, 2007@18:43:35.

The MPI/PD Exception Purge process will now run.
Please come back to this option in five minutes.

Please contact IRM to verify that the MPI/PD EXCEPTION PURGE
[RG EXCEPTION PURGE] option is scheduled to run via TaskMan
with a frequency of once an hour.
```

The purge process eliminates duplicate exceptions for the same patient/exception type, keeping only the most recent occurrence.

The MPI/PD EXCEPTION PURGE [RG EXCEPTION PURGE] option should be scheduled to run once an hour via Task Manager in the Schedule/Unschedule Options [XUTM SCHEDULE] on the Taskman Management [XUTM MGR] menu. In the QUEUED TO RUN AT WHAT TIME field, enter a time that is a few minutes into the future (as soon as possible.) In the RESCHEDULING FREQUENCY field, enter "1H" (1 hour.).

The HL7 and MailMan packages have purging options that should be used to control the large number of HL7 messages that MPI/PD products. Since IRM personnel have the option to use either HL7 or MailMan as the messaging component for sending and receiving data from the MPI, see the associated product documentation, listed below, for purging instructions specific to these packages:

- *VistA Health Level Seven (HL7) Technical Manual*, Version 1.6 and up.
- *VA Electronic Mail System (MailMan) Technical Manual and Systems Management Guide*, Version 7.1 and up.

Chapter 9: Callable Routines

Supported APIs

Veterans Health Information Systems and Technology Architecture (VistA) Application Program Interfaces (API) fall into the following three categories:

1. The first category is "Supported API" These are callable routines, which are supported for general use by all VistA applications.
2. 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.
3. The third category is "Private API," where only a single application is granted permission to use an attribute/function of another VistA package.

NOTE: All the Supported and Controlled Subscription APIs belonging to the MPI/PD package for retrieving information from the MPI node in the PATIENT file (#2) or MPI /PD related information can be found in the *Master Patient Index/Patient Demographics (MPI/PD) VistA Programmer Manual* and on FORUM.

The following are instructions for obtaining the current list of Integration Agreements on FORUM in its entirety, to which the Master Patient Index/Patient Demographics (MPI/PD) is a custodian:

1. Sign on to the FORUM system (forum.va.gov).
2. Go to the *DBA MENU*.
3. Select the *INTEGRATION CONTROL REGISTRATIONS* menu.
4. Select the *Custodial Package* menu.
5. Choose the *ACTIVE ICRs by Custodial Package* option.
6. When this option prompts you for a package, enter the name of the VistA software (e.g., Master Patient Index MPIF, Clinical Info Resource Network RG, etc.).

   NOTE: All current IAs for which the VistA package is custodian are listed.

To obtain detailed information on a specific Integration Agreement on FORUM:

1. Sign on to the FORUM system (forum.va.gov).
2. Select the *DBA MENU*.
3. Select the *INTEGRATION CONTROL REGISTRATIONS* menu.
4. Select the *Inquire to an Integration Control Registration* option.
5. When prompted for "INTEGRATION REFERENCES", enter the number of the Integration Agreements you want to display.

   NOTE: The option lists the full text of the IAs you requested.

NOTE: All the Supported and Controlled Subscription APIs belonging to the MPI/PD package for retrieving information from the MPI node in the PATIENT file (#2) or MPI /PD related information can be found in the *Master Patient Index/Patient Demographics (MPI/PD) VistA Programmer Manual* and on FORUM.

NOTE: Due to early and separate beginnings, the now combined MPI/PD, formerly known as CIRN/PD, and MPI VistA software packages, merged into one as MPI/PD, has references to both Clinical Information Resource Network (CIRN) or RG patches, and Master Patient Index VistA or MPIF patches.

NOTE: The MPI/PD software (i.e., routines in the MPIF* and RG* namespaces) SHOULD NOT reside/run on Legacy systems. Any VistA applications utilizing APIs in the MPIF and RG namespaces on Legacy systems should check the existence of these routine(s) before trying to access them.

MPI 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 a patient doesn't have an ICN (local or national).

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.

Chapter 10: External Interfaces

The MPI package makes extensive use of HL7 messaging to ensure synchronization of patient records among sites.

NOTE: For more information on MPI HL7 messaging, see the *Master Patient Index/Patient Demographics (MPI/PD) VistA HL7 Interface Specifications* for complete details on message construction.

Listed below are the HL7 Application Parameters, HL Lower Level Protocol Parameters, and HL7 Protocols, used by MPI/PD for HL7 messaging.

HL7 Application Parameters

- MPIF A29 SERVER
- MPIF A30 SERVER
- MPIF CMOR CHNG
- MPIF CMOR COMP
- MPIF CMOR RSLT
- MPIF LOC/MIS
- MPIF MPI
- MPIF TRIGGER
- MPIF-STARTUP
- RG ADT
- RG CIRN
- RG CIRN ADT
- RG MPIPD
- RG REPOSITORY
- RG SITE MERGE
- RG SUBSCRIPTION
- RGMT CIRN
- VAFC PIMS
- VAFC TRIGGER

HL Lower Level Protocol Parameters

- CIRN MAIL
- MPIF RTC PARAMS
- MPIVA MAIL
- MPIVA TCP

Protocols

- MPIF ADT-A24 CLIENT
- MPIF ADT-A24 SERVER
- MPIF ADT-A28 CLIENT
- MPIF ADT-A28 SERVER
- MPIF ADT-A29 CLIENT
- MPIF ADT-A29 SERVER
- MPIF ADT-A31 CLIENT
- MPIF ADT-A31 SERVER
- MPIF ADT-A37 CLIENT
- MPIF ADT-A37 SERVER
- MPIF ADT-A40 CLIENT
- MPIF ADT-A40 SERVER
- MPIF ADT-A43 CLIENT
- MPIF ADT-A43 SERVER
- MPIF CMOR APP/DIS

- MPIF CMOR APPROVE/DISAPPROVE
- MPIF CMOR COMPARISON CLIENT
- MPIF CMOR COMPARISON SERVER
- MPIF CMOR REQUEST
- MPIF CMOR RESPONSE
- MPIF CMOR RESULT CLIENT
- MPIF CMOR RESULT SERVER
- MPIF ICN-Q02 SERVER
- MPIF POTENTIAL DUP (CMOR PDAT)
- MPIF POTENTIAL DUP (HELP)
- MPIF POTENTIAL DUP (MPI PDAT)
- MPIF POTENTIAL DUP (SELECT PATIENT)
- MPIF POTENTIAL DUP MENU
- MPIF REAL-TIME QUERY (ADD PATIENT)
- MPIF REAL-TIME QUERY (CMOR PDAT)
- MPIF REAL-TIME QUERY (HELP)
- MPIF REAL-TIME QUERY (MPI PDAT)
- MPIF REAL-TIME QUERY (SELECT PATIENT)
- MPIF REAL-TIME QUERY MENU
- MPIF TEST
- RG ADT-A01 2.4 CLIENT
- RG ADT-A01 2.4 SERVER
- RG ADT-A03 2.4 CLIENT
- RG ADT-A03 2.4 SERVER
- RG ADT-A04 2.4 CLIENT
- RG ADT-A04 2.4 SERVER
- RG ADT-A04 TRIGGER
- RG ADT-A08 2.4 CLIENT
- RG ADT-A08 2.4 SERVER
- RG ADT-A08 TRIGGER
- RG EXCPT ACTION MENU
- RG EXCPT BLANK1
- RG EXCPT DATE SORT
- RG EXCPT DISPLAY ONLY QUERY
- RG EXCPT EDIT NOTE
- RG EXCPT EDIT PATIENT DATA
- RG EXCPT HINQ INQUIRY
- RG EXCPT MAIN MENU
- RG EXCPT MPI/PD DATA
- RG EXCPT PATIENT AUDIT
- RG EXCPT PATIENT INQUIRY
- RG EXCPT PATIENT SORT
- RG EXCPT PDAT MENU
- RG EXCPT POT MATCH
- RG EXCPT PV REJECT
- RG EXCPT RCHK
- RG EXCPT RDISP
- RG EXCPT RSEND
- RG EXCPT SELECT
- RG EXCPT SELECT TYPE
- RG EXCPT SORT
- RG EXCPT UPDATE STATUS
- RG EXCPT TF INQUIRY
- RG EXCPT TYPE SORT
- RG EXCPT UPDATE STATUS
- RG EXPCT PDAT MENU
- RG FACILITY INTEGRATION CLIENT
- RG FACILITY INTEGRATION SERVER
- RG MPI DELETE
- RG PATIENT MERGE

In the Phase III Enhancements project, a new messaging structure was implemented for the MPI/PD. To reduce the amount of facility-to-facility messaging, the MPI Austin is now the source for update messages rather than the CMOR. For those message types that require CMOR action, the CMOR will update the MPI, and the MPI will distribute updates to the appropriate facilities. Changes to messaging include the use of a new generic HL7 2.4 message builder for the ENV, PD1 and PID segments. Additionally, HL7 application acknowledgements are incorporated in all MPI/PD messages. Upon installation of the third phase of patches (DG*5.3*474, MPIF*1*24, and RG*1*27), the necessary routines to call the new trigger events using the updated messaging structure will be in place.

NOTE: With the implementation MPI Changes Project, Iteration 4 - Primary View (MPI*1*40, MPIF*1*44 and RG*1*45), the CMOR will no longer play a roll, but instead the Primary View business rules will determine what will be updated and send out the update messages to the appropriate facilities.

NOTE: For definitions of MPI/PD messages, please refer to the *Master Patient Index/Patient Demographics (MPI/PD) VistA HL7 Interface Specification* on the Virtual Document Library (VDL) at http://www.va.gov/vdl/

Remote Procedure Calls (RPCs)

This section documents all the supported RPCs belonging to the MPI/PD package.

Table 10-1. MPI/PD Remote Procedure Calls (RPC)

RPC	Description
MPIF ACK CHECK Routine: EN^MPIFACHK	This RPC will check to see if there are any messages on the sites before date BEFORE that haven't received the application level ACK back. If so, the message will need to be regenerated to the MPI.
MPIF DNL ADD UPD Routine: MPIRPC	This RPC has been established to allow the remote creation of records into the MPI DO NOT LINK (#985.26) file.
MPIF EDAT REMOTE Routine: MPIRPC	MPI Extended Patient data inquiry for Display Only Query. ICN needs to be passed in.
MPIF EXT PDAT REMOTE Routine: PATINFO^MPIFEXT2	This RPC is the Extended PDAT call remote. ICN or SSN can be passed. NOTE: With the introduction of the new Race and Ethnicity fields in the PATIENT file (#2), in Patch DG*5.3*415, MPIF EXT PDAT REMOTE was modified to utilize these new fields. Routine MPIFEXT2 was modified to support this change.
MPI GETCORRESPONDINGIDS Routine: GETIDS^MPIRPC1	This RPC is used by PSIM to pull the list of active correlations for a given ICN. It is intended for use only by consumers like North Chicago that need to get the Date Last Treated information on the correlation which at this time is only stored on MPI. ICN is the name of a return parameter that returns a list of active correlations as the value in the following format. • n^SourceID^Station#^DateLastTreated • n+1^SourceID^Station#^DateLastTreated
MPIF ICN STATS Routine: ICNSTAT^MPIFRPC	This RPC, also known as MPIF ICN STATS, returns an ICN, Exceptions pending, CMOR, CMOR History, ICN History for any given ICN.
MPIF INACTIVATE Routine: INACT^MPIFRPC	This RPC allows the remote inactivation of a patient from the MPI at a specific site.

RPC	Description
MPIF REMOTE FULL ICN STATS Routine: STATS^MPIFFULL	This RPC allows the remote MPI user to know when the last run of the MPIF REMOTE LOCAL ICN ASSIGN RPC took place, the total number of patients with national ICNs, local ICNs, merged patients (-9 node in PATIENT (#2) file), and no ICNs.
MPIF REMOTE ICN UPDATE Routine: UPDATE^MPIFRPC2	This RPC allows the remote update of the INTEGRATION CONTROL NUMBER (#991.01), ICN CHECKSUM (#991.02), and COORDINATING MASTER OF RECORD (#991.03) fields in the PATIENT file (#2) at a specified site. The patient is found based upon SSN.
MPIF REMOTE LOCAL ICN ASSIGN Routine: LOCALIA^MPIFFULL RPC	This RPC allows local integration control numbers (ICNs) to be assigned to a number of patient records. This allows them to get a national ICN thru the normal resolution of local ICNs via the MPIF LOCAL/MISSING ICN RESOLUTION background job.
MPIF REMOTE PRIMARY DFN ICN Routine: PRIMARY^MPIFRPC3	This Remote Procedure Call will return the primary system IEN (DFN) in the PATIENT file (#2) along with the Integration Control Number (ICN) if available for a particular legacy system station number and DFN.
MPIF REMOTE SPI Routine: SPI^MPIFRPC2	This RPC allows the remote sending of a specific patient at a specific site to the MPI for ICN assignment. The patient is found based upon SSN.
MPIF SSN DUPS Routine: TOSITE^MPIFDUPS	This RPC will be used by the MPI Data Quality Management Team's Statistics Report to search for multiple SSNs with different ICNs from the same site.
RG PRIMARY VIEW FROM MPI Routine: MPIPV^MPIRPC	This remote procedure call will return the MPI Patient Data Inquiry [MPI DATA MGT PDAT MPI] (PDAT) report for a requested ICN.
RG PRIMARY VIEW REJECT Routine: PVREJ^MPIRPC	This RPC will return the Primary View Reject report for a particular station, ICN, and date range. The date range will be from the date of the exception to the current date.
RG REM ACTIVITY Routine: EN^RGACTIV	This RPC returns Health Level Seven (HL7) message information and exception information for a patient. The HL7 data is from the ADT/HL7 PIVOT file (#391.71) and exception date is from the CIRN HL7 EXCEPTION LOG file (#991.1).
RG REMOTE HL7 TASK Routine: TASK^RGMTRUN	This RPC will return the currently running HL7 tasks from a remote site to the Master Patient Index (MPI) Austin.
RG VIEW VISTA EXCEPTIONS Routine: EN^RGRPC	This RPC will allow the MPI HC IdM staff to view VistA exceptions for a given patient logged during a specific date range.
VAFC LOCAL GETCORRESPONDINGIDS Routine: TFL^VAFCTFU2	A new Remote Procedure Call (RPC), VAFC LOCAL GETCORRESPONDINGIDS, has been created. When supplied with a patient DFN, Integration Control Number (ICN), or DoD's Electronic Data Interchange Personal Identifier (EDIPI), the RPC will return

RPC	Description
	specific data. The returned information includes the list of Treating Facilities where the patient has been seen, the station number of that facility, the SOURCE ID and the IDENTIFIER STATUS.
VAFC AA UPDATE REMOTE PROCEDURE Routine: PDAT^VAFCRPC	When a new entry is added to the MPI ASSIGNING AUTHORITY (#985.55) file on the MPI, the VAFC AA UPDATE REMOTE PROCEDURE is called. The RPC triggers an update message to those Treating Facilities where the patient's Integration Control Number (ICN) is known and creates an identical entry in the VistA VAFC ASSIGNING AUTHORITY (#391.92) file.
VAFC NEW NC TREATING FACILITY Routine: NEWTF^VAFCTFU2	A new Remote Procedure Call (RPC), VAFC NEW NC TREATING FACILITY, has been created for use by the North Chicago Common Registration User Interface (UI). The RPC allows the UI to add an active Department of Defense correlation to the TREATING FACILITY LIST (#391.91) file if it does not already exist. The RPC then returns the list of Treating Facilities where the patient has been seen, along with the SOURCE ID, INSTITUTION, and IDENTIFIER STATUS.
VAFC REMOTE PDAT Routine: PDAT^VAFCRPC	This RPC returns the test Patient MPI/PD Data Inquiry report to a remote site.

Chapter 11: External Relations

Platform Requirements

The Master Patient Index/Patient Demographics VistA package requires a standard VistA operating environment in order to function correctly. Check your VistA environment for packages and versions installed.

REF: For information on the VistA APIs created and used by the MPI/PD package, and for instructions for obtaining the current list of DBA Approvals and Integration Agreements on FORUM, see the section titled: *"Supported APIs"* in the *"Callable Routines"* chapter of this manual.

Chapter 12: Internal Relations

All routines, files, and options within the MPI/PD software can function independently.

Namespace

The Master Patient Index/Patient Demographics (MPI/PD) VistA package uses both MPIF and RG namespaces.

File Numbers

The MPI/PD V.1.0 file numbers and globals are listed below.

Table 12-1. MPI/PD V. 1.0 Files

File #	Name	Global
984.1	MASTER PATIENT INDEX (LOCAL NUMBERS)	^MPIF(984.1,
984.5	MPI CHECKDIGIT	^MPIF(984.5,
984.8	MPI ICN BUILD MANAGEMENT	^MPIF(984.8,
984.9	MPIF CMOR REQUEST	^MPIF(984.9,
991.1	CIRN HL7 EXCEPTION LOG	^RGHL7(991.1,
991.8	CIRN SITE PARAMETER	^RGSITE(991.8
991.11	CIRN HL7 EXCEPTION TYPE	^RGHL7(991.11,
995	CIRN EVENT ASSOCIATION DATA SCREEN	^RGEQASN(

Chapter 13: Package-wide Variables

The Master Patient Index/Patient Demographics (MPI/PD) VistA package contains no package-wide variables.

Chapter 14: Software Product Security

Mail Groups

Mail groups exported with the MPI/PD package are documented in the *"Implementation and Maintenance"* section of this manual.

Bulletins

Mail groups exported with the MPI/PD package are documented in the *"Implementation and Maintenance"* section of this manual.

Remote Systems

The MPI Austin, located at the Austin Automation Center, maintains the actual patient index and a current list of facilities where the patient has been seen in order to enable sharing of patient data among operationally diverse systems. The MPI/PD that resides on VistA at the sites, sends data to the MPI Austin. Some patient fields were transmitted to Austin during the initialization process as a result of daily operations at the VAMC. The initialization process started at a VAMC. HL7 messages went to the MPI requesting ICNs for all the patients that had activity in the past three years. This process has been completed and currently the MPI is kept up-to-date via existing VistA options.

The MPI/PD package makes extensive use of HL7 messaging to ensure synchronization of patient records between sites. Please refer to the *Master Patient Index/Patient Demographics (MPI/PD) VistA HL7 Interface Manual* for complete details on message construction.

Archiving/Purging

Archiving

There are no application-specific archiving procedures or recommendations for the Master Patient Index/Patient Demographics (MPI/PD) VistA package.

Purging

The MPI/PD package provides users with the opportunity to purge processed exceptions as part of the MPI/PD Exception Handling RG EXCEPTION HANDLING option. To access this option, follow the steps in Figure 14-1. As shown in Figure 14-1, you will be told when the last purge took place. You will have to wait a few minutes before using the MPI/PD Exception Handling option.

Figure 14-1. How to access MPI/PD Exception Handling process

```
   CORD   MPI/PD Patient Admin Coordinator Menu ...
   IRM    MPI/PD IRM Menu ...

Select MPI/PD Master Menu Option: CORD <Enter> MPI/PD Patient Admin Coordinator
Menu

   SP     Site Parameters Edit for CMOR
   LOG    Patient Audit Log Reports ...
   MSG    Message Exception Menu ...
   RPT    Management Reports ...
   POC    Add/Edit Point of Contact

Select MPI/PD Patient Admin Coordinator Menu Option: MSG <Enter> Message Exception
Menu

          MPI/PD Exception Handling
          Patient MPI/PD Data Inquiry
          Remote Patient Data Query Menu ...
          Display Only Query

Select Message Exception Menu Option: MPI/PD <Enter> Exception Handling

The MPI/PD Exception Purge process last ran Feb 24, 2006@17:33:21.
```

The purge removes duplicate entries and resolved entries over 30 days old from the CIRN HL7 EXCEPTION LOG file (#991.1). Regular purging provides you with the most up-to-date information on the List Manager screen.

The HL7 and MailMan packages have purging options that should be used to control the large number of HL7 messages produced by MPI/PD.

Contingency Planning

Sites should have a local contingency plan to be used in the event of application problems in a live environment. Field station Information Security Officers (ISOs) can get assistance for the Regional ISO (RISO).

Interfacing

There are no specialized (not VA produced) products (hardware and/or software) embedded within or required by the MPI/PD package.

Electronic Signatures

There are no electronic signatures used in the MPI/PD package.

Menus

There are no options of particular interest to Information Security Officers (ISOs) in the MPI/PD package.

Security Keys

There are no security keys exported with the MPI/PD package.

File Security

Table 14-1. Software Product Security: File Access

File #	File Name	DD	RD	WR	DEL	LAYGO	AUDIT
984.1	MASTER PATIENT INDEX (LOCAL NUMBERS)	@	@	@	@	@	@
984.5	MPI CHECKDIGIT	@	@	@	@	@	@
984.8	MPI ICN BUILD MANAGEMENT	@	@	@	@	@	@
984.9	MPIF CMOR REQUEST	@	@	@	@	@	@
991.1	CIRN HL7 EXCEPTION LOG						
991.8	CIRN SITE PARAMETER	@	@	@	@	@	@
991.11	CIRN HL7 EXCEPTION TYPE	@	@	@	@	@	
**391.91	TREATING FACILITY LIST	@	@	@	@	@	@
**391.92	VAFC ASSIGNING AUTHORITY	@	@				
995	CIRN EVENT ASSOCIATION						

** The file numbers listed in Table 14-1 preceded by two asterisks (**) are not files created in the MPI/PD namespace. They are, however, files that the MPI/PD software interacts with.

Glossary

Table G-1. Glossary

.001 Field	A field containing the internal entry number of the record.
.01 Field	The one field that must be present for every file and file entry. It is also called the NAME field. At a file's creation the .01 field is given the label NAME. This label can be changed.
10-10EZ	Form used to apply for health benefits.
abbreviated response	This feature allows you to enter data by typing only the first few characters for the desired response. This feature will not work unless the information is already stored in the computer.
Accept Agreement	Part of the validation and agreement to the privacy regulations associated with Toolkit (IdM TK).
access code	A code that, along with the Verify code, allows the computer to identify you as a user authorized to gain access to the computer. Your code is greater than 6 and less than 20 characters long; can be numeric, alphabetic, or a combination of both; and is usually assigned by a site manager or application coordinator. It is used by the Kernel's Sign-on/Security system to identify the user (see Verify Code).
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 the authoritative data store within VHA for cross-cutting person administrative information. The Administrative Data Repository contains identification and cross-cutting demographics data as well as other administrative information. Patient Information Management System (PSIM) uploads the identity demographic data to the ADR.May also include subset of the Enrollment database. May also be referred to as ADR-N or ADR-L to designate a national or local instance.
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).
AITC	The Master Patient Index (MPI) is located at the Austin Information Technology Center (AITC).

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 other than the PATIENT file (#2). For example, selected personnel in Laboratory, Radiology, and Pharmacy.

ANSI American National Standards Institute.

ANSI M The M (formerly known as MUMPS) programming language is a standard recognized by the American National Standard Institute (ANSI). M stands for Massachusetts Utility Multi-programming System.

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. 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 Any software that executes logic or rules which allow people to interface with the computer and programs which collect, manipulate, summarize, and report data and information. .

application coordinator Designated individuals responsible for user-level management and maintenance of an application package such as IFCAP, Lab, Pharmacy, Mental Health, etc.

application server Software/hardware for handling complex interactions between users, business logic, and databases in transaction-based, multi-tier applications. Application servers, also known as app servers, provide increased availability and higher performance.

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.

AT-SIGN ("@") A VA FileMan security Access code that gives the user programmer-level access to files and to VA FileMan's developer features. See Programmer Access. Also, the character "@" (i.e., at-sign, Shift-2 key on most keyboards) is used at VA FileMan field prompts to delete data.

attribute **VHA** Definition:

- These are Persons Traits or Meta-Data about the Primary View or the Correlation.

Identity Hub™ Definition:

- Members have attributes, like Name, Gender, Address, Phone, Birth Date, SSN.
- Attributes are stored in tables according to Segments. Segments are “attribute types” The MEMPHONE segment can hold Home Phone, Cell Phone, and Fax Number information.

authentication Verifying the identity of the end-user.

authorization Granting or denying user access or permission to perform a function.

Auto Link Threshold or Threshold, Auto Link The Auto Link Threshold is the level that a Comparison Score must meet or exceed in order for two or more Identity Profiles to be considered the same unique Person Identity.

auto-resolved Exception cases automatically closed by the System without action by the HealthCare Identity Management (HC IdM) staff.

auto-update The term "auto-update" refers to fields that are updated from a central database (i.e., the Master Patient Index).

Bad Address Indicator (BAI) The Bad Address Indicator field applies to the address at which the patient resides. This field should be set as follows (if applicable):

- "UNDELIVERABLE" - Bad Address based on returned mail.
- "HOMELESS" - Patient is known to be homeless.
- "OTHER" - Other Bad Address Reason

Setting this field will prevent a Bad Address from being shared with HEC and other VAMC facilities. It will also be used to block Means Test Renewal Letters from being sent. Once the Bad Address Indicator is set, incoming “newer" addresses will automatically remove the Bad Address Indicator, and allow the "updated" address to be transmitted to HEC and other VAMC Facilities.

batch acknowledgements The format of a HL7 batch acknowledgement message consists entirely 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.
BHIE	Bidirectional Health Information Exchange
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.
business requirements	• Requirements state the customer needs the project output will satisfy. Requirements typically start with phrase "The system shall …" Business requirements refers to how the project will satisfy the business mission of the customer. • Business requirements refer to business functions of the project, such as project management, financial management, or change management.
business rule	• A policy imposed by the business, or an external entity, on the system used in the process of conducting that business. • A special category of a requirement. A business rule is directive, policy, or procedure within an organization that describes the relationship between two or more entities. Business rules may also come from outside sources such as government regulations and membership association guidelines.
cache	Cache memory is a small area of very fast RAM used to speed exchange of data. Also, a file or directory included on your computer's hard drive which automatically stores the text and graphics from a web page you pull up, which, in turn, allows you to go back to that web page, without having to wait for the information to reload.
CAIP	Cross-Application Integration Protocol. A framework which provides both applications and services with support for software procedure calls across systems and applications that rely upon infrastructure and middleware technologies, while simultaneously minimizing the direct dependencies of these same applications and services upon these enabling technologies.
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.
CAPRI	Compensation & Pension Records Interchange (CAPRI). This Graphical User Interface (GUI) software is used to access veterans' electronic medical records throughout the VA. The Healthcare Identity Management (HC IdM) Team uses

	CAPRI as a resource for reviewing patient demographic and clinical data.
CHDR	Clinical Data Repository (CDR) Health Data Repository
checksum	The result of a mathematical computation involving the individual characters of a routine or file.
client	A single term used interchangeably to refer to the user, the workstation, and the portion of the program that runs on the workstation. In an object-oriented environment, a client is a member of a group that uses the services of an unrelated group. If the client is on a local area network (LAN), it can share resources with another computer (server).
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.
common menu	The Common menu consists of options that are available to all users. Entering two question marks at the menus select prompt displays any secondary menu options available to the signed-on user, along with the common options available to all users.
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.
correlation	Comparison of person identity traits for multiple records with the Primary View in the ADR and/or MPI databases.
COTS	Commercial Off The Shelf applications sold by vendors through public catalogue listings. COTS software is not intended to be customized or enhanced.
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 attribute	A characteristic unit of data such as length, value, or method of representation. VA FileMan field definitions specify data attributes.
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.
data integrity	This term refers to the condition of patient records in terms of completeness and correctness. It also refers to the process in which a particular patient's data is synchronized at all the sites in which that patient receives care.
data type	A specific field or type of information, such as Name, Social Security Number, etc.
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 (DBMS)	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.
date of death	A patient may be entered as deceased at a treating facility. If a shared patient is flagged as deceased, an RG CIRN DEMOGRAPHIC ISSUES bulletin is sent to each treating facility telling where, when, and by whom the deceased date was entered. Each site can then review whether the patient should be marked as deceased at their site.
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.
demographic data	Identifying descriptive data about a patient, such as: name, sex, date of birth, marital status, religious preference, SSN, address, etc.
demographics	Information about a person, such as name, address, service record, next of kin, and so on.

Department of Veterans Affairs	The Department of Veterans Affairs (formerly known as the Veterans 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).
DFN	IdM – Data File Number which is the Patient Internal Entry Number (IEN) in Legacy Vista for a specific Site. Additionally, this is a defined variable in VistA that refers to the IEN of the Patient currently in memory.
DHCP	Decentralized Hospital Computer Program (now known as Veterans Health Information Systems and Technology Architecture [VistA]). VistA software, developed by VA, is used to support clinical and administrative functions at VA Medical Centers nationwide. It is written in M and, via the Kernel, runs on all major M implementations regardless of vendor. VistA is composed of packages that undergo a verification process to ensure conformity with namespacing and other VistA standards and conventions.
dictionary	Database of specifications of data and information processing resources. VA FileMan's database of data dictionaries is stored in the FILE of files (#1).
direct connect	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: • Register A Patient, • Load/Edit Patient Data, • Electronic 10-10EZ Processing, and when using the: • Display Only Query
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.
DNS	Domain Name Server
DOB	Date of Birth
DOD	IdM– Date of Death
DoD	Department of Defense.
domain	A site for sending and receiving mail.
double quotes ("")	Symbol used in front of a Common option's menu text or synonym to select it

	from the Common menu. For example, the five-character string "TBOX" selects the User's Toolbox Common option.
Duplicate Record Merge: Patient Merge	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]).
DUZ	Locally defined variable in VistA that refers to the IEN of the logged on user (From the New Person file).
DUZ(0)	Locally defined variable that holds the File Manager Access Code of 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.
exception	A task that has encountered an error in personal data. Any Data Quality issue that requires detailed documentation. HC IdM finds an Exception based on business rules.
exception message	MPI/PD 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.
FHIE	Federal Health Information Exchange – A Federal IT health care initiative that facilitates the secure electronic one-way exchange of patient medical information

	between Government health organizations. The project participants are the Department of Defense (DoD) and the Department of Veterans Affairs (VA). (http://vaww.va.gov/FHIE-BHIE/ ***NOTE:*** *This is an internal VA Web site and is not available to the public.*)
field	HL7: An HL7 field is a string of characters defined by one of the HL7 data types. 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 discernible 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).
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.
FIN	Foreign ID Number
FIPS	Standards published by the U.S. National Institute of Standards and Technology, after approval by the Department of Commerce; used as a guideline for federal procurements.
FOIA	Freedom of Information Act
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.
FTP	File Transfer Protocol
function point count (FPC)	The function point method is used to establish a meaningful unit-of-work measure and can be used to establish baseline costs and performance level monitors. Function point analysis centers on its ability to measure the size of any software deliverable in logical, user-oriented terms. Rather than counting lines of code, function point analysis measures the functionality being delivered to the end user.
GAL	Global Address List.
gender	The following are listed in Legacy Vista as Standard Gender values: • F – Female

- M – Male

SDS table Values:

- F – Female
- M – Male
- A – Ambiguous
- N – Not Applicable
- - Other
- U – Unknown
- UN – Undifferentiated

global variable Variable that is stored on disk (M usage).

GUI Graphical User Interface.

HC IdM Healthcare Identity Management

HDR Health Data Repository – A repository of clinical information normally residing on one or more independent platforms for use by clinicians and other personnel in support of patient-centric care. The data is retrieved from heritage, transaction-oriented systems and is organized in a format to support clinical decision-making in support of patient care. Formerly known as Clinical Data Repository.

Health Level 7 (HL7) Batch Protocol Protocol utilized to transmit a batch of HL7 messages. The protocol generally uses FHS, BHS, BTS and FTS segments to delineate the batch. In the case of the MPI, the protocol only uses the BHS and BTS segments.

Health Level Seven (HL7) National standard for electronic data exchange/messaging protocol. HL7 messages are the dominant standard for peer-to-peer exchange of clinical, text-based information.

Health Level Seven (HL7) VistA Messaging system developed as VistA software that follows the HL7 Standard for data exchange.

Healthcare Identity Management (HC IdM) The Healthcare Identity Management team (formerly the Identity Management Data Quality team)

- Serves as business steward for patient identity data for the patient's electronic health record (such as name, SSN, date of birth, gender, mother's maiden name, place of birth) as well as managing the patient's longitudinal health record across the enterprise.
- Defines business rules and processes governing healthcare identity management data collection and maintenance.
- Monitors and resolves data integrity issues and conflicts on the MPI and local systems related to the individual's identity data within their health record, including the resolution of duplicates, mismatches and catastrophic edits to patient identity, which affect patient care and safety.

Health*e*Vet-VistA The next generation of VistA, Health*e*Vet-VistA, will retain all of the capabilities of legacy VistA but will provide enhanced flexibility for future health care and compliance with the One VA Enterprise Architecture. It will allow seamless data

	sharing between all parts of VA to benefit veterans and their families.
HEC	Health Eligibility Center.
help frames	Entries in the HELP FRAME file (#9.2) that can be distributed with application packages to provide online documentation. Frames can be linked with other related frames to form a nested structure.
help prompt	The brief help that is available at the field level when entering one or more question marks.
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 – A law passed by Congress in 1996 that requires the Department of Health and Human Services to implement regulations that will require the use of specific standards related to health care claims, code sets, identifiers (individual, provider, employer, and health plan), and security. Protects the privacy of individually identifiable health information.
HL7	Health Level 7 – National standard for electronic data exchange/messaging protocol. A standards organization primarily focused on message-oriented middleware for healthcare. HL7 messages are the dominant standard for peer-to-peer exchange of clinical, text-based information.
HLO	HL7 Optimized. VistA HL7 package routines.
ICN	Patients are assigned a unique identifier, Integration Control Number (ICN), within the process of being added to the MPI database. This number links patients to their records across VHA systems. The Integration Control Number is a unique identifier assigned to patients when they are added to the MPI. The ICN follows the ASTM-E1714-95 standard for a universal health identifier.
ID State	An attribute of the ICN, which describes the state of the record as Permanent, Temporary, or Deactivated. ID State is composed of the following two fields from the MPI VETERAN/CLIENT file (#985): • ID STATE (#80) is a set of codes: PERMANENT, TEMPORARY, and DEACTIVATED. Auditing is enabled for this field. • DATE OF ID STATE (#81) identifies when the ID STATE field was last updated.
Identity Services	A business and data service that provides a consistent interface for access and maintenance of person identification to trusted client applications and services. It is the authoritative source for person identification in the Veterans Health Administration (VHA) domain.

IdM	Identity Management
IdM TK	Toolkit
IdM Toolkit (IdM TK) Administrator	An IdM Toolkit Administrator is a user with additional privileges and security beyond the IdM Toolkit User's available functionality in the system.
IEN	Internal Entry Number. The IEN number and Station Number comprise the Source ID of the person targeted for the search. The Source ID is used to uniquely identify a person.
IMDQ **New name: "Healthcare Identity Management (HC IdM)"**	The Identity Management Data Quality team (renamed the Healthcare Identity Management team) is a group of Data Management Analysts 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.
Initiate Identity Hub™	The Initiate Identity Hub™ is a third-party proprietary off-the-shelf software package that makes use of a Probabilistic Matching Algorithm.
Initiate Identity Hub	Initiate Systems Inc. software that provides a trusted on-demand system of record for multiple organizations or other entities by accurately identifying the relevant duplicate and fragmented records and linking them – within, as well as across, all data sources
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 Number (ICN)	Patients are assigned a unique identifier, known as an Integration Control Number (ICN), within the process of being added to the MPI database. This number links patients to their records across VHA systems. The Integration Control Number is a unique identifier assigned to patients when they are added to the MPI. The ICN follows the ASTM-E1714-95 standard for a universal health identifier.
internal entry	The number used to identify an entry within a file. Every record has a unique

number (IEN)	internal entry number.
IRM	Information Resource Management. A service at VA medical centers responsible for computer management and system security.
ISO	Information Security Officer.
ISS	Infrastructure and Security Services (now known as Common Services Security Program).
IV&V	IV&V is the principal activity that oversees the successful implementation and execution of all internal control processes for financial and interfacing systems. In order to ensure overall systems integrity, IV&V is accomplished organizationally independent from the elements that acquire, design, develop or maintain the system.
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.
LAYGO Access	A user's authorization to create a new entry when editing a computer file. (**L**earn **A**s **Y**ou **GO** allows you the ability to create new file entries.)
LDAP	Lightweight Directory Access Protocol.
Lookup	To find an entry in a file using a value for one of its fields.
M (ANSI Standard)	Massachusetts General Hospital Utility Multi-Programming System (M, formerly named MUMPS). The Mumps language originated in the mid-60's at the Massachusetts General Hospital. Although most implementations are proprietary, consolidated into the hands of a small number of companies, an open source version of the language has been developed which is distributed freely under the GNU GPL and LGPL licenses.
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.
Master Patient Index (Austin) or MPI Austin	The MPI is a separate computer system located at the Austin Information Technology Center. It maintains a record for VA patients and stores data such as a unique patient identifier and Treating Facility lists (which tracks the sites where that ICN is known).
Master Patient Index or MPI	A data store of patient records. Master Patient Index is a cross-reference or index of patients that includes the patient's related identifiers and other patient identifying information. It is used to associate a patient's identifiers among multiple ID-assigning entities, possibly including a Health Data Repository, to support the consolidation and sharing of a patient's health care information across VHA. The MPI is the authoritative source for patient identity. Systems of interest include VA facilities where patients are seen for care and other systems that have a registered interest in a patient, such as Federal Health Information Exchange (FHIE), Home TeleHealth, Person Service Identity Management (PSIM), and Health Data Repository (HDR). The ability to uniquely identify patients assists in the elimination of duplicate records throughout all VA systems and other agencies, and allows the systems to share information for patients that receive care from more than one facility/agency.
Master Patient Index/Patient Demographics (MPI/PD) VistA or 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.
Master Veteran Index or MVI	The authoritative source for person identity data. Maintains identity data for persons across VA systems. Provides a unique universal identifier for each person. Stores identity data as correlations for each system where a person is known. Provides a probabilistic matching algorithm. (Includes MPI, PSIM, and IdM TK) Maintains a "gold copy" known as a "Primary View" of the person's identity data. Broadcasts identity trait updates to systems of interest. Maintains a record locator service.
match threshold	The Match Threshold is the level at which an Identity Profile must score against a set of identity traits in order to be considered a match. For most enterprise applications the Match Threshold would be set at or near the Auto Link Threshold. Internal Identity Management Systems (MPI/PSIM) may use a lower score, perhaps the Task Threshold, as a Match Threshold for identity management decision processes.
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.

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 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.

MMN Mother's Maiden Name: 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

MPI Initialization The process of initializing a site's PATIENT file (#2) with the Master Patient Index (MPI). Initialization synchronizes PATIENT file (#2) information (for active shared patients) with the MPI and identifies facilities where the patient has been treated. This process transfers the Integration Control Number (ICN), and Treating Facility list for each patient to the patient's record in the VistA PATIENT file (#2) at all sites where the patient has been treated. It is also possible to initialize an individual patient to the MPI. This is done through menu options. The initial synchronization of PATIENT file (#2) information (for active, shared patients) with the Master Patient Index and with the patient's treating facilities is an important step in the implementation of the MPI/PD software system.

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

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.

NPI National Provider Index

null Empty—A field or variable that has no value associated with it is null.

numeric field	Response that is limited to a restricted number of digits. It can be dollar valued or a decimal figure of specified precision.
OI	Office of Information
OIFO	Office of Information Field Office.
OIT	Office of Information Technology
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 (software)	The set of programs, files, documentation, help prompts, and installation procedures required for a given application (e.g., Laboratory, Pharmacy, and PIMS). A VistA software environment is composed of elements specified via the PACKAGE file (#9.4). Elements include files, associated templates, namespaced routines, and namespaced file entries from the OPTION, HELP FRAME, BULLETIN, and FUNCTION files. As public domain software, VistA software can be requested through the Freedom of Information Act (FOIA).
person correlation	A profile of an Identity that is maintained by an Associated System and is correlated to only one ICN. (Source - PIDS)
PIMS	Patient Information Management System- VistA software package that includes Registration and Scheduling packages.
PKI	Public Key Infrastructure
POB (City)	PLACE OF BIRTH [CITY]: The city in which this applicant was born (or foreign country if born outside the U.S.).
POB (State)	PLACE OF BIRTH [STATE]: State in which patient was born.
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.
potential match threshold	The level at which an Identity Profile must score against a set of identity traits in order to be considered a Potential Match for HC IdM decision processes.
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 menu	The list of options presented at sign-on. Each user must have a primary menu in order to sign-on and reach Menu Manager. Users are given primary menus by Information Resource Management (IRM). This menu should include most of the computing activities the user needs.
primary reviewer	This can be a single person or group of people given the overall responsibility to initiate reviews of potential duplicate record pairs. For example, selected personnel in Patient Administration or a task force or group formed to oversee and conduct the effort of reducing or eliminating the occurrence of duplicate records in the site's database.
primary view	Provides the most accurate, current, and complete identity information for a VA patient. The Primary View from the MVI business rules make determinations about data additions and updates to identity traits (Name, SSN, Date of Birth, Gender, Mother's Maiden Name, Place of Birth, and Multiple Birth Indicator) based on the authoritativeness of the update or edits as they are received by the MVI.
private integration agreement	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. 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.
probabilistic comparison score	In a Probabilistic Search, these are the points assigned to an identity to indicate the level of confidence of matching to a given set of traits. If the Comparison Score is above a certain level called the **Match Threshold**, then the profile is considered to be a match and the profile would be returned to the calling application.
probabilistic matching algorithm	A method to determine that a person identity profile has been matched in the PS Datastore based on the Comparison Score, which is calculated for each profile compared to the set of traits used for matching.
probabilistic search	A search using a matching algorithm to determine that a person's identity profile matches a set of defined traits. The algorithm assigns a comparison score and returns results based on a defined match threshold.
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.
PS	Product Support
Pseudo SSN Reason	The reason that a pseudo SSN has been collected for the patient. The PSEUDO

	SSN REASON value is a set of codes pulled from the PATIENT (#2) file.
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 (PSIM) enumerates and maintains person identities.
queuing	Requesting that a job be processed in the background rather than in the foreground within the current session. Jobs are processed sequentially (first-in, first-out). Kernel's TaskMan module handles the queuing of tasks.
queuing required	Option attribute that specifies that the option must be processed by Task Manager (the option can only be queued). The option may be invoked and the job prepared for processing, but the output can only be generated during the specified times.
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).
REEME	Registration/Eligibility/Enrollment Maintenance and Enhancement
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. 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. The MPI will return either that a match was found or that no match was found. If a potential match was found the MPI will log an exception in the Toolkit for review and not found will be returned to the user. If the MVI did not find a match, the request is sent to add a new record to MVI. If the match was found, the date last treated site will be contacted to pull data back as part of Register Once functionality. Once the registration process has completed, the ADT-A04 Registration HL7 message will be sent to the MPI and if the MPI updates primary view as a result of that A04, the updates will be broadcasted out to all appropriate facilities.
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.
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.

Resolution Journal Case Number IDM – Number associated with each Resolution Journal Case. Used by the HealthCare Identity Management (HC IdM) team to document detailed information mostly for duplicate exception resolution but may also be used to denote details for resolving any type of exception.

RG CIRN DEMOGRAPHIC ISSUES mail group The RG CIRN DEMOGRAPHIC ISSUES bulletin controls the sending of the following patient related bulletin:

- Patient Related Bulletin—REMOTE SENSITIVITY INDICATED
- Cause—Patient is marked as sensitive at the sending site but not at receiving site.
- Action to take—No action: message is informational

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.

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.

sending site Sending Site—As it relates to HL7 Messages, it is the site that is transmitting the message to another site.

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.

server The computer where the data and the Business Rules reside. It makes resources available to client workstations on the network. In VistA, it is an entry in the OPTION file (#19). An automated mail protocol that is activated by sending a message to a server at another location with the "S.server" syntax. A server's activity is specified in the OPTION file (#19) and can be the running of a routine or the placement of data into a file.

Set Of Codes Usually a preset code with one or two characters. The computer may require capital letters as a response (e.g., M for male and F for female). If anything other than the acceptable code is entered, the computer rejects the response.

shared patient A patient who has been seen at more than one VistA site. The MPI keeps the Treating Facility list updated every time a new facility is added. The MPI broadcasts out an updates to the treating facility list, including date last treated and event reason.

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 (package) The set of programs, files, documentation, help prompts, and installation procedures required for a given application (e.g., Laboratory, Pharmacy, and PIMS). A VistA software environment is composed of elements specified via the PACKAGE file (#9.4). Elements include files, associated templates, namespaced routines, and namespaced file entries from the OPTION, HELP FRAME, BULLETIN, and FUNCTION files. As public domain software, VistA software can be requested through the Freedom of Information Act (FOIA).

source ID PSIM – A Source ID is a term used to describe the components that define a unique correlation in PSIM/ADR. There are 4 components of a Source ID in PSIM:

1. Assigning Authority (ex. USVHA)
2. Assigning Location (ex. Station #)
3. IDType (e.g. NI, PI, EI)
4. Internal Identifier - A code used at the assigning location used to uniquely identify a person.

The Initiate Identity Hub also uses the term Source ID, but with a slightly different context. The Source ID in the IDHub is the unique identifier of a correlated system. PSIM would translate the components Assigning Authority, Assigning Location, and IDType to an IDHub Source ID. The fourth PSIM Source ID component, IEN, would translate to the Member ID in the ID HUB. Thus, the IDHub uses 2 components to uniquely identify a member: Source ID and Member ID.

spacebar return	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.
special queuing	Option attribute indicating that Task Manager should automatically run the option whenever the system reboots.
SSA	Social Security Administration
SSDI	Social Security Death Index (SSDI). The SSDI is a database used for genealogical research as well as enabling users to locate a death certificate, find an obituary, and discover cemetery records and track down probate records. The Healthcare Identity Management (HC IdM) Team uses the SSDI (http://www.genealogybank.com/gbnk/ssdi/) as a resource for verifying patients' dates of death.
SSN	Social Security Number
station identifier	The number assigned to a VAMC facility or a System Association. The station identifier may be three characters in length designating the facility as a parent organization or up to six characters in length designating the facility as a child of a parent organization.
subscriber	A subscriber is an entity, which receives updates to a patient's descriptive data from other sites. All treating facilities are also made subscribers as part of the MPI/PD processes.
subscript	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.
supported reference integration agreement	This applies where any VistA application may use the attributes/functions defined by the IA (these are also called "Public "). An example is an IA that describes a standard API such as DIE or VADPT. The 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.
synchronized patient data	Key descriptive fields in the PATIENT file (#2) that are updated in all the descriptive subscriber's PATIENT files whenever the fields are edited by a subscriber.
systems of interest	The term "systems of interest" refers to VA facilities that have seen patients and entered them as entries onto the MPI. This also refers to non-VistA systems that have a registered interest in a patient (e.g., Federal Health Information Exchange [FHIE], HomeTeleHealth, Person Service Identity Management [PSIM], Health Data Repository [HDR], etc).
Task Manager	Kernel module that schedules and processes background tasks (also called TaskMan)

task threshold or threshold, task

The Task Threshold (also called the Clerical Review Threshold) is a value that is less than the Auto Link Threshold. A Comparison Score above the Task Threshold and below the Auto Link Threshold needs to be reviewed by an Identity Management expert to determine whether the Identity Profile is either a match or not a match for the traits being compared.

The Task Threshold is determined and tuned by Identity Management experts and may change over time as software systems and business processes improve. The ideal goal for automated identity matching is to minimize the difference between the Task Threshold and the Auto Link Threshold.

TCP/IP

Transaction Control Protocol/Internet Protocol. A set of protocols for Layers 3 (Network) and 4 (Transfer) of the OSI network model. TCP/IP has been developed over a period of 15 years under the auspices of the Department of Defense. It is a de facto standard, particularly as higher-level layers over Ethernet. Although it builds upon the OSI model, TCP/IP is not OSI-compliant.

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).

TIN

Temporary ID Number

Toolkit (IdM TK)

The User Interface for the HealthCare Identity Management team. With the IdM TK, authorized users can search and view identity and exception information from the Administrative Data Repository (ADR). Specifically, you can view the Primary View record and any associated correlations, correlation data, history, audit trails and IdM exceptions. A side-by-side comparison of the ADR and Master Patient Index (MPI) patient information is included. In addition, you can search for exceptions, review exception details, and then view and resolve Potential Duplicate Exceptions.

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.
TSPR	Technical Services Project Repository
UAT	User Acceptance Testing.
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 Domiciliary	Provides comprehensive health and social services in a VA facility for eligible veterans who are ambulatory and do not require the level of care provided in nursing homes.
VA FileMan	VistA's Database Management System (DBMS). The central component that defines the way standard VistA files are structured and manipulated.
VA hospital	An institution that is owned, staffed and operated by VA and whose primary function is to provide inpatient services. NOTE: Each division of an integrated medical center is counted as a separate hospital.
VA Medical Center (VAMC)	A unique VA site of care providing two or more types of services that reside at a single physical site location. The services provided are the primary service as tracked in the VHA Site Tracking (VAST) (i.e., VA Hospital, Nursing Home, Domiciliary, independent outpatient clinic (IOC), hospital-based outpatient clinic (HBOC), and CBOC). The definition of VA medical center does not include the Vet Centers as an identifying service. NOTE: This definition was established by the Under Secretary for Health.
VA Nursing Home Care Units (NHCU)	Provide care to individuals who are not in need of hospital care, but who require nursing care and related medical or psychosocial services in an institutional setting. VA NHCUs are facilities designed to care for patients who require a comprehensive care management system coordinated by an interdisciplinary team. Services provided include nursing, medical, rehabilitative, recreational, dietetic, psychosocial, pharmaceutical, radiological, laboratory, dental and spiritual.
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., $TEST).
VBA SHARE	This is a VBA application which is utilized by the Regional Offices to access BIRLS, C&P, PIF, PHF, Corporate Database, Social Security and COVERS records. The Healthcare Identity Management (HC IdM) Team uses VBA SHARE as a resource for verifying patient identity data as well as military information.
verify code	The Kernel's Sign-on/Security system uses the Verify code to validate the user's identity. This is an additional security precaution used in conjunction with the Access code. Verify codes shall be at least eight characters in length and contain three of the following four kinds of characters: letters (lower- and uppercase), numbers, and, characters that are neither letters nor numbers (e.g., "#", "@" or "$"). 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.
Vet Center	A data source under the direct supervision of the Readjustment Counseling Service (RCS). The Vet Center provides professional readjustment counseling, community education, outreach to special populations, brokering of services with community agencies, and access to important links.
VHA	Veterans Health Administration.
VIS	Veterans Information Solution (VIS). This intranet-based application is designed to provide a consolidated view of information about veterans and active service members. The HC IdM Team uses VIS as a resource for verifying patient identity data as well as military information.
VISN	Veterans Integrated Service Network
VistA	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 the SACC SharePoint Site – ***NOTE:*** *This is an internal VA Web site and is not available to the public.*). 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.
VPID (replaced with ICN.)	Veterans Administration Personal Identifier – An enterprise-level identifier uniquely identifying VA „persons“ across the entire VA domain.
WAN	Wide Area Network.
Z st	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.

REF: For a comprehensive list of commonly used terms and definitions, please visit the Process Management OIT Master Glossary :

http://vaww.oed.wss.va.gov/process/OIT%20Master%20Glossary/Home.aspx

NOTE: *This is an internal VA Web site and is not available to the public.*

Appendix A: Exceptions and Bulletins

NOTE: For information on exception messages, their resolution, and the MPI/PD Exception Handling option RG EXCEPTION HANDLING introduced in Patch RG*1*3, see the Master Patient Index/Patient Demographics (MPI/PD) VistA Exception Handling manual at the following web site:

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

This document gives Master Patient Index/Patient Demographics (MPI/PD) sites information and assistance in dealing with exception messages.