



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

**Changes to National ICN Assignments  
and Resolving Potential Matches  
Returned Exceptions**

**Supplement to Patch Description  
Patches MPI\*1\*38, MPIF\*1\*43, and  
RG\*1\*43**

**April 2006**

Department of Veterans Affairs  
VistA Health Systems Design & Development (HSD&D)  
Infrastructure and Security Services (ISS)



# Revision History

## Documentation History

The following table displays the revision history for this document. Revisions to the documentation are based on continuous dialog with Infrastructure and Security Services (ISS) Technical Writers and evolving industry standards and styles.

Date	Description	Author
April 2006	Original document based on Patches MPI*1*38, 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, Birmingham OIFO; Paulette Davis, Birmingham OIFO; Dan Soraoka, Oakland OIFO, Project Manager

**Table i: Documentation Revision History**

## Patch History

For the current patch history related to this software, please refer to the Patch Module on FORUM.



# Contents

Revision History .....	iii
Tables and Figures .....	vii
Orientation .....	ix
<b>Chapter 1: Introduction.....</b>	<b>1-1</b>
<b>Chapter 2: Changes for the Veterans Affairs Facilities (Sites) .....</b>	<b>2-1</b>
National ICNs Assigned to All Patient Records That do Not Have an Exact Match on MPI.....	2-1
How Does this Change National ICN Assignments of Patient Records? .....	2-1
Under What Conditions are Local ICNs Still Assigned to Patient Records? .....	2-2
Removal of Single Patient Initialization (SPI) Functionality .....	2-3
New Exception Handler Action “Potential Match Rev (PMR)” .....	2-3
How is the PMR Action Different from SPI Functionality?.....	2-4
<b>Chapter 3: Health Eligibility Center (HEC) Enumeration .....</b>	<b>3-1</b>
Health Level 7 (HL7) Messaging .....	3-1
Coordination With HL7 Support .....	3-1
Glossary .....	Glossary-1
Appendix A: Example Scenario—Processing Exceptions for Shared Patients in VistA.....	Appendix A-1
Index .....	Index-1



# Tables and Figures

Table i: Documentation Revision History .....	iii
Table ii: Documentation symbol descriptions .....	ix
Figure 2-1: All patients are now added to MPI during registration, thus receiving a national ICN .....	2-2
Figure 2-2: New PMR action displays list of potential matches, similar to SPI action .....	2-5
Figure 2-3: Additional actions to choose within Potential Match Rev (PMR) action .....	2-6
Figure Appendix A-1: Potential matches exception sent to IMDQ team for resolution .....	Appendix A-2



# Orientation

This is a guide for the Health Systems Implementation Training and Enterprise Support (HSITES) to use when working with the changes to MPI/PD software resulting from the installation of VistA Patches RG\*1.0\*43 and MPIF\*1.0\*43. The primary audience for this manual is Health Systems Implementation Training and Enterprise Support (HSITES), primarily including the Veterans Affairs facilities, the Identity Management Data Quality (IMDQ) team, and all stakeholders.

This document is organized into the following major parts:

1. Introduction
2. Changes for the Veterans Affairs Facilities (Sites)
3. Health Eligibility Center (HEC) Enumeration
4. Glossary
5. Index

## How to Use this Manual

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

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

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

**Table ii: Documentation symbol descriptions**

- Descriptive text is presented in a proportional font (as represented by this font).
- "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.



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

## Orientation

- All uppercase is reserved for the representation of M code, variable names, or the formal name of options, field and file names, and security keys (e.g., the XUPROGMODE key).
- Conventions for displaying TEST data in this document are as follows:
  - The first three digits (prefix) of any Social Security Numbers (SSN) will begin with either "000" or "666".
  - Patient and user names will be formatted as follows: [Application Name]PATIENT,[N] and [Application Name]USER,[N] respectively, where "Application Name" is defined in the Approved Application Abbreviations document, located on the Web site listed below, and where "N" represents the first name as a number spelled out and incremented with each new entry.



The list of Approved Application Abbreviations can be found at the following Web site:

[http://vista.med.va.gov/iss/strategic\\_docs.asp#sop](http://vista.med.va.gov/iss/strategic_docs.asp#sop)

## Reference Material

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

- VistA Documentation Library (VDL) at the following address:  
<http://www.va.gov/vdl/Infrastructure.asp?appID=16>
- Identity Management Data Quality (IMDQ) at:  
[http://vista.med.va.gov/mpi\\_dqmt/](http://vista.med.va.gov/mpi_dqmt/)
- Master Patient Index/Patient Demographics (MPI/PD) at:  
[http://vista.med.va.gov/mpi\\_pd/index.html](http://vista.med.va.gov/mpi_pd/index.html)

The MPI/PD VistA product documentation, as found on the VDL, includes the following manuals:

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

The Master Patient Index VistA and Patient Demographics (PD) were distributed and installed together. All installation information and procedures involved with the MPI VistA is included in the following MPI/PD VistA document:

- *CIRN/PD and MPI Installation and Implementation Guide*

VistA documentation is made available online in both Microsoft Word format and Adobe Acrobat Portable Document Format (PDF). It can be downloaded from the Health Systems Design and Development (HSD&D) VistA Documentation Library (VDL) Web site at:

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

The PDF documents *must* be read using the Adobe Acrobat Reader (i.e., ACROREAD.EXE), which is freely distributed by Adobe Systems Incorporated at the following Web address:

<http://www.adobe.com/>



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

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

VistA documentation and software can also be downloaded from the Enterprise VistA Support (EVS) anonymous directories:

- **Preferred Method**      **download.vista.med.va.gov**
- Albany OIFO              ftp.fo-albany.med.va.gov
- Hines OIFO                ftp.fo-hines.med.va.gov
- Salt Lake City OIFO      ftp.fo-slc.med.va.gov



This method transmits the files from the first available FTP server.

## How to Obtain Technical Information Online

Exported file, routine, and global documentation can be generated using Kernel, MailMan, and VA FileMan utilities.



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

### Help at Prompts

VistA software has online help and commonly used system default prompts. In character-based mode, users are strongly 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.



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

# Chapter 1: Introduction

## Overview

To support a successful migration of data from the Health Eligibility Center (HEC) database to the Administrative Data Repository (ADR), it has been determined that 1.6 million records on the HEC must be enumerated to the MPI and be assigned Integration Control (ICNs). The HEC and Master Patient Index (MPI) teams have identified 1.6+ million patients in the HEC database as not having national ICNs by site and internal entry number (Station #/DFN) in the PATIENT file (#2) at that site. These records have been stored in a global on the MPI for the MPI developers to process, ultimately sending the patient records from their corresponding site to the MPI for ICN assignment and correlation.

To support this effort, all patients presented to the MPI for ICN assignment, regardless which option was used to make the connection, will be established as an exact match or a message will be returned indicating, "No match found." This ensures that all patients will get a national ICN unless the MPI is unavailable.

Among the changes to MPI/PD software with the installation of VistA patches RG\*1.0\*43 and MPIF\*1.0\*43, are the following:

- Potential matches, not exact, but that meet the threshold as a possible match found for patients on the MPI after VistA patches RG\*1.0\*43 and MPIF\*1.0\*43 have been installed, will generate potential match exceptions. The patients are then added directly to the MPI.
- Sites no longer have the SPI Single Patient Init action (commonly known as SPI) to review and resolve potential match exceptions. Instead, a new action is being introduced named Potential Match Rev (PMR), located on the MPI/PD Exception Handling option [RG EXCEPTION HANDLING].



## Chapter 2: Changes for the Veterans Affairs Facilities (Sites)

Two VistA Patches, MPIF\*1.0\*43 and RG\*1.0\*43, make a number of changes to the MPI/PD software that will change the way that ICNs are assigned and how Potential Matches Returned exceptions are processed. This section provides information on how these patches affect the Veterans Affairs facilities (sites) day-to-day interaction with the MPI.

### **National ICNs Assigned to All Patient Records That do Not Have an Exact Match on MPI**

Previously, the MPI/PD software assigned a local ICN and logged a Potential Matches Returned exception at the site for any entry found through querying the MPI that did not closely match the registrant patient's identifying information. Site personnel used the MPI/PD Exception Handling [RG EXCEPTION HANDLING] option to resolve these exceptions.

With the installation of VistA Patches MPIF\*1.0\*43 and RG\*.0\*43, Potential Matches Returned exceptions are still logged at the site; however, all patients are now added directly to the MPI during the registration process, thus receiving a national ICN, through the following PIMS options:

- Register a Patient
- Load/Edit Patient Data
- Electronic 10-10EZ Processing

The following sections explain how this new functionality works at the site and what site personnel need to do to resolve Potential Matches Returned exceptions.

### **How Does this Change National ICN Assignments of Patient Records?**

With the release of VistA Patches MPIF\*1.0\*43 and RG\*1.0\*43, national ICNs are now assigned to patients when they are presented to the MPI, even if they are found as a potential match to another record on the MPI. 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).

```
Select PATIENT NAME: MPIPATIENT,ONE L
  ARE YOU ADDING 'MPIPATIENT,ONE L' AS A NEW PATIENT (THE 1481ST)? No// Y <Enter>
(Yes)
  PATIENT SEX: F <Enter> FEMALE
  PATIENT DATE OF BIRTH: 10/4/55 <Enter> (OCT 04, 1955)
  PATIENT SOCIAL SECURITY NUMBER: 666098766
  PATIENT TYPE: SC <Enter> VETERAN
  PATIENT VETERAN (Y/N)?: Y <Enter> YES
  PATIENT SERVICE CONNECTED?: Y <Enter> YES
  PATIENT MULTIPLE BIRTH INDICATOR: N <Enter> NO

  ...searching for potential duplicates....

  No potential duplicates have been identified

  ...adding new patient...new patient added

Patient name components--
FAMILY (LAST) NAME: MPIPATIENT//
GIVEN (FIRST) NAME: ONE//
MIDDLE NAME: L//
PREFIX:
SUFFIX:
DEGREE:
Press ENTER to continue

Please verify or update the following information:

MOTHER'S MAIDEN NAME: MPIMAIDENNAME
PLACE OF BIRTH [CITY]: ANY CITY
PLACE OF BIRTH [STATE]: ALABAMA
Select ALIAS:

Attempting to connect to the Master Patient Index in Austin...
If no SSN or inexact DOB or common name, this request
may take some time, please be patient...

Exact match for Patient was not found in the MPI...
Message sent to MPI requesting Patient to be added.

Option continues as it would normally...
```

Record is added to the MPI during the registration process, thus receiving a national ICN.

**Figure 2-1: All patients are now added to MPI during registration, thus receiving a national ICN**

## Under What Conditions are Local ICNs Still Assigned to Patient Records?

The following are conditions in which local ICNs are assigned to patient records:

- The site's VistA system can't connect to the MPI.
- 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).
- The site attempts to add a patient; however, something happens to hold up transmission to the MPI causing a delay in national ICN assignment. In this instance, a local ICN is assigned as an interim placeholder to the patient entry until a national ICN is returned. Local ICN assignments made in this situation facilitate these types of patient entries to be easily identifiable.

**Local ICN Assignment as Placeholders**

When a patient is sent to the MPI, a local ICN is assigned as placeholder to that entry until a national ICN is returned. In addition, if the patient sent to the MPI is an existing patient that doesn't have a national ICN assignment, and if that record has been edited outside the PIMS options that interact directly with the MPI, when the UPDATE BATCH JOB FOR HL7 v2.3 [VAFC BATCH UPDATE] job runs it will create a local ICN for that patient. This ensures that patient records of this nature are sent to the MPI for national ICN assignment when the Local/Missing ICN Resolution background job [MPIF LOC/MIS ICN RES] is run at the site.



When Local ICNs are assigned to patient records, they continue to be resolved through the Local/Missing ICN Resolution Background Job [MPIF LOC/MIS ICN RES].

**Removal of Single Patient Initialization (SPI) Functionality**

VistA Patches MPIF\*1.0\*43 and RG\*1.0\*43 have removed the Single Patient Initialization to MPI (commonly known as SPI) functionality, which was available on the MPI in the following two forms:

- As the action named SPI Single Patient Init, located on the MPI/PD Exception Handling [RG EXCEPTION HANDLING] option, located on the Message Exception Menu [RG EXCEPTION MENU]
- As the standalone option, Single Patient Initialization to MPI [MPIF IND MPI LOAD], located on the MPIF VISTA MENU.

**New Exception Handler Action “Potential Match Rev (PMR)”**

VistA Patches MPIF\*1.0\*43 and RG\*1.0\*43 introduce a new action named Potential Match Rev (PMR) on the MPI/PD Exception Handling option [RG EXCEPTION HANDLING]. This action has been developed specifically to resolve Potential Matches Returned exceptions by displaying the list of potential matches for the user to determine if the patient being processed should be linked to another existing national ICNs on the MPI. This new action replaces the Single Patient Initialization to MPI (commonly known as SPI) functionality; however, because all patients are now assigned national ICNs as part of the registration process, regardless if there are potential duplicates, there is a slight difference in the way this new action is used to resolve potential matching records. This is explained further in the next topic.



The Potential Match Rev (PMR) action is only available for Potential Matches Returned exceptions that are not marked with a status of "PROCESSED."

## How is the PMR Action Different from SPI Functionality?

### Single Patient Initialization (SPI)

The Single Patient Initialization (SPI) functionality allowed you to request an ICN assignment from the MPI for any patient that didn't have a national ICN. When the MPI found a potential match, or multiple potential matches, the user was presented the list of potential matches for review. Sites were offered the following actions from which to choose:

- Match to another patient record in the list (if the patient is the same one being reviewed)
- View the patient's information at the CMOR
- Add their patient entry to the MPI (if the patient wasn't in the list)
- View additional demographic information on the MPI
- Select online help for assistance
- Quit and do nothing

### New Potential Match Rev (PMR)

The Potential Match Rev action is located on the MPI/PD Exception Handling option, Figure 2-2. This action is used to resolve Potential Matches Returned exceptions with a status of "NOT PROCESSED," only. Patient entries sent to the MPI through the PIMS options Register a Patient, Load/Edit Patient Data, and Electronic 10-10EZ Processing are now added directly to the MPI, thus receiving a national ICN. The PMR action allows site personnel to query the MPI and, even though a national ICN assignment has already been made, presents the user with a list of potential matches for the record they are reviewing.



The PMR action, Figure 2-2, looks almost identical to the former SPI action; however, in the PMR action you can't add the patient to the MPI. This is because the patient already has a national ICN, which as of VistA Patches MPIF\*1.0\*43 and RG\*1.0\*43 is now assigned as part of the registration process.



As of VistA Patch RG\*1.0\*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 now obsolete.

```

Select Message Exception Menu Option: MPI/PD Exception Handling
-----
MPI/PD EXCEPTION HANDLING      Jan 24, 2006@19:30:47      Page: 1 of 1
MPI/PD Exception Handling
-----
Patient          SSN          Dt Rec'd  Exception Type
-----
1  MPIPATIENT,FOUR  666450978  9/17/03  Death Entries on MPI and Vista D
2  MPIPATIENT,TWO  666434212  12/12/05  Potential Matches Returned
3  MPIPATIENT,ONE  666098765  1/24/06  Potential Matches Returned
-----
Enter ?? for more actions
SN Sort by Patient Name          SE Select Exception
ST Sort by Exception Type
Select Action:Quit// SE <Enter> Select Exception
Select : (1-3): 3
-----
MPI/PD EXCEPTION ACTIONS      Jan 24, 2006@19:31:43      Page: 1 of 1
MPI/PD EXCEPTION HANDLING ACTIONS.
-----
Exception Data
-----
Name:  MPIPATIENT,ONE
SSN:   666098765
DOB:   OCT 4,1955
DFN:   100000754
ICN:   1008521046
Date of Death:
Exception Type:  Potential Matches Returned
Exception Date:  Jan 24, 2006
Exception Status: NOT PROCESSED
Exception Text:  Potential matches found, please review via MPI/PD
                  Exception Handler
Exception Notes:
-----
Enter ?? for more actions
-----
AUD Patient Audit      DO MPI Display Only Qry  UPD Update to Processed
PI Patient Inquiry    PMR Potential Match Rev  DI MPI/PD Data Inquiry
HI Hinq Inquiry       ED Edit Patient Data     NT Edit Note
Select Action:Quit// PMR <Enter> Potential Match Rev
    
```

**Figure 2-2: New PMR action displays list of potential matches, similar to SPI action**

Within Potential Match Rev (PMR), Figure 2-3, site personnel can perform the following additional actions:

- SE Match to another patient record in the list (if the patient is the same one being reviewed)
- CMR View the patient's information at the CMOR
- MPI View additional demographic information on the MPI
- HLP Select online help for assistance
- QUIT Quit and do nothing

```

Enter ?? for more actions
AUD Patient Audit          DO MPI Display Only Qry  UPD Update to Processed
PI Patient Inquiry        PMR Potential Match Rev  DI MPI/PD Data Inquiry
HI Hing Inquiry          ED Edit Patient Data     NT Edit Note
Select Action:Quit//  PMR <Enter> Potential Match Rev

Attempting to connect to the Master Patient Index in Austin...
If no SSN or inexact DOB or common name, this request
may take some time, please be patient...

MPI QUERY RESULTS          Jan 24, 2006@21:18:17      Page: 1 of 1
Possible MPI Matches for Patient: MPIPATIENT,ONE
SSN: 666098765
DOB: 10-4-1955
SEX: FEMALE

Patient          SSN          DOB          CMOR
*1 MPIPATIENT,ONE L  666098766  10-4-1955  ALBANY

Enter ?? for more actions
SE Match With Existing Pt on List      MPI MPI Data View
CMR CMORs Data View                    HLP HELP

Select Action:Quit//

```

**Figure 2-3: Additional actions to choose within Potential Match Rev (PMR) action**

When the PMR action presents a list of potential matches to the user, it does not include the current national ICN assignment to the patient being reviewed. Remember, this patient is already on the MPI, unlike functionality pre-MPIF\*1.0\*43 and RG\*1.0\*43, when site personnel could use the SPI functionality to resolve patient records that didn't have national ICNs. Now site personnel only see other Potential Matches Returned exceptions. The patient being reviewed is not included in the list.

If there has been a change to the data on the MPI or to the patient's record in the local sites' PATIENT file (#2), it is possible for users to see that potential matches no longer exist for the patient being reviewed. In this situation, the user is informed of this and the exception status automatically changes to PROCESSED.

If the user matches to an entry in the list of potential matches:

- The ICN and CMOR fields are updated to the new values for the patient in the local sites' PATIENT (#2) file.
- The pre-existing ICN and CMOR values before the update occurred are moved to the corresponding History fields in the local sites' PATIENT (#2) file.
- An HL7 message is sent from the reviewing site, alerting the MPI that the ICN linkage has occurred.
- The exception status automatically changes to PROCESSED for that exception at the site.



Once the exception status changes to PROCESSED, the PMR action is no longer available.

- The MPI automatically deactivates the ICN assigned to the patient.
- The treating facility list is automatically updated on the MPI and broadcast back to all entries in the treating facility list at the site.



**If site personnel are unsure whether the potential matching records being reviewed are in fact a match, the exception should remain in a NOT PROCESSED status. Thus, users should answer "No" to the following prompt "Do you want to mark this exception as processed? NO// <Enter>." Exceptions marked as PROCESSED are removed from the list of active exceptions and cannot be re-activated.**



**Should a user who is presented with a list of potential matches find more than one entry is for the same patient, it is recommended that they contact the Identity Management Data Quality (IMDQ) team to assist in the resolution of multiple duplicates on the MPI.**

**Requests for assistance with duplicate resolution should be sent with the password-protected patient sensitive information related to the duplicate entries via an e-mail message to:**

- **MPIF EXCEPTIONS mail group (local VistA)**
- **CIRN EXCEPTION MGT mail group (FORUM)**
- **VHA OI IA MPI DQ Team distribution group on Outlook**



### **Business Rules for Matching Using the New Potential Match Rev (PMR) Action**

#### **Existing MPI Business Rules:**

- If a match is found on the MPI for the patient, all the current business rules apply (i.e., Can't match to a patient if the SSN and/or the Sex are different.)
- If you are matching to a record and the names are different, you are prompted "Are you sure?" and the different names are displayed.
- Only one entry in a VistA system (PATIENT file [#2]) can be associated with an ICN. In the event that an ICN is attempted to be assigned to a patient and that ICN is already in use for another patient in this VistA system, a potential duplicate exception message is generated at the site and to the IMDQ team for review.

#### **New MPI Business Rules Implemented with the Release of VistA Patches MPIF\*1.0\*43 and RG\*1.0\*43:**

- When attempting to match to an entry on the list of potential matches, if the patient being processed is shared with another VistA system the match cannot be made. If attempted, a message is displayed indicating that you can't match to the patient in question because that ICN is known at another VistA system. An exception message is then sent to the Identity Management Data Quality (IMDQ) team for review and assistance in resolving the potential duplicate on the MPI. The exception status at the site is automatically marked as PROCESSED and removed from the list of exceptions. See Appendix A: Example Scenario—Processing Exceptions for Shared Patients in VistA.
- The Potential Match Rev [PMR] action is only available for Potential Matches Returned exceptions that are not marked with a status of "PROCESSED."



#### **When RG\*1.0\*43 is Installed, it Will Retire the Following Exception Types:**

- Potential Match
- Missing Required Fields
- SSN Mismatch or Name Mismatch

Patch RG\*1.0\*43 will also result in all local ICNs being sent to the MPI for ICN assignment the next time the Local/Missing ICN Resolution Background Job [MPIF LOC/MIS ICN RES] job runs. Any new potential match exceptions logged will be a result of the patient being presented to the MPI under the new enumeration process.

# Chapter 3: Health Eligibility Center (HEC) Enumeration

## Overview

In order to support the Health Eligibility Center (HEC) migration to Administrative Data Repository (ADR), each record in the HEC must have a national Integration Control Number (ICN). To accomplish this, the Master Patient Index (MPI) development team and the HEC development/support staff have identified these patients by DFN at the respective site (DFN in the sites' PATIENT file [#2]) and station number of that site. They have created a new global on the MPI in Austin that contains this data.

In order to process these patients, a utility has been created to allow the processing of  $x$  number of patients for a selected site. Using an option, MPI HEC Enumeration Process [MPI HEC ENUMERATION PROCESS], the MPI developers will be able to select a site and how many entries to process. The job is then tasked off to the background. This job utilizes the functionality of the existing Remote Single Patient Initialization [MPI DATA MGT REMOTE SPI] option, to process each patient to the MPI for enumeration and national ICN assignment. In addition, there are two new reports available to obtain the following information:

- Site/DFN Status [MPI HEC SITE/DFN STATUS]
- Site Status [MPI HEC SITE STATUS]

## Health Level 7 (HL7) Messaging

During the enumeration process, there will be extra messaging occurring; potentially more than usual. The MPI development team can obtain the total number of patient records that will be processed for each Veterans Affairs facility and will be able to estimate the number of resulting messages generated.

At this time the MPI development team is unable to give any estimates on the number of Potential Matches Returned exceptions and the messaging that can result from the processing of these exceptions. The MPI development team may be able to provide more information on this after the test sites have processed some patient records.

## Coordination With HL7 Support

Coordination needs to be done with the sites prior to processing their respective patient records. The Health Systems Implementation Training and Enterprise Support (HSITES) group involved in the HL7 support would like to be kept in the loop, in case there are any HL7 issues that arise.



# Glossary

AAC	Austin Automation Center
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).
ADR	The Administrative Data Repository is a centralized database repository for person (PATIENT [#2[ and NEW PERSON [#200] file).
ANSI MUMPS	The MUMPS programming language is a standard recognized by the American National Standard Institute (ANSI). MUMPS stands for Massachusetts Utility Multi-programming System and is abbreviated as M.
API	Application Programming Interface
CMOR	The Coordinating Master Of Record site is the designated “owner” of the patient’s clinical and descriptive data. A patient only has one CMOR at a time, but the CMOR can change. Initially, the MPI assigns the CMOR based upon the first site at which the MPI encounters the patient. The designation of a site as the CMOR for a patient does not provide “workload credit” or any other distinction. The CMOR is a field that can be found in the PATIENT file (#2).
ESR	Enrollment Systems Redesign is a centralized and Reengineered enrollment system.
EVC	Enrollment VistA Changes
FORUM	The central E-mail system within the VA. FORUM is used to communicate at a national level. For example, VistA developers use FORUM to discuss programming and other issues. FORUM is located at the OI Field Office—Washington, DC (162-2).
HEC	Health Eligibility Center.
HL7	Health Level 7 is a standard for electronic data exchange/messaging protocol.
HSITES	Health Systems Implementation Training and Enterprise Support
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.

## Glossary

ICN	Patients are assigned a unique identifier, known as an Integration Control Number, within the process of being added to the MPI database. This number links patients to their records across VHA systems.
IMDQ	The Identity Management Data Quality Team is a group of information technology specialists committed to improving and safeguarding the quality and accessibility of patient data throughout the VA enterprise. They are involved in many data quality initiatives, but their primary role is to assist VHA facilities in all matters related to the MPI.
IP	Integration Point
IRM	Information Resource Management. A service at VA medical centers responsible for computer management and system security.
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.
M (formerly named MUMPS)	Massachusetts General Hospital Utility Multi-Programming System is a software package, which consists of a high level programming language and a built-in database.
MPI Austin	The Master Patient Index (MPI) is a database located on a system at the Austin Automation Center in Austin, Texas that holds over 8 million VA Patient entries. The role of the MPI is to uniquely identify a patient and "link" that patient's data throughout Veterans Health Administration (VHA) facility and corporate databases through the Integration Control Number (ICN). The MPI is the authoritative source for a patient's ICN and the ICN is the enterprise-wide identifier for a veteran and the key to accessing a patient's record across multiple databases.
MPI/PD	Master Patient Index/Patient Demographics (MPI/PD) software initializes your 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 (#200) at all sites where the patient has been treated.
MUMPS (ANSI STANDARD)	A programming language recognized by the American National Standards Institute (ANSI). The acronym MUMPS stands for Massachusetts General Hospital Utility Multi-programming System and is abbreviated as M.
NDBI	National Database Integration
PIMS	Patient Information Management System- VistA software package that includes Registration and Scheduling packages.
PSIM	Person Service Identity Management
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.
VA	Department of Veterans Affairs
VA FileMan	VistA's Database Management System (DBMS). The central component that defines the way standard VistA files are structured and manipulated.
VAMC	Veterans Affairs Medical Center
VHA	Veterans Health Administration.
VISN	Veterans Integrated Service Network
VistA	<p>Veterans Health Information Systems and Technology Architecture (VistA) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). VistA software, developed by the VA, is used to support clinical and administrative functions at VHA sites nationwide. It is both roll-and-scroll- and GUI-based software that undergoes a quality assurance process to ensure conformity with namespacing and other VistA standards and conventions (see <u>SAC</u>).</p> <p>Server-side code is written in M, and, via Kernel, runs on all major M implementations regardless of vendor. Client-side code is written in Java or Borland Delphi and runs on the Microsoft operating system.</p>



For a comprehensive list of commonly used infrastructure- and security-related terms and definitions, please visit the ISS Glossary Web page at the following Web address:

<http://vista.med.va.gov/iss/glossary.asp>

For a list of commonly used acronyms, please visit the ISS Acronyms Web site at the following Web address:

<http://vista/med/va/gov/iss/acronyms/index.asp>



# Appendix A: Example Scenario—Processing Exceptions for Shared Patients in VistA

The following example shows a patient entry that has generated a Potential Matches Returned exception that is shared with another VistA system, thereby automatically sending the Potential Matches Returned exception to be resolved by the Identity Management Data Quality Team (IMDQ), Figure Appendix B-1.

1. Patient is registered at VistA system (A), added to the MPI, and assigned an ICN.
2. That same patient is now registered at VistA system (B); however, uses a middle initial in his name, thereby creating a potential match to the patient record in VistA system (A). The patient is added to the MPI and assigned a different ICN (other than that assigned to the original patient record in VistA system [A]). This generated a Potential Matches Returned exception logged in VistA system (B) in the MPI/PD Exception Handling option.
3. In the meantime, that same patient is now registered at VistA system (C), again using his middle initial. This patient will automatically match to the ICN of the patient VistA system (B).
4. Because this patient is shared between two VistA systems (B and C), the MPI/VistA software will not allow site personnel at Veterans Affairs facility (B) to resolve the Potential Matches Returned exception, which was logged in the MPI/PD Exception Handling option at their site. Instead, that Potential Matches Returned exception is automatically sent to the IMDQ team for resolution. This action marks the exception in VistA system (B) as PROCESSED and automatically removes it from the list.

```

MPI/PD EXCEPTION HANDLING      Jan 10, 2006@11:01:15      Page: 1 of 1
MPI/PD Exception Handling

Patient      SSN      Dt Rec'd  Exception Type
1  MPIPATIENT,ONE L      666450978  9/17/03  Death Entries on MPI and Vista D
2  MPIPATIENT,TWO      666434212  12/12/05  Potential Matches Returned
3  MPIPATIENT,THREE R      666498643  1/10/06  Potential Matches Returned
    
```

Disparate middle initial caused exception logged in VistA system (B) for same patient originally on VistA system (A).

```

Enter ?? for more actions
SD Sort Exceptions by Date      VT View Selected Exception Type
SN Sort by Patient Name        SE Select Exception
ST Sort by Exception Type
Select Action:Quit// SE <Enter> Select Exception
Select : (1-3): 3
    
```

Exception is selected to be processed.

```

MPI/PD EXCEPTION ACTIONS      Jan 10, 2006@11:02:04      Page: 1 of 1
MPI/PD EXCEPTION HANDLING ACTIONS.

Exception Data
Name:      MPIPATIENT,THREE R
SSN:      666498643
DOB:      MAR 23,1948
DFN:      000000743
ICN:      1000001029
Date of Death:
Exception Type:      Potential Matches Returned
Exception Date:      Jan 10, 2006
Exception Status:      NOT PROCESSED
Exception Text:      Potential match(es) found, please review via
    
```

Appendix A: Example Scenario—Processing Exceptions for Shared Patients in VistA

```

MPI/PD Exception Handler
Exception Notes:

Enter ?? for more actions
AUD Patient Audit          DO MPI Display Only Qry  UPD Update to Processed
PI Patient Inquiry        PMR Potential Match Rev  DI MPI/PD Data Inquiry
HI Hinq Inquiry          ED Edit Patient Data     NT Edit Note
Select Action:Quit// PMR

```

The Potential Match Rev (PMR) action is selected to resolve the exception.

```

MPI QUERY RESULTS          Jan 10, 2006@11:02:54      Page: 1 of 1
Possible MPI Matches for Patient: MPIPATIENT,THREE R
SSN: 666498643
DOB: 3-23-1948
SEX: MALE

```

Patient shares same ICN with another VistA system.

Patient	SSN	DOB	CMOR
1 MPIPATIENT,THREE	666498643	3-23-1948	VISTA SYSTEM (A)

Same patient, however created on VistA system (A) without middle initial.

```

Enter ?? for more actions
Select Action:Quit// SE <Enter> Match With Existing Pt on List
Select: (1-1): 1

Unable to match these ICNs together as the site patient is now shared.
Exception has been sent to IMDQ team for assistance in resolving this
MPI Duplicate. Local exception has been automatically marked as processed.

Enter RETURN to continue or '^' to exit:

```

Message displayed to site indicating can't match patient record because ICN is known at another VistA system. Exception sent to IMDQ team for resolution.

**Figure Appendix A-1: Potential matches exception sent to IMDQ team for resolution**

# Index

## A

Acronyms (ISS)  
    Home Page Web Address, Glossary, 3  
Adobe  
    Home Page Web Address, xi  
Adobe Acrobat Quick Guide  
    Home Page Web Address, xi  
Anonymous Directories, xi  
Appendix B  
    Processing Exceptions for Shared Patients in  
        VistA, 1  
Approved Application Abbreviations, x  
assistance with duplicate resolution  
    IMDQ team, 2-7, 2-8, 1

## B

Business Rules, MPI, 2-8

## C

Changes for the sites  
    ICN assignments, 2-1  
    patients added to MPI during registration, 2-1  
    Potential Matches Returned exception, 2-1  
CIRN EXCEPTION MGT mail group, 2-7  
Contents, v

## D

Data Dictionary  
    Data Dictionary Utilities Menu, xii  
    Listings, xii  
Documentation  
    History, iii  
    Symbols, ix  
duplicate resolution assistance  
    IMDQ team, 2-7, 2-8, 1

## E

EVS Anonymous Directories, xi  
exception processing for shared patients in VistA, 1  
exception status  
    NOT PROCESSED, 2-3, 2-4, 2-7  
    PROCESSED, 2-3, 2-4, 2-6, 2-7, 2-8

## F

Figures and Tables, vii  
FTP directories, xi

## G

Glossary (ISS)  
    Home Page Web Address, Glossary, 3

## H

Health Level 7 (HL7) Messaging, 3-1  
HEC enumeration to the MPI, 1-1, 3-1  
Help  
    At Prompts, xii  
    Online, xii  
History, Revisions to Documentation and Patches, iii  
Home Pages  
    Adobe Acrobat Quick Guide Home Page Web  
        Address, xi  
    Adobe Home Page Web Address, xi  
    ISS Acronyms Home Page Web Address,  
        Glossary, 3  
    ISS Glossary Home Page Web Address, Glossary,  
        3  
    VistA Documentation Library (VDL) Home Page  
        Web Address, xi  
How to  
    Obtain Technical Information Online, xi  
How to Use this Manual, ix

## I

ICN assignment  
    local, 2-1, 2-2, 2-3  
    Local/Missing ICN Resolution, 2-3  
    Potential Match Rev (PMR), 2-3  
    transmission to MPI, 2-2  
    UPDATE BATCH JOB FOR HL7 v2.3, 2-3  
    VistA can't connect, 2-2  
Identity Management Data Quality (IMDQ) team  
    assistance with duplicate resolution, 2-7  
    CIRN EXCEPTION MGT mail group, 2-7  
IMDQ team  
    assistance with duplicate resolution, 2-8, 1  
    VHA OI IA MPI DQ Team distribution group, 2-7  
Introduction  
    HEC enumeration to the MPI, 1-1  
    overview, 1-1

## Index

### ISS Acronyms

Home Page Web Address, Glossary, 3

### ISS Glossary

Home Page Web Address, Glossary, 3

## L

List File Attributes Option, xii

list of potential matches, 2-6

Local/Missing ICN Resolution, 2-3

national ICN assignment, 2-3

## M

mail groups

CIRN EXCEPTION MGT, 2-7

Mail groups

VHA OI IA MPI DQ Team distribution, 2-7

match to another patient record, 2-5

menu text

List File Attributes, xii

MPI Business Rules, 2-8

MPIF\*1.0\*43, 1-1, 2-1

## N

NOT PROCESSED exception status, 2-4, 2-7

## O

Online

Documentation, xii

Help Frames, xii

Technical Information, How to Obtain, xi

Orientation, ix

conventions for displaying TEST data, x

EVS Anonymous Directories, xi

How to Use this Manual, ix

## P

Patch History, iii

Patch MPIF\*1.0\*43, 1-1, 2-1

Patch RG\*1.0\*43, 1-1, 2-1

patient & user names

test data, x

patient shared with another VistA system, 2-8, 1

Potential Match Rev (PMR)

list of potential matches, 2-6

MPI/PD Exception Handling, 2-3

new exception handling action, 2-4

NOT PROCESSED, 2-4

Potential Matches Returned exception, 2-3

PROCESSED, 2-3

resolve Potential Matches Returned exception, 2-4

Single Patient Initialization (SPI), 2-4

Potential Matches Returned exceptions

MPI/PD Exception Handling, 2-3

potential matching records

IMDQ team, 2-7, 2-8, 1

multiple entries for same patient, 2-7, 2-8, 1

NOT PROCESSED, 2-7

PMR action, 2-3, 2-4

Potential Match Rev (PMR), 2-3, 2-4

PROCESSED exception status, 2-3, 2-6, 2-7, 2-8

Processing Exceptions for Shared Patients in VistA,

1

## Q

Question Mark Help, xii

## R

Reference Materials, x

Revision History, iii

RG\*1.0\*43, 1-1, 2-1

## S

shared patient, 2-8, 1

Site changes

ICN assignments, 2-1

patients added to MPI during registration, 2-1

Potential Matches Returned exception, 2-1

Social Security Numbers

test data, x

Symbols Found in the Documentation, ix

## T

Tables and Figures, vii

test data

patient & user names, x

Social Security Numbers, x

## U

UPDATE BATCH JOB FOR HL7 v2.3

local ICN assignment, 2-3

## V

Veterans Affairs facility changes

ICN assignments, 2-1

patients added to MPI during registration, 2-1

Potential Matches Returned exception, 2-1

VHA OI IA MPI DQ Team distribution group, 2-7

View demographic information on the MPI, 2-5  
View patient's information at the CMOR, 2-5  
VistA Documentation Library (VDL)  
Home Page Web Address, xi

## **W**

Web Pages

Adobe Acrobat Quick Guide Home Page Web  
Address, xi  
Adobe Home Page Web Address, xi  
ISS Acronyms Home Page Web Address,  
Glossary, 3  
ISS Glossary Home Page Web Address, Glossary,  
3  
VistA Documentation Library (VDL) Home Page  
Web Address, xi

