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

PROGRAMMER MANUAL

Version 1.0

Revised June 2003

Department of Veterans Affairs
VHA OI Health System Design & Development (HSD&D)
Infrastructure and Security Services (ISS)

Revision History

Document Revision History

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

Date	Revision	Description	Author
04/1999	1.0	Initial MPI/PD and MPI VistA User 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
06/2003	2.0	MPI/PD VistA Version 1.0 Programmer Manual released in conjunction with patches DG*5.3*505, and MPIF*1.0*28 of the MPI Changes Iteration I project	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, or to the following web address: http://vista.med.va.gov/mpi_pd/Patches.asp.

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Orientation

How to Use this Manual

This manual is intended for use in conjunction with the Master Patient Index/Patient Demographics (MPI/PD) VistA package.

This manual uses several methods to highlight different aspects of the material. "Snapshots" of computer dialogue (or other online displays) are shown in a non-proportional font and enclosed within a box. User responses to online prompts are highlighted in boldface. Boldface is also used to highlight a descriptive word or sentence. The Return or Enter key is illustrated by the symbol **<RET>** when displayed in computer dialogue and is included in examples only when it may be unclear to the reader that such a keystroke must be entered. The following example indicates that you should type two question marks followed by pressing **<RET>** when prompted to select an option:

```
Select Primary Menu option: ??
```

Figure 1: How to access online help

M code, variable names, acronyms, the formal name of options, field names, file names, and security keys are represented with all uppercase letters.

Who Should Read this Manual?

This manual is written with the assumption that the reader is familiar with the **V***IST***A** computing environment. If you need more information, we suggest you look at the various VHA OI - System Design & Development (SD&D) home web pages for a general orientation to **V***IST***A** at this address: http://vaww.vista.med.va.gov.

Introduction

This is the Programmer Manual for the Master Patient Index/Patient Demographics (MPI/PD) VistA. It is designed to provide you, the Veterans Health Information Systems and Technology Architecture (**V*IST*A**) developer, with information about the programming functions of MPI/PD. This manual covers the APIs (Application Programming Interfaces) involved with MPI/PD. It provides information on which call(s) to use to perform a particular task, how to use the call(s), and if applicable, which messages to subscribe to. Specifically, this manual provides information on APIs relating to Integration Control Numbers (ICN)s.

Reference Material

In order to competently operate this package you must be familiar with the operations of the **V*IST*A** computer system in general.

The MPI/PD V*IST*A Product Documentation

In addition to the information provided in this documentation, readers who wish to learn more about the Master Patient Index/Patient Demographics (MPI/PD) VistA software should consult the VistA Documentation Library (VDL) at the following address:

http://www.va.gov/vdl/Infrastructure.asp?appID=16 .

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 (MPI)* 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*

Installation Information and Procedures

All installation information and procedures involved with Master Patient Index/Patient Demographics (MPI/PD) VistA are included in the following MPI/PD documents:

- *CIRN Patient Demographics (CIRN-PD) Pre-Installation and Implementation Guide v.5*

  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:

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

MPI/PD Questions and Answers for Programmers

What is the Master Patient Index (MPI)?

The Master Patient Index (MPI) is a central index of unique patients. Veterans Health Administration's (VHA) implementation includes assigning each patient an Integration Control Number (ICN) and a Coordinating Master of Record (CMOR) site. The ICN assignment enables the sharing of patient data between operationally diverse systems. Each record, or index entry, in the MPI contains a small amount of patient data used to identify individual entries. MPI data is maintained in a centralized, dynamic database located at the Austin Automation Center (AAC) that is available to meet multiple information needs across many systems. The MPI/PD software resides in **V*IST*A**. The MPI/PD VistA software enables sites (i.e., Veterans Affairs Medical Centers) to:

- Query the MPI (Austin) for known data.
- Request the assignment of an ICN.
- Inactivate an ICN.
- Manage incoming and outgoing Change CMOR requests.

The MPI/PD functionality, among other things, updates the MPI with any changes made to the demographic fields of the patients the MPI has assigned an ICN. The MPI will only accept demographic data updates or treating facility list updates from the CMOR.

(For more information see "Appendix A – Product Description: What is the Master Patient Index?" of this manual.)

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

What is an Integration Control Number (ICN)?

An Integration Control Number (ICN) is a unique identifier assigned to each patient entry in the Master Patient Index linking patients to their records across VA systems. The ICN is a 10-digit number. It is simply a number used internally by **V*IST*A** software. The ICN also has a 6-digit check sum associated with it. The ICN may have the checksum concatenated to it with a V separating the two. For example: 1000720100V271387.

The ICN follows the ASTM E1714-95 standard for a universal health identifier. There are two different categories of ICNs, which are described below.

National ICNs

1. During the initialization of the MPI, each VA Medical Center sends batch HL7 messages to the index requesting ICNs for all of its patients whose records reflect activity in the past three fiscal years (i.e., patient records that contain CMOR Activity Scores). During this process, one of the following three scenarios can occur:

a. The MPI may find that the patient already exists in the index and return the ICN and CMOR.
b. The MPI may find one or more entries in the index for the patient, causing the need for human interaction to decide if either is correct. In this case, the MPI returns a flag for potential matches.
c. The MPI may NOT find the patient. In this case, the patient is added to the index and the site making the request becomes the CMOR. The ICN and CMOR are returned to the site.

2. During daily operations a real-time TCP/IP connection (i.e., Direct Connect) is established to the MPI. Patient Information Management System (PIMS) options interact with the MPI making it possible for the immediate return of an ICN and CMOR designation for a patient that does not have one (a local or national ICN) assigned in the site's PATIENT file (#2).

   (For more information on PIMS Interaction with the MPI, see the section "PIMS Options – MPI Daily Operations" in the *Master Patient Index (MPI) VISTA User Manual.*)

3. Any patient records that have received a local ICN or that were flagged as missing an ICN are sent up for assignment of a national ICN in the Local/Missing ICN Resolution background job. This job is scheduled to run nightly after hours.

Local ICNs

ICNs are created for new patients locally at the site when the MPI is unavailable to assign an ICN in real-time (e.g., the Direct Connect could not be established). Local ICNs 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.

A background job named Local/Missing ICN Resolution will find all patients in the local PATIENT file (#2) with a Local ICN or that have been flagged as missing an ICN and send these patients to the MPI for a national ICN assignment.

Missing ICNs

Patient records get an ICN assignment from the MPI in real time if they are added to the PATIENT file (#2) using any one of the PIMS options: Load/Edit Patient Data, 10-10T Registration, Register a Patient, and Electronic 10-10EZ Processing.

Missing ICNs result from patient records added to the PATIENT file (#2) via means other than these PIMS options. As long as the DPT global was not hard set, these patients will be flagged and sent up in the nightly Local/Missing ICN Resolution background job for ICN assignment.

What Does an ICN Look Like?

The ICN is a 10-digit number with 6-digit check sum at the end. The ICN may have the checksum concatenated to it with a character V separating the two. For example:

1000720100**V**271387

How Does a Patient Get an ICN?

A patient record can get an ICN assignment by one of the following three ways:

1. During the preparation phase of MPI/PD, if a patient has been seen at a VAMC within the past three fiscal years, a CMOR Activity Score is assigned and stored in CMOR ACTIVITY SCORE field (#991.06) of their patient record in that site's PATIENT file (#2). During the implementation phase of the MPI/PD, patient records containing CMOR Activity Scores are sent to the MPI for ICN assignment.

2. Once the implementation phase has been completed, patients can also receive an ICN through a real-time connection (i.e. Direct Connect) via one of these four PIMS options:

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

   Through these PIMS options, the MPI will attempt to assign an ICN to any patient record that does not have one.

3. A patient may also receive an ICN via the MPI/PD VistA option Single Patient Initialization. This option will allow any patient that does not have a national ICN to be selected and a real-time connection made with the MPI to request an ICN. This option must be used to get ICN assignments for patients with exceptions (such as potential matches) requiring human interaction to make the decision whether or not they already exist on the MPI.

Where is the ICN stored?

Besides being stored on the MPI, the ICN is also stored in two fields in the PATIENT file (#2):

1. The Integration Control Number, field (#991.01).
2. The ICN Checksum, field (#991.02).

Both of these fields are stored on the "MPI" node, ^DPT(<DFN>,"MPI").

An ICN can also be stored in the ICN History multiple (#2.0992). ICNs found in the ICN History multiple are ones that have previously been assigned to the patient, but are not the current ICN. Stored in the ICN History multiple are the following fields: ICN (#.01), ICN checksum (#1), CMOR (#2) and Date/Time of Change (#3).

The ICN History multiple is stored in ^DPT(<DFN>,"MPIFHIS",<IEN>,0).

How Can I Retrieve a Patient's ICN as a V*IST*A Developer/Package?

The ICN is a 10 digit number with a six digit checksum at the end, often separated by the character V (e.g., 1000720100**V**271387). The API $$GETICN^MPIF001(DFN) will return a complete ICN. This function call is passed the IEN for the patient in the PATIENT file (#2). Returned is a -1^error message or the ICN, include the ICN Checksum. For example:

Usage: This function call: S ICN=$$GETICN^MPIF001(3404040)
Output: Returns this value: 1000720100V271387

Note: This API returns the active ICN for the patient. If there was an ICN assigned, which is no longer active, no ICN will be returned.

Use the API $$GETDFN^MPIF001(ICN) if you have the ICN and need to find the patient's entry in the PATIENT file (#2). This function call is passed the ICN (without the Checksum or "V") of the patient you are looking for in the PATIENT file (#2). Returned is a –1^error message or the IEN for the patient in this site's PATIENT file (#2).

Usage: This function call: S DFN=$$GETDFN^MPIF001(1000720100)
Output: Returns this value: 3404040

Why Would a Patient Record Not Have an ICN Assignment?

A patient record may not have an ICN assignment (national or local) for any one of the following reasons:

1. If they have not been seen at a VAMC in the last 3 fiscal years, their patient record would not have been sent up to the MPI for an ICN and CMOR assignment during the initial seeding of the index.
2. If they have not been processed into the system via any of the four PIMS options: Load/Edit, Register a Patient, 10-10T Registration, or Electronic 10-10EZ Processing since the initial seeding of the index.
3. If their patient record had been ZZ'd or if they had been considered a test patient with 5 leading zeros in the SSN field.
4. If their patient record has been inactivated from the MPI. This may have happened for a number of reasons, such as a duplicate record in the site's PATIENT file (#2).
5. If their patient record had been merged with another.

Can a Patient's ICN Change?

Yes. A patient's ICN can change in any of the following two ways:

1. ICN can change as a result of inactivating it and then having another ICN assigned (though another ICN may not ever be assigned). With the release and implementation of the CIRN Aware Duplicate Record Merge patch, you may have seen ICNs change as a result of this process.

2. An ICN can also change as a result of sending a local assignment to the MPI for a national ICN assignment. All previously assigned ICNs are stored in the ICN History Multiple in the

PATIENT file (#2). The GETDFN Application Programmer Interface will return the patient given a passed ICN.

How is an ICN Inactivated?

An ICN can only be inactivated if it is not a shared patient (i.e., a patient who has been seen at more than one site) and if your site is the CMOR. Local ICNs can also be inactivated.

Reasons for inactivating an ICN:

1. The patient is deemed to be a "test" patient and should not be on the MPI.
2. The patient is found to be a duplicate in the site's PATIENT file (#2).
3. The patient is found to be a duplicate on the MPI and is inactivated, then matched to the remaining entry on the MPI (via Single Patient Initialization option).

Patch MPIF*1.0*9 will automatically inactivate patients that are ZZ'd in the PATIENT file (#2). They must have a minimum of two leading Zs, but can have more. All the rules for inactivation are followed in this process (must be CMOR and not shared).

How Can I Tell if an ICN has Change?

Currently, there isn't a trigger event to tell anyone of a change to ICN. When an ICN is a local, there isn't anyone else that knows about this number so there wasn't a need to tell anyone. When an ICN is inactivated, only that site and the MPI know about the ICN (that's why it can be inactivated), so there was only a need to tell the MPI, which happens during the inactivation process. This is true since there weren't any other applications utilizing the ICN. The HEC has created their own cross-reference on the ICN field to tell them when the ICN value has changed. A generic function will be created to allow any one that needs to know of a change that one has happened. Since previous ICNs (including locals) are stored in the ICN History multiple of the PATIENT file (#2), these ICNs can be passed into the GETDFN^MPIF001 API and the patient found at the local site.

What is a Coordinating Master of Record (CMOR)?

The function of the Coordinating Master of Record (CMOR) site is to advise other site(s) when demographic data has been changed for a shared patient (i.e., a patient who has been seen at more than one site) after that patient has been established in the MPI. The MPI will only accept changes to patient data from the CMOR site for that patient.

Note: The CMOR is NOT analogous with the notion of Preferred Facility as it relates to PIMS. Additionally, CMOR sites do not receive endorsed funding that is NOT part of the regular course for patient care.

Where is the CMOR Stored?

In addition to being stored at the MPI, the CMOR is stored on the "MPI" node, ^DPT(<DFN>,"MPI"), of the PATIENT file (#2). The CMOR field is called the Coordinating Master of Record and is field number #991.03.

Previously assigned CMORs are stored in the CMOR History Multiple (#993) of the PATIENT file (#2). Within this multiple, they are stored in the following fields: CMOR (#.01), CMOR Activity Score (#1), CMOR Score Calculation Date (#2) and CMOR Change Date (#3).

CMOR History multiple is stored in ^DPT(<DFN>,"MPICMOR",<IEN>,0).

Do Patients with Local ICNs have CMORs?

Yes. Patients with local ICNs have the site that assigned the local ICN as the CMOR. Remember that this ICN is only known at this one facility (the CMOR facility).

How Can I Retrieve a Patient's CMOR as a V*IST*A Developer/Package?

There are a couple of support function calls that can return the CMOR for a given patient. They are listed below.

1. $$GETVCCI^MPIF001(DFN). This function call is passed the IEN for the patient in the PATIENT file (#2). Returned is a -1^error message or the Station Number of the CMOR site. For example:

   Usage: This function call: S CMOR=$$GETVCCI^MPIF001(3404040)
   Output: Returns this value: 516

2. $$CMOR2^MPIF001(DFN). This function call is also passed the IEN of the patient in the PATIENT file (#2). Returned is a -1^error message or the CMOR Facility Name. For example:

   Usage: This function call: S CMOR=$$CMOR2^MPIF001(3404040)
   Output: Returns this value: Bay Pines VAMC

How Can My V*IST*A Application Get an ICN Assignment for a Patient?

If your application requires an ICN and would like to attempt to get one as part of your processing, a request needs to be sent to the development team for evaluation. The development staff will review the request and if approved, provide the appropriate APIs and code to accomplish this task.

Callable Routines

This section documents two categories of supported calls as they relate to the Master Patient Index/Patient Demographics (MPI/PD) VistA package.

1. The first category is titled "Supported APIs". This section lists and describes the callable routines, which are supported for general use in interacting with the MPI.

2. The second category is titled "Supported APIs (DBIA required)". This section lists and describes the MPI/PD VistA callable routines, for which you must obtain a DBIA in to use. Also in the second category is the section titled "MPI Direct Connect". You must also obtain a DBIA for adding the MPI direct connect functionality to your **V*IST*A** package.

For a list of the Database Integration Agreements in which MPI is either custodian or subscriber see the section titled Database Integration Agreements (DBIA) in this manual.

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

Supported APIs

This section documents all the supported APIs belonging to the MPI/PD VistA package for retrieving information from the MPI node in the PATIENT file (#2) or MPI related information. The following information is provided for each API listed:

1. API name (highlighted in boldface) and description.
2. Required/optional input parameter(s), if applicable.
3. Output parameter(s), if applicable.
4. Associated DBIA.

API and Description	Input Parameter(s)	Output Parameter(s)	DBIA
$$CMOR2^MPIF001(DFN) This API returns the CMOR (Coordinating Master Of Record) Site Name for any given patient.	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	CMOR Site Name or -1^error message	2701
$$CMORNAME^MPIF001(CIEN) This API returns the CMOR Site Name for any given Institution IEN.	CIEN (i.e., The CIEN is the IEN entry from the INSTITUTION file [#4].)	CMOR Site Name or -1^error message	2701

API and Description	Input Parameter(s)	Output Parameter(s)	DBIA

$$GETDFN^MPIF001(ICN)
 	
This is the supported API for retrieving the IEN from the PATIENT file (#2) for any given ICN passed as the input parameter. The ICN should be passed without the V or its checksum. Returned is a –1^error message or the IEN for the patient in this site's PATIENT file (#2).
 	
Usage: This function call:
`S DFN=$$GETDFN^MPIF001(1000720100)`
 	
Output: Returns this value:
`3404040`
	ICN (i.e., Integration Control Number without the checksum or V separator.)	PATIENT file (#2) IEN (i.e., IEN of the patient found to have the passed ICN)	2701

$$GETICN^MPIF001(DFN)
 	
This API returns the ICN and ICN checksum for the patient passed.
 	
As ICN is a 10 digit number often followed by the capital letter V and a six digit checksum. This API returns the complete ICN. It is passed the IEN for the patient in the PATIENT file (#2). Returned is a -1^error message or the ICN, include the ICN Checksum. For example:
 	
Usage: This function call:
`S ICN=$$GETICN^MPIF001(3404040)`
 	
Output: Returns this value:
`1000720100V271387`
 	
NOTE: This will return only the active ICN for the patient. If there was an ICN assigned, but is no longer active, NO ICN will be returned.
	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	ICNVICN CHECKSUM	2701

$$GETVCCI^MPIF001(DFN) This API returns the CMOR Station Number for the patient who was passed.	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	Station Number of the CMOR for the given patient.	2701

API and Description	Input Parameter(s)	Output Parameter(s)	DBIA
$$HL7CMOR^MPIF001(DFN,SEP) This API returns the CMORs Station Number and Institution Name for any given patient.	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].) SEP is the delimiter used to separate Station Number and Name. This is not a required field. Default value is ^.	Station Number SEP Institution Name or -1^error message	2701
$$IFLOCAL^MPIF001(DFN) This API is used to check if a patient has a Local ICN.	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	0 (zero) or 1 The returned value of 0 (zero) means that: 1. the patient does not exist, 2. the DFN (i.e., The DFN is the IEN entry from the PATIENT file [#2].) is not defined, 3. the MPI node does not exist, or 4. the patient does not have a local ICN. The returned value of 1 means that the patient has a Local ICN.	2701
$$IFVCCI^MPIF001(DFN) This API is used to determine if your site is the CMOR for the given patient.	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	If the number 1 is returned, your site is the CMOR for the given patient. If a minus number 1 (–1) is returned, your site is NOT the CMOR for the given patient.	2701
$$EN2^MPIFAPI() This API creates and returns the next local ICN and ICN Checksum.	None	Local ICN V ICN Checksum	2702

API and Description	Input Parameter(s)	Output Parameter(s)	DBIA
$$MPILINK^MPIFAPI() This API returns the name of the HL7 Logical Link that is used to send messages to the MPI. If you are sending a message to the MPI, this is the call to make to get the name of the link.	none	HL7 Logical Link name	2702
$$MPINODE^MPIFAPI(DFN) This API returns the MPI node for any given patient from the PATIENT file (#2).	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	MPI node or -1^error message.	2702
$$SUBNUM^MPIFAPI(DFN) This API returns the Subscription Control Number from the MPI node for any given patient in the PATIENT file (#2).	DFN (i.e., The DFN is the IEN entry of the patient from the PATIENT file [#2].)	Subscription Control Number or -1^error message	2702

Figure 1: MPI/PD VistA Supported APIs

Note: For more information on the DBIAs associated with the APIs listed above, see the section titled "External Relations" of the Master Patient Index (MPI) **V*IST*A** Technical Manual.

Background Jobs

The following jobs need to be tasked to run in the background in support of MPI/PD.

Auto Change CMOR Night Job

Background job: [MPIF CMOR REQUEST AUTO JOB]

This job will look at all pending CMOR requests that have been received and if they are older than 14 days, they will be processed as if the auto accept parameter was enabled.

Local/Missing ICN Resolution

Background job: [MPIF LOC/MIS ICN RES]

Local ICNs

ICNs are created for new patients locally at the site when the MPI is unavailable to assign an ICN in real-time (e.g., the Direct Connect could not be established). Local ICNs 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

Patient records get an ICN assignment from the MPI in real time if they are added to the PATIENT file (#2) using any one of the PIMS options Load/Edit Patient Data, 10-10T Registration, Register a Patient, and Electronic 10-10EZ Processing.

Missing ICNs result from patient records that are added to the PATIENT file (#2) via means other than through these PIMS options. These records will not get an ICN assignment from the MPI in real time and they will be flagged internally for resolution. As long as the DPT global was not hard set, these patients will be flagged and sent up in the nightly Local/Missing ICN Resolution background job for ICN assignment.

Resolution of Local/Missing ICNs

The Local/Missing ICN Resolution background job should be scheduled to run via TaskMan at least once a day, typically after hours when there is less system activity. The Local/Missing ICN Resolution job will find all patients in the local PATIENT file (#2) with a Local ICN or that have been flagged as missing an ICN and send these patients to the MPI for a national ICN assignment. These patients are sent to the MPI requesting an ICN and CMOR, in batch HL7 messages (maximum of 100 patient entries each).

Note: Patch MPIF*1.0*10 has placed a screen on this job to not send patients that have a Potential Match Exception as they need manual intervention to be resolved. Patch MPIF*1.0*15 has added a date/time stamp to the "AICNL" cross-reference so that the Local ICNs will only be sent to the MPI once for resolution.

In this background job, the MPI performs the following actions based of these possible scenarios:

1. If the patient is not already in the MPI:

    a. The patient is added to the index.
    b. The patient is assigned an ICN.
    c. The site sending the message becomes the CMOR.
    d. ICN and CMOR are returned to the site and the corresponding fields are updated.

2. If an exact match is found for the patient in the MPI:

    a. ICN and CMOR are returned to the site.
    b. The site is added to the list of treating facilities where the patient has been seen.
    c. Messages are sent to the CMOR requesting that this new site be added to the list of treating facilities and subscribers.

3. If multiple patient entries are found in the MPI that closely match the patient's identifying information:

    a. The HL7 message is sent back to the sending site and processed, instead of the ICN and CMOR normally returned. A new entry is made in the CIRN HL7 EXCEPTION LOG file (#991.1) indicating that a list of potential matches has been found for this patient.

    b. The View Potential Match Patient option is available on the Message Exception Menu. It prints a list of patients, as shown in the next figure. It lists patients who have been identified as having multiple potential matches on the MPI and who haven't yet been resolved using the option Single Patient Initialization to MPI. Patient entries are listed by Name, Social Security Number, Date of Birth, and DFN. The status of the patient is current as of the date/time the report is generated. This data is pulled from the CIRN HL7 EXCEPTION LOG file (#991.1).

```
Select Message Exception Menu Option: view Potential Match Patient

This report prints a list of patients who have been identified as having
multiple Potential Matches on the Master Patient Index (MPI) and who
haven't yet been resolved using the option "Single Patient Initialization
to MPI".
Status is current as of the date/time the report is generated.

This data is pulled from the MPI/PD HL7 EXCEPTION LOG file (#991.1).
Prior to producing the report, duplicate POTENTIAL MATCH patients will be
purged from the file.

...one moment please..

0 duplicate patient entries for POTENTIAL MATCH exceptions were
identified and deleted from the MPI/PD HL7 EXCEPTION LOG file (#991.1).

The right margin for this report is 80.

DEVICE: HOME// <RET>


PATIENT LIST of Potential Matches to be Resolved              Page: 1
Printed at ALBANY, NY on Aug 08, 2000@17:09

Patient Name                      SSN         DOB                  DFN
-----------------------------------------------------------------------

DOE,JOHN R                       123456789P   1940                  279
SMITH,DEBBIE                     123123123    1955                  337
HAR,HARRY P                      126126126P   1952                  381
TESTING,TILLIE                   111111111P   1952                  320
FRUGEL,FREDDY                    222222222P   1952                  319
TOTAL: 5
```

Figure 2: Report listing patients identified as having multiple potential matches on the MPI

Note: People also use the MPI/PD Exception Handling option to produce a report with a list of exceptions that have not yet been processed. You can sort the list by date (default), by patient, or by exception type. You can also choose to view only those of a selected exception type. For information on how to use this option, refer to the Master Patient Index/Patient Demographics (MPI/PD) User Manual, Revised October 2001. See the topic titled “Message Exception Menu” in the section “MPI/PD Patient Admin User Menu.”

c. These patients must then be resolved using the MPI option Single Patient Initialization to MPI.

   The MPI option Single Patient Initialization also establishes the TCP/IP direct connection with the MPI. It can also be used to initialize a patient record to the MPI that currently exists in the PATIENT file (#2), but that has no ICN and CMOR designation. (This option is documented in the previous section "MPI/PD VistA Menus and Options – MPI Daily Operations".) It is recommended that this option be used when potential duplicate records have

Update Patient Information

Background job: [VAFC BATCH UPDATE]

The event of updating patient information can take place from several different options within **V***IST***A**, including VA FileMan. Changes to any of the fields listed below are recorded and an entry created in the ADT/HL7 PIVOT file (#391.71). The entry is then marked as pending to be transmitted. 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 on FORUM. Because it is not possible to determine if the editing of this field is complete, this background job [VAFC BATCH UPDATE] will periodically collect these marked events and broadcast an ADT A08 Message (i.e., Update Patient Information). This is a PIMS-generated HL7 message.

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
.112	STREET ADDRESS [2]
.114	CITY
.115	STATE
.1112	ZIP+4
.117	COUNTY
.301	SERVICE CONNECTED
.302	SERVICE CONNECTED PERCENTAGE
.31115	EMPLOYMENT STATUS
.323	PERIOD OF SERVICE
.361	PRIMARY ELIGIBILITY CODE
391	PATIENT TYPE
1901	VETERAN (Y/N)
.351	DATE OF DEATH
.2403	MOTHER'S MAIDEN NAME
.131	PHONE NUMBER [RESIDENCE]
.132	PHONE NUMBER [WORK]
.219	K-PHONE NUMBER
.211	K-NAME

Figure 3: Data elements monitored in the PATIENT file (#2) for changes

(For more information on the ADT A08 Message — Update Patient Information, see the *Master Patient Index (MPI)* **V***IST***A** *HL7 Interface Specifications*.)

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

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

Routine Descriptions

The following routines are distributed with the release of the Master Patient Index/Patient Demographics (MPI/PD) VistA. A brief description is given for each routine.

Routine Name	Description
MPIF Routines:	
MPIF001	This routine contains several APIs. Line tag GETICN returns the ICN and ICN checksum for a given patient. Line tag GETDFN returns the IEN from the PATIENT file (#2) for the given ICN. Line tag CMOR2 returns the CMOR site name. Line tag CMORNAME returns the site name for a given INSTITITUTION file (#4) IEN. Line tag GETVCCI returns the CMOR station number for a given patient. Line tag IFLOCAL returns a zero (0) if the patient does not have a local ICN and a one (1) if the patient does. Line tag IFVCCI returns a one (1) if your site is the CMOR for a given patient or a -1 if your site is not. Line tag HL7CMOR returns the CMOR station number and CMOR site name for a given patient. Line tag CHANGE updates the CMOR in the PATIENT file (#2) for a given patient. Line tag SETICN updates the ICN and ICN checksum for a given patient in the PATIENT file (#2). Line tag SETLOC updates the Locally Assigned ICN field for a given patient. Line tag ICNLC retuns the ICN for a patient if one already exists. If an ICN doesn't exist, it will created a Local ICN and store all appropriate fields in the PATIENT file (#2).
MPIFA31I	This routine processes the A31 HL7 messages sent from the MPI. These messages contain the new ICN and CMOR assignments for a patient that was just added to the MPI.
MPIFAPI	This routine contains several APIs. Line tag EN2 gets the next Local ICN number when a Local ICN is to be assigned. Line tag MPILINK returns the MPI Logical Link. Line tag SUBNUM returns the Subscription Control Number for a given patient. Line tag MPINODE returns the MPI node in the PATIENT file (#2) for a given patient. Line tag UPDATE updates fields on the MPI node.
MPIFAREQ	This routine will automatically process any CMOR Change Request still pending review as approved.
MPIFBT1	This routine creates the initialization messages for sending to the MPI in Austin. Each batch message contains at most 100 patients. Only patients that have a CMOR Activity Score are sent to the MPI for assignment of an ICN.
MPIFBT2	This routine processes the batch message sent from the MPI during the initialization phase and during resolution of missing and local ICNs. Each batch message contains at most 100 patients. The MPI returns an ICN, CMOR and a list of known treating facilities. These fields are then updated in **V***IST***A**.
MPIFBT3	Batch response from MPI.
MPIFCMOR	This routine sends out the change of CMOR message to the MPI and all subscribers.
MPIFCMRP	The routine creates a change of CMOR that is a PUSH to give up being the

Routine Name	Description
	CMOR, giving it to another site automatically.
MPIFDEL	This routine is used to create a message to send to the MPI to inactive the ICN for an individual patient. The site making the request must be the CMOR and there must be no other known treating facilities. This option should be used cautiously and to remove any test patients that were accidentally sent to the MPI.
MPIFEDIT	This routines is used to request changing the CMOR to your site and puts the request into the MPI/PD Event Queue.
MPIFHL7	This routine processes inbound CMOR messages.
MPIFMER	This routine has two parts as follows: 1. Builds MERGE ICN messages to be sent to the MPI and any sites that subscribe when an ICN is changed to a new value from a previous one. 2. Processes Merge ICN messages received from another site. NOTE: Currently not being utilized.
MPIFNEW	This routine adds a new request for change of CMOR to File #984.9.
MPIFNQ	Functions for use by CMOR routines. Line tag PAT returns the CMOR for the specified patient's IEN. Line tag ICN returns ICN for specified patient IEN. Line tag IEN returns patient IEN for the specified ICN. Line tag AUTO sets the CMOR REQUEST CHANGE field in the CIRN SITE PARAMETER file (#991.8) to Automatic. Line tag RPT1 prints a list of your sent requests for change of CMOR that are outstanding. Line tag RPT2 prints a list of all requests for change of CMOR that have been received and not processed at this site. Line tag RPT3 prints all approved requests on or since a user entered date. Line tag RPT4 prints all disapproved requests on or since a user entered date. Line tag INQ allows user to view a specified request.
MPIFPST	Post-Init for the Master Patient Index build. This routine checks to see if the MPI institution has been established and prints a message if it is not, updates the mail group field in File #991.8, updates the mail group field for a number of entries in the CIRN EXCEPTION TYPE file (#991.11) and populates the Facility Name field in the HL7 APPLICATION PARAMETER file (#771) for all the MPIF entries.
MPIFQ0	This routine is used for the individual patient initialization to the MPI. One patient is selected to be loaded to the MPI in real-time.
MPIFQ1	This routine is used for the real-time direct connect during the PIMS options.
MPIFQED	This routine is used to update particular fields returned from the MPI during the direct connect.
MPIFQUE3 (Requesting CMOR site)	This routine was used during the initial seeding process to automatically change the CMOR to another site based upon CMOR Activity Score. This routine is not currently utilized.
MPIFQUE4 (Receiving CMOR site)	Once the HL7 batch message has arrived at the target CMOR site, the HL7 Filer will call this processing routine. The message is then put into a background job to run. Once TaskMan calls this background job, this processing routine loops

Routine Name	Description
	through the HL7 batch message and parses out the individual content messages to get the required patient data (i.e., ICN, CMOR score, calculation date, requesting site, requestor name, and the reason for the request). After the target CMOR site obtains all the comparison-specific information from the requesting (incoming) HL7 message, this routine finds the local patient record that matches the ICN of the requesting patient record. Next, it obtains the local score calculation date and the CMOR score from this patient record. If the current score calculation date in the target system is fewer than 89 days from today's date, then the current CMOR score will be used to perform the comparison. Otherwise, a new score is calculated for that patient during the processing of the message. If the requesting (incoming) CMOR score is less than the present CMOR score for this patient record in the target system, nothing will change. If the requesting CMOR score is more than 80% greater than the current (local) CMOR score, then the current CMOR for this patient record will be changed to the requesting (incoming) CMOR. An ADT~A31 HL7 message (not a batch message) is then generated to update the Subscription Control list and the MPI system in Austin showing that the CMOR for this patient record has been changed.
MPIFQUE5 (Subscriber CMOR site)	This routine processes the notification HL7 message that approves the change to the CMOR number. This will update the matching patient record in the receiving system with the new CMOR.
MPIFREQ	This routine processes the CMOR Request from the MPI/PD Event Queue, creating the HL7 message for the Change CMOR Request.
MPIFRES	This routine sends batch messages containing at most 100 patients to the MPI to have an ICN assigned. These are patients that received a Local ICN (MPI was unavailable to assign one in real time) or for patients that were added to the PATIENT file (#2) after the initialization using means other than the PIMS options: • Register a Patient, • 10-10T Registration, • Load/Edit Patient Data, or • Electronic 10-10EZ Processing. Local ICNs will only be sent to the MPI once for resolution. If they aren't resolved the first time, it is most likely because an exception has been generated requiring manual processing.
MPIFRESS	This routine processes the approve/disapprove message from the site the CMOR Request was sent to.
MPIFREV	This routine processes the request, bringing the request up for the user to process (approve/disapprove)
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.
MPIFSAQ	This routine allows a user to query the MPI for any know information. The patient can be in the PATIENT file (#2), but doesn't have to be. If the patient

Routine Name	Description
	is not part of the PATIENT file (#2), the user will be prompted for Name, SSN and DOB (all required). A query is sent to the MPI (in real time) and all known information is returned. If the MPI does not find an exact match, all potential matches are returned and displayed to the user. No updating to the patient data can take place. This is a display option only.
MPIFSPC	This routine computes the checksum for a given ICN.
MPIFUTL	This routine is made up of several APIs. Line tag TYPE allows for updating of CIRN SITE PARAMETER file (#991.8). Line tag MAIL returns the mail group for new requests. Line tag CHK1 checks as to whether or not a new Request for Change CMOR can be created.
MPIFVTQ	This routine builds the RDF segment for a VTQ query to the MPI.
MPIF121P	Installed and deleted after install of MPIF*1.0*21
MPIF002	Utility routine of APIs
MPIFDUPS	MPIF RPC APIs
MPIFEXT	Extended PDAT RPC
MPIFEXT2	Extended PDAT RPC
MPIFEXT3	Extended PDAT 3 RPC
MPIFRPC	MPIF RPC APIs
MPIFRPC2	MPIF RPC APIs
MPIFA24	A24 Processing Routine
MPIFA24B	Build A23 Add Me Messages
MPIFA28	Build A28 Add Me Messages
MPIFA31B	Build A31 Messages
MPIFA37	Utility for processing an AD-A37
MPIFA40	Unlink ID Build A40 Merge Message
MPIFA43	Utility for processing an ADT-A43
MPIFACHK	Unlink ID Acknowledgement check
MPIFSEED	Seeding of A31s to MPI and sub cleanup
MPIFQ3	Query List Manager Functions
MPIFSA2	Stand Alone Query Part 2
RG Routines:	
RGJCTS01	Subscription Control Startup Utility To CMOR
RGJUSITE	Routine to hold API for the CIRN PARAMETER (#991.8) file
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

Routine Name	Description
RGMTDPSC	Count duplicate record entries by CMOR score range
RGMTTFL	Treating Facility List Statistics
RGPDENV	Environment Check
RGPDPST	Post Init
RGPRSSN	CIRN Pseudo/Missing SSN Report
RGRSBULL	RGRSTEXT Bulletin routine
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
RGRSWPT	Active patient check
RGVCCMR1	CIRN CMOR activity score generator (part 1)
RGVCCMR2	CIRN CMOR activity score generator (part 2)
RGRSZZPT	Utility for CIRN
RGRSBUL1	RGRSTEXT Bulletin Routine (part 2)
RGEQ	Queue processor
RGEQDMN	Dequeue processor
RGEQDMN1	Dequeue processor continued
RGEQERR	Reprocess data class error. This routine was deleted in RG*1.0*19
RGEQEXC	Error processor
RGEQRPT	Print CIRN queue statistics. This routine was deleted in RG*1.0*19
RGEQSTAT	Statistics
RGEQSUB	Dequeue processor
RGHLEXC	HL7 exception handling utilities. This routine was deleted in RG*1.0*18

Routine Name	Description
RGHLEXC1	Generate exception statistics report
RGHLLOG	Log message processing info
RGHLPOST	CIRN Messaging Build Postinit
RGHLUT	HL7 message processing utilities
RGHOUT	HL7 message generation utilities
RGJCREC	CIRN Subscription Processor
RGJCSUB	CIRN Subscription Generator
RGMSENV	Environment Check
RGP2ENV	RG*1.0*2 Patch Environment Check Routine
RGEVPM	View Potential Match Patient List
RGP1ENV	RG*1.0*1 Patch Environment Check Routine
RGEX01	List Manager for CIRN Exceptions
RGEX03	List Manager for CIRN Exceptions
RGEXHND1	CIRN Exception Handling Utility
RGP3PST	RG*1.0*3 Patch Post-Init Routine
RGRAS	CIRN PRE-Seeding Report For Treating Facility
RG4POST	Post-Init Driver
RGADT	ADT Message Processing/Routing
RGADT1	Build ADT Messages
RGADT2	File Seeding Routine (PD-MPI Load)
RG7POST	RG*1.0*7 Patch Post-Init Routine
RGFIACK	Process Application Acknowledgement
RGFIBM	Send Facility Integration Message
RGFIPM	Process Facility Integration Message
RGFIPM1	Process Facility Integration Message
RGFIRM	Route Facility Integration Message
RGFIU	MPI/PD NDBI Merge Utility (Continued)
RGP5ENV	RG*1.0*5 Patch Environment Check
RGDRM01	MPI/PD Aware Duplicate Record Merge
RGDRM02	MPI/PD Aware Duplicate Record Merge
RGDRM03	MPI/PD Aware Duplicate Record Merge
RGFICLN	MPI/PD NDBI Site Cleanup Utility

Routine Name	Description
RGP9ENV	RG*1.0*9 Patch Environment Check
RGP9PST	RG*1.0*9 Patch Post Install Routine
RGI15PST	Post-Init for RG*1.0*15
RGSYSTAT	MPI/PD Status Display
RGHLLOG1	Send Exception to MPI Exception Handler
RGP13ENV	Routine deleted by installation of RG*1.0*13
RGP13PST	Routine deleted by installation of RG*1.0*13
RGP22	Pre Install and Post Install Routine
RGP22ENV	Environment Check Routine
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
RGMTHLPD	MPI/PD HL7 Message Status Report (Detailed)
RGPOC	Add/Edit Point of Contact Option
RGPOC1	Add/Edit Point of Contact Option (Continued)
RGEX04	List Manager Routine for MPI/PD Exception PDAT Query
RGEX05	List Manager Routine Remote PDAT in Exception Handler
RGRPDAT	Routine to call Remote PDAT
RGMTETOT	Compile totals for site exceptions
RGMTMONT	MPI/PD Monitor HL7 Messaging/Filers and Setups
RGMTUT01	Compile and Correct Data Validation for Local Sites
RGMTUT02	Compile and Correct Data Validation for Local Sites (con't)
RGMTUT03	Compile and Correct Data Validation for Local Sites (con't)
RGMTRUN	Scan TaskMan Running HL7 Tasks
RGADTP	ADT Processor to Retrigger A08 or A04 messages with AL/AL (COMMIT/APPLICATION) ACKNOWLEDGEMENTS
RGADTP2	ADT Processor to Retrigger A08 or A04 messages with AL/AL (COMMIT/APPLICATION) ACKNOWLEDGEMENTS (con't)
RGMTMONX	MPI/PD Monitor HL7 Messaging/Filers and Setups (con't)
RGMTSTAT	MPI/PD Maintenance Query
RGMTUT98	Misc. MPI Load COUNTER Utilities

Figure 4: Routines and descriptions in the MPIF and RG namespace

File List

Files and Globals

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

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.

Files and Globals (Used by MPI, but Not Exported with MPI)

The following files are not exported in the MPI package, but are used by the MPI software.

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

This file stores generic site parameters for the MPI/PD package. Only one entry (entry number 1) should exist in this file for MPI/PD. MPI/PD VistA, however, utilizes eight fields in it. They are listed below by field number, field name, and brief description:

Field #	Field Name	Description
991.8,.02	CMOR REQUEST CHANGE	'0' FOR MANUAL; '1' FOR AUTOMATIC; Based on this field setting, any CMOR change request received from another station can be manually either reviewed or automatically approved.
991.8,.03	NEW REQUEST MAILGROUP	If the CMOR Request Change field (#991.8,.02) is set to manual, any new CMOR change requests received will notify the mail group entered in this field. This provides a means for prompting someone to review the new request.
991.8,30	CMOR COMP LAST PATIENT	This was the last patient processed in the CMOR comparison process.
991.8,31	CMOR COMP STARTED DATE/TIME	This is the date/time the CMOR comparison process began.
991.8,32	CMOR COMP STOPPED DATE/TIME	When the CMOR comparison has stopped, (either automatically or manually) the time is recorded in this field.
991.8,33	CMOR COMP STATUS	This is the status of the CMOR comparison process in your system.
991.8,34	CMOR COMP LAST TASK #	This is the last task number that the CMOR comparison ran on.
991.8,35	CMOR COMP FLAG	This flag allows the user to stop the CMOR comparison process.

Figure 5: CIRN SITE PARAMETER file (#991.8)

The Master Patient Index build exports the input template MPIF SITE PARAMETERS for the file CIRN SITE PARAMETER (#991.8). The template allows MPI to update the fields: CMOR Request Change and New Requests Mail Group.

(For more information about the CIRN SITE PARAMETER file (#991.8) see the "Files" section of the *Master Patient Index/Patient Demographics (MPI/PD) Technical Manual*.)

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

This file holds definitions of MPI/PD events that occur. When an event occurs, an entry is placed into the MPI/PD EVENT QUEUE and the corresponding HL7 message is sent. The CIRN EVENT ASSOCIATION file entry determines how the event is processed, such as the routine to call to process event and related HL7 Protocol.

DBIA #2792 allows the Master Patient Index to add two new entries to this file [i.e., the CIRN EVENT ASSOCIATION file (#995)]. Those entries are MPIF CMOR RESULT and MPIF CMOR REQUEST. DBIA #2792 also allows these entries to be utilized via the API call EN^RGEQ.

991.1 CIRN HL7 EXCEPTION LOG ^RGHL7(991.1,
Data Comes with File: Yes

This file is used for tracking MPI/PD HL7 exception information. It holds the MPI/PD HL7 exception types. It is pointed to by the TYPE field (#2) for the EXCEPTION subfield (#991.12) of the CIRN HL7 EXCEPTION LOG file (#991.1). It 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.

Mail Groups

The following mail groups are exported in the MPI package. They are listed by Mail Group name, and a brief description is given:

Mail Group Name	Description
MPIF EXCEPTIONS	If a server address is not populated in the CIRN HL7 EXCEPTION TYPE file (#991.11), MAIL GROUP field (#6), MPI exception e-mail messages (problems) that need to be addressed are sent to this mail group. These messages are all technical in nature, involving problems with HL7 messages or conflicts resulting from CMORs or ICNs not found. Any messages sent to the MPIF EXCEPTIONS mail group are automatically sent to the remote mail group G.CIRN EXCEPTION MGT@FORUM.VA.GOV. Normally there isn't anything a site can do to resolve these messages, which is why they are not sent to local members. If necessary, members of this remote mail group will contact site personnel for assistance. Note: The remote member is populated automatically.
MPIF HL7 GROUP	If HL7 messages are automatically sent to the MPI at the Austin Automation Center via the MailMan protocol will this mail group be utilized. This mail group contains the remote member: S.HL V16 SERVER@MPI.ISC-ALBANY.VA.GOV. No other members should be added to this group.
MPIF CMOR REQUEST	Any requests to change the CMOR will be sent to this Mail Group. Requests will then be processed (i.e., accepted/rejected) via the CMOR options. The messages serve as a heads-up that there are CMOR requests to process. **Note:** This Mail Group is added to the MAIL GROUP file (#3.8) during the Post-Init of the installation.

Figure 6: Mail groups exported in the MPI package

Note: IRM personnel will be required to use MailMan utilities to add members to the following mail groups:

- MPIF CMOR REQUEST
- RG CIRN DEMOGRAPHIC ISSUES (Exported with MPI/PD. However, utilized by MPI.)

PIMS personnel will most likely be the ones processing CMOR Requests and reviewing MPI/PD HL7 Exception Messages addressing data issues. They should be added as members to the RG

CIRN DEMOGRAPHIC ISSUES mail groups. However, anyone participating in this should be added in these mail groups.

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).

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, such as:

   - Patients dates of death not being synchronized between your local PATIENT file (#2) and the MPI.
   - Patient entries with missing required field(s) (i.e., Date of Birth or Name) when trying to add them to the MPI.
   - Potential matches were found during the initialization or during the Local/Missing ICN resolution job that need to be resolved manually in order to obtain an ICN.

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

(For information on assigning members to mail groups, see the VA Electronic Mail System (MailMan) User Manual V. 7.1.)

Remote Systems

The MPI, 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 software that resides on the **V***IST***A** side sends data to the MPI in Austin as well as any other VAMCs where that patient is known. Some patient data fields are transmitted to Austin during the initialization process as a resulting of daily operations at the VAMC.

The initialization process starts at a VAMC. HL7 messages go to the MPI requesting ICNs for all of the patients that have had activity in the past three years. Once this process has been completed, the MPI is kept up-to-date via existing **V***IST***A** options.

Glossary

10-10EZ	Form used to apply for health benefits.
ACTIVE PATIENTS	Patients who have been seen at a site within the past three years.
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.
ACCESS CODE	Code that allows the computer to identify you as a user authorized to gain access to the computer. Your code is greater than six and less than twenty characters long; can be numeric, alphabetic, or a combination of both; and is usually assigned by a site manager or application coordinator. (See the term **verify code** in the Glossary.)
ACTIVE PATIENTS	Patients who have been seen at a site within the past three years.
ADPAC	**A**utomated **D**ata **P**rocessing **A**pplication **C**oordinator
ADT	**A**dmission **D**ischarge and **T**ransfer - 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 added to the ADT/HL7 PIVOT file and marked for transmission. A background job will collect these updates and broadcast the appropriate HL7 message (A08 Patient Update or Master Files Notification [MFN] Treating Facility Updates). This is an ADT HL7 message designed for MPI/PD.
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.
APPLICATION COORDINATOR	Designated individuals responsible for user-level management and maintenance of an application package such as IFCAP, Lab, Pharmacy, Mental Health, etc.

APPLICATION PACKAGE	In **V***IST***A**, software and documentation that support the automation of a service, such as Laboratory or Pharmacy, within VA medical centers (see the term Package in the Glossary). The Kernel is like an operating system relative to other **V***IST***A** applications.
BATCH ACKNOWLEDGMENTS	The format of an HL7 batch acknowledgement message consists entirely of a group of ACK (acknowledgment) messages. In the case of MPI, batch acknowledgments are returned during the initialization process and during the Local/Missing ICN Resolution job. The background job files the ICN, ICN checksum, and CMOR, then updates the Treating Facility list. Data returned from this process constitute the acknowledgment of the batch message.
BATCH MESSAGES	There are instances when it is convenient to transfer a batch of HL7 messages. Common examples related to MPI are queries sent to the MPI for an ICN during the initialization process, the resolution of Local or Missing ICNs, and CMOR Batch Comparisons. Such a batch could be sent online using a common file transfer protocol. In the case of the MPI, the HL7 Batch Protocol uses the Batch Header Segment (BHS) and Batch Trailer Segment (BTS) message segments to delineate the batch.
BATCH PROTOCOL, HL7	Protocol utilized to transmit a batch of HL7 messages. The protocol generally uses File Header Segment (FHS), BHS, BTS and File Trailer Segment (FTS) segments to delineate the batch. In the case of the MPI, the protocol only uses the BHS and BTS segments.
BULLETINS	Electronic mail messages that are automatically delivered by MailMan under certain conditions. For example, a bulletin can be set up to fire when database changes occur, such as adding a record to the file of users. Bulletins are fired by bulletin-type cross-references.
CALLABLE ENTRY POINT	Authorized programmer call that may be used in any **V***IST***A** application package. The DBA maintains the list of DBIC-approved entry points.
COORDINATING MASTER OF RECORD (CMOR) (Also see CMOR [COORDINATING MASTER OF RECORD].)	The CMOR site is the designated "owner" of the patient's descriptive and clinical data. A patient has only one CMOR at a time, but the CMOR can change. Initially, the MPI assigns the Coordinating Master of Record based upon the first site at which the MPI encounters the patient. The designation of a site as the CMOR for a patient does not provide "workload credit" or any other distinction. This is a new field in the PATIENT file (#2). The CMOR keeps the Treating Facility List and Subscription List updated every time a new facility where the patient has been seen identifies itself to the MPI. The CMOR then broadcasts the updated lists to all the other facilities that share this patient.

CLINICAL PATIENT RECORD SYSTEM (CPRS)	**C**linical **P**atient **R**ecord **S**ystem 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 **V***IST***A**. The MPI/PD software is built upon the foundation created by the CPRS work.
CMOR (COORDINATING MASTER OF RECORD) (Also see COORDINATING MASTER OF RECORD [CMOR].)	The CMOR site is the designated "owner" of the patient's descriptive and clinical data. A patient has only one CMOR at a time, but the CMOR can change. Initially, the MPI assigns the Coordinating Master of Record based upon the first site at which the MPI encounters the patient. The designation of a site as the CMOR for a patient does not provide "workload credit" or any other distinction. This is a new field in the PATIENT file (#2). The CMOR keeps the Treating Facility List and Subscription List updated every time a new facility sends an "add me" message to the CMOR for a particular patient. The CMOR then broadcasts the updated lists to all the other facilities that share this patient.
CMOR ACTIVITY SCORE	During the Pre-Implementation, a CMOR score based on activity (Current FY, FY-1, and FY-2) is calculated for the active patients in a site's PATIENT file (#2). The CMOR score indicates which patients in a PATIENT file (#2) have activity. During initialization of a site's database with the MPI, the first site at which the MPI encounters a patient is assigned as the CMOR. After MPI initialization, the CMOR score is used to compare a patient's activity at two sites to help determine the logical Coordinating Master of Record. The CMOR activity score is stored in the PATIENT file (#2) along with the date last calculated. It can be recalculated as needed. Following the initialization with the MPI, a site runs an option that identifies the shared patients for which it is **not** the CMOR. An option is provided to send messages to the CMOR sites in order to compare the CMOR scores and reassign the CMOR if that action appears to be appropriate. Changing the CMOR requires agreement between the two sites involved.
COMMON MENU	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.

CROSS REFERENCE	Cross-reference—There are several types of cross-references available. Most generally, a VA FileMan cross-reference specifies that some action is performed when the field's value is entered, changed, or deleted. For several types of cross-references, the action consists of putting the value into a list; an index used when looking-up an entry or when sorting. The regular cross-reference is used for sorting and for lookup; you can limit it to sorting only.
DATA	A representation of facts, concepts, or instructions in a formalized manner for communication, interpretation, or processing by humans or by automatic means. The information you enter for the computer to store and retrieve. Characters that are stored in the computer system as the values of local or global variables. VA FileMan fields hold data values for file entries.
DATA ATTRIBUTE	A characteristic of a 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 what kind of data is stored in the global corresponding to a particular file. The data is used internally by VA FileMan for interpreting and processing files. A **D**ata **D**ictionary 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 DICTIONARY LISTING	This is the printable report that shows the data dictionary. Users and programmers use DDs.
DATABASE	A set of data, consisting of at least one file, that is sufficient for a given purpose. The **V***IST***A** database is composed of a number of VA FileMan files. A collection of data about a specific subject, such as the PATIENT file (#2); a data collection has different data fields (e.g., patient name, SSN, Date of Birth, and so on). An organized collection of data about a particular topic.
DATABASE MANAGEMENT SYSTEM	A collection of software that handles the storage, retrieval, and updating of records in a database. A **D**ata**b**ase **M**anagement **S**ystem (DBMS) controls redundancy of records and provides the security, integrity, and data independence of a database.
DATABASE, NATIONAL	A database that contains data collected or entered for all VHA sites.

DBA	**D**ata**b**ase **A**dministrator, oversees package development with respect to **V***IST***A** Standards and Conventions (SAC) such as namespacing. Also, this term refers to the **D**ata**b**ase **Administration** function and staff.
DBIA	**D**ata**b**ase **I**ntegration **A**greement, a formal understanding between two or more **V***IST***A** packages, which describes how data is shared or how packages interact. The DBA maintains a list of DBIAs.
DBIC	**D**ata**b**ase **I**ntegration **C**ommittee. Within the purview of the DBA, the committee maintains a list of DBIC approved callable entry points and publishes the list on FORUM for reference by application programmers and verifiers.
DEFAULT	Response the computer considers the most probable answer to the prompt being given. It is identified by double slash marks (//) immediately following it. This allows you the option of accepting the default answer or entering your own answer. To accept the default you simply press the Enter (or Return) key. To change the default answer, type in your response.
DELIMITER	Special character used to separate a field, record or string. VA FileMan uses the ^ character as the delimiter within strings.
DEMOGRAPHIC DATA	Identifying descriptive data about a patient, such as: name, sex, date of birth, marital status, religious preference, SSN, address, etc.
DEPARTMENT OF VETERANS AFFAIRS	The Department of **V**eterans **A**ffairs, formerly called the **V**eterans **A**dministration.
DEVICE	Peripheral connected to the host computer, such as a printer, terminal, disk drive, modem, and other types of hardware and equipment associated with a computer. The host files of underlying operating systems may be treated like devices in that they may be written to (e.g., for spooling).
DHCP	**D**ecentralized **H**ospital **C**omputer **P**rogram of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA) is the former name for Veterans Health Information Systems and Technology Architecture **V*IST*A**. **V***IST***A** 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. **V***IST***A** is composed of packages that undergo a verification process to ensure conformity with namespacing and other **V***IST***A** 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).

DINUM	Input variable that identifies the subscript at which the data is to be stored; that is, the internal entry number (IEN) of the record.
DIRECT CONNECT	The Direct Connect is a real-time TCP/IP connection to the Master Patient Index to allow for an immediate request for an ICN. As of MPI Version 1.0, the Direct Connect is activated when using any one the following PIMS options: • Register A Patient, • Load/Edit Patient Data, • 10-10T Registration processes in PIMS, or • Electronic 10-10EZ Processing, and when using the following MPI options: • MPI Single Patient Initialization and • Display Only Query option.
DOUBLE QUOTE (")	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 (Also see Kernel Toolkit: Duplicate Record Merge: Patient Merge or Patient Merge.)	Patient Merge is a **V*IST*A** application that provides an automated method to eliminate duplicate patient records within the **V*IST*A** database (i.e., the **V*IST*A** PATIENT file [#2]). It consists of three steps: 1. Search for potential duplicate record pairs. 2. Review, verification, and approval of those pairs. 3. Merge process.
DUZ	Local variable holding the user number that identifies the signed-on user.
DUZ(0)	Local 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).
ENTER (<RET>)	Pressing the return or enter key tells the computer to execute your instruction or command or to store the information you just entered.

ENTRY	VA FileMan record. It is uniquely identified by an internal entry number (the .001 field) in a file.
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.
FIELD	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.
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)	The **V***IST***A**'s Database Management System (DBMS). The central component of the Kernel that defines the way standard **V***IST***A** files are structured and manipulated.
FORCED QUEUING	Device attribute indicating that the device can only accept queued tasks. If a job is sent for foreground processing, the device rejects it and prompts the user to queue the task instead.
FORM	Screen-oriented display (see ScreenMan).
FORUM	The central E-mail system within **V***IST***A**. It is used by developers to communicate at a national level about programming and other issues. FORUM is located at the CIO Field Office - Washington, DC (162-2).
GLOBAL VARIABLE	Variable that is stored on disk (M usage).
HEALTH LEVEL SEVEN (HL7)	National level standard for data exchange in all healthcare environments regardless of individual computer application systems.
HEALTH LEVEL SEVEN (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) MFN MESSAGES	HL7 Update Treating Facility message type (Master File Notification [MFN]). When an update to a patient's treating facility occurs, this event is added to the ADT/HL7 PIVOT file (#391.71) and marked for transmission. A background job will collect these updates and broadcast the HL7 MFN messages. This is an ADT HL7 message designed for MPI/PD.
HEALTH LEVEL SEVEN (HL7) **V***IST***A**	Messaging system developed as a **V***IST***A** software package that follows the HL7 Standard for data exchange.
HELP FRAMES	Entries in the HELP FRAME file (#9.2) that may be distributed with application packages to provide online documentation. Frames may be linked with other related frames to form a nested structure.
HELP PROCESSOR	Kernel module that provides a system for creating and displaying online documentation. It is integrated within the menu system so that help frames associated with options can be displayed with a standard query at the menu's select prompt.
HELP PROMPT	Brief help that is available at the field level when entering one question mark.
HINQ	**H**ospital **Inq**uiry - 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.
HOOK OR LINK	Non-specific terms referring to ways in which files may be related (via pointer links) or can be accessed (via hooks).
HOST FILE SERVER (HFS)	Procedure available on layered systems whereby a file on the host system can be identified to receive output. It is implemented by the Device Handler's HFS device type.
I.H.S.	**I**ndian **H**ealth **S**ervice
I.H.S.	**I**ntegrated **H**ospital **S**ystem
IDCU	The **I**ntegrated **D**ata **C**ommunications **U**tility, which is a wide area network, used by VA for transmitting data between VA sites.
INPATIENT	Patient who has been admitted to a hospital in order to be treated for a particular condition.

INTEGRATION CONTROL NUMBER (ICN)	The **I**ntegration **C**ontrol **N**umber is a unique identifier assigned to patients when they are added to the Master Patient Index. The ICN follows the ASTM E1714-95 standard for a universal health identifier. ICNs link patients to their records across VA systems.
INTERNAL ENTRY NUMBER (IEN)	The number used to identify an entry within a file. Every record has a unique internal entry number.
IRM	Information Resource Management. A service at VA medical centers responsible for computer management and system security.
KERNEL	Set of **V*IST*A** software routines that function as an intermediary between the host operating system and the **V*IST*A** application packages such as Laboratory, Pharmacy, IFCAP, etc. The Kernel provides a standard and consistent user and programmer interface between application packages and the underlying M implementation.
KERNEL TOOLKIT	Kernel Toolkit is a robust set of tools developed to aid the Veterans Health Information Systems and Technology Architecture **V*IST*A** development community, and Information Resources Management (IRM), in writing, testing, and analysis of code. They are a set of generic tools that are used by developers, documenters, verifiers, and packages to support distinct tasks. The Toolkit provides utilities for the management and definition of development projects. Many of these utilities have been used by the CIO Field Office - San Francisco for internal management and have proven valuable. Toolkit also includes tools provided by other CIO Field Offices based on their proven utility.
KERNEL TOOLKIT, DUPLICATE RECORD MERGE: PATIENT MERGE (Also see Duplicate Record Merge: Patient Merge or Patient Merge.)	Patient Merge is a **V*IST*A** application that provides an automated method to eliminate duplicate patient records within the **V*IST*A** database (i.e., the **V*IST*A** PATIENT file [#2]). It consists of three steps: 1. Search for potential duplicate record pairs. 2. Review, verification, and approval of those pairs. 3. Merge process.
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.
KEYWORD	Word or phrase used to call up several codes from the reference files in the LOCAL LOOK-UP file (#8984.4). One specific code may be called up by several different keywords.

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.)
LINK	Non-specific term referring to ways in which files may be related (via pointer links). Files have links into other files.
MAIL MESSAGE	An entry in the MESSAGE file (#3.9). The **V*IST*A** electronic mail system (MailMan) supports local and remote networking of messages.
MAILMAN	Electronic mail system that allows you to send and receive messages from other users via the computer.
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 PATIENT INDEX — **V*IST*A**	This software resides in **V*IST*A** and supports the Austin side of the MPI, as well as the CMOR (Coordinating Master Of Record) change requests. MPI/PD VistA enables sites to query the MPI (Austin) for the: • Assignment of ICN (i.e., Integration Control Number) and CMOR. • Inactivation of an ICN for a patient. • Known data on the MPI (Austin). Any updates to patient data are then sent to the MPI (Austin) and to sites where a patient has been seen. MPI/PD VistA also manages incoming and outgoing Change CMOR requests. (For more information, see the "**Error! Reference source not found.**" section of this manual.)
MASTER PATIENT INDEX (AUSTIN)	The **M**aster **P**atient **I**ndex is the master index of all VHA patients. The MPI assigns and maintains unique national patient identifiers (i.e., Integration Control Numbers or ICNs) that link patients to their records across VHA systems. The MPI also assigns the initial CMOR (first site to identify the patient to the MPI). It contains patient's identifying descriptive information (e.g., name, SSN, date of birth, mother's maiden name, place of birth state and place of birth city).
MENU	List of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word "Select" and followed by the word "option" as in Select Menu Management option: (the menu's select prompt).

MENU SYSTEM	The overall Menu Manager logic as it functions within the Kernel framework.
MENU TEMPLATE	An association of options as pathway specifications to reach one or more final destination options. The final options must be executable activities and not merely menus for the template to function. Any user may define user-specific menu templates via the corresponding Common option.
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 TREES	The menu system's hierarchical tree-like structures that can be traversed or navigated, like pathways, to give users easy access to various options.
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.
MPI (AUSTIN)	The **M**aster **P**atient **I**ndex is the master index of all VHA patients. The MPI assigns and maintains unique national patient identifiers (i.e., Integration Control Numbers or ICNs) that link patients to their records across VHA systems. The MPI also assigns the initial CMOR (first site to identify the patient to the MPI). It contains patient's identifying descriptive information (e.g., name, SSN, date of birth, mother's maiden name, place of birth state and place of birth city).
MPI/PD VistA	This software resides in **V***IST***A** and supports the Austin side of the MPI, as well as the CMOR (Coordinating Master Of Record) change requests. MPI/PD VistA enables sites to query the MPI (Austin) for the: • Assignment of ICN (i.e., Integration Control Number) and CMOR. • Inactivation of an ICN for a patient. • Known data on the MPI (Austin). Any updates to patient data are then sent to the MPI (Austin) and to sites where a patient has been seen. MPI/PD VistA also manages incoming and outgoing Change CMOR requests. (For more information, see the "**Error! Reference source not found.**" section of this manual.)

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), Coordinating Master of Record (CMOR), and Treating Facility list for each patient to the patient's record in the **V***IST***A** 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.
MPIF CMOR REQUEST mail group	Any requests to change the CMOR will be sent to this Mail Group. They will then be processed (i.e., accepted/rejected) via the CMOR options. The messages serve as a heads-up that there are CMOR requests to process.
MPIF EXCEPTIONS mail group	If a server address is not populated in the CIRN HL7 EXCEPTION TYPE file (#991.11), MAIL GROUP field (#6), MPI exception e-mail messages (problems) that need to be addressed are sent to this mail group. These messages are all technical in nature, involving problems with HL7 messages or conflicts resulting from CMORs or ICNs not found. Any messages sent to the MPIF EXCEPTIONS mail group are automatically sent to the remote mail group G.CIRN EXCEPTION MGT@FORUM.VA.GOV. Normally there isn't anything a site can do to resolve these messages, which is why they are not sent to local members. If necessary, members of this remote mail group will contact site personnel for assistance. Note: The remote member is populated automatically.
MPIF HL7 GROUP mail group	If HL7 messages are automatically sent to the MPI at the Austin Automation Center via the MailMan protocol will this mail group be utilized. This mail group contains the remote member: S.HL V16 SERVER@MPI.ISC-ALBANY.VA.GOV. No other members should be added to this group. **MailMan is currently not utilized for sending the HL7 messages for MPI/PD, TCP/IP protocol is used instead.
NAMESPACING	Convention for naming **V***IST***A** package elements. The 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.

NODE	In a tree structure, a point at which subordinate items of data originate. A name and a unique subscript characterize an M (previously referred to as MUMPS) array element. Thus the terms: node, array element, and subscripted variable are synonymous. In a global array, each node might have specific fields or "pieces" reserved for data attributes such as name.
NON CMOR SITES	Sites that are not the CMOR for a given patient but which nevertheless have an interest in the patient.
NUMERIC FIELD	Response that is limited to a restricted number of digits. It can be dollar valued or a decimal figure of specified precision.
OPERATING SYSTEM	Basic program that runs on the computer, controls the peripherals, allocates computing time to each user, and communicates with terminals.
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 Task Manager.
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 **V***IST***A** conventions monitored by the DBA.
PAC	**P**rogrammer **A**ccess **C**ode - Optional user attribute that may function as a second level password into programmer mode.
PACKAGE	The set of programs, files, documentation, help prompts, and installation procedures required for a given software application. For example, Laboratory, Pharmacy, and PIMS are packages. A **V***IST***A** software environment composed of elements specified via the PACKAGE file (#9.4). Elements include files and associated templates, namespaced routines, and namespaced file entries from the OPTION, HELP FRAME, BULLETIN, and FUNCTION files. As public domain software, packages may be requested through the Freedom of Information Act (FOIA).
PASSWORD	A user's secret sequence of keyboard characters, which must be entered at the beginning of each computer session to provide the user's identity.
PATIENT DEMOGRAPHICS (PD)	Identifying descriptive information about a patient. With MPI/PD, key demographic information for a patient is the same at each of the treating facilities where that patient is seen. Also, a module of the MPI/PD package.

PATIENT MERGE (Also see Duplicate Record Merge: Patient Merge or Kernel Toolkit, Duplicate Record Merge: Patient Merge.)	Patient Merge is a **V***IST***A** application that provides an automated method to eliminate duplicate patient records within the **V***IST***A** database (i.e., the **V***IST***A** PATIENT file [#2]). It consists of three steps: 1. Search for potential duplicate record pairs. 2. Review, verification, and approval of those pairs. 3. Merge process.
PATIENT, SENSITIVE	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.
PERIPHERAL DEVICE	Any hardware device other than the computer itself (central processing unit plus internal memory). Typical examples include card readers, printers, CRT units, and disk drives.
PHANTOM JUMP	Menu jumping in the background. Used by the menu system to check menu pathway restrictions.
PIMS	**P**atient **I**nformation **M**anagement **S**ystem - **V***IST***A** software package that includes Registration and Scheduling packages.
POINTER	The address at which a data value is stored in computer memory. A relationship between two VA FileMan files, a pointer is a file entry that references another file (forward or backward). Pointers can be an efficient means for applications to access data by referring to the storage location at which the data exists.
PRIMARY MENUS	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 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.
PRODUCTION ACCOUNT	The UCI where users log on and carry out their work, as opposed to the manager, or library, account.
PROGRAM	List of instructions written in a programming language and used for computer operations.

PROGRAMMER ACCESS	The ability to use **V***IST***A** features reserved for programmers. Having the programmer's at-sign, when DUZ(0)=@, enables programmer access.
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. The Kernel includes several protocol-type options for enhanced menu displays within the OE/RR package.
PSEUDO-SSNs	False **S**ocial **S**ecurity **N**umbers that are calculated internally to **V***IST***A** and cannot be mistaken for valid SSNs because they end in P. Updating active patients' missing or pseudo-SSNs is on of the functions of MPI/PD pre-implementation. Patients with pseudo-SSNs can be sent to the MPI (Austin) for a national ICN and CMOR assignment. However, pseudo-SSNs will NOT be used to assist in the lookup of that patient entry on the MPI. If that patient is found to already exist on the MPI, and if the MPI has record of their SSN, then the Pseudo-SSN will not be uploaded to the PATIENT file (#2).
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). The Kernel's Task Manager 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 time periods.
READ ACCESS	A user's authorization to read information stored in a computer file.
RECEIVING SITE	Receiving Site — As it relates to HL7 Messages, it is the site that the message was sent to.
RECORD	Set of related data treated as a unit. An entry in a VA FileMan file constitutes a record. A collection of data items that refer to a specific entity (e.g., in a name-address-phone number file, each record would contain a collection of data relating to one person).

REGISTRATION PROCESS	During a registration, if a patient does not have an ICN , the patient is checked against the entries in the MPI to determine if the patient already is established or needs to be added. The MPI may return a list of patients who are possible matches. If the patient is truly new and there are no potential matches in the MPI, the MPI will assign an ICN and assigns the requesting site as the CMOR. If the patient is already known at the MPI, the ICN and CMOR is returned and a HL7 message is sent to the CMOR to add this new facility to the list of Treating Facilities for this patient. Registration for patients who already have an ICN at the Facility. At the CMOR site, A04 Registration HL7 messages are sent to the MPI and all sites where the patient is known. These messages update the date of last activity and any changes to the descriptive data. At a non-CMOR site, an A04 Registration HL7 message is sent to the Coordinating Master of Record.
REQUESTING SITE	Requesting Site — As it relates to HL7 Messages, it is the site initiating a message to another site requesting some action be taken.
RETURN KEY	On the computer keyboard, the key located where the carriage return is on an electric typewriter. It is used in **V***IST***A** to terminate "reads." Symbolized by <RET>.
RG CIRN DEMOGRAPHIC ISSUES mail group	PIMS Personnel (e.g., ADPACs and/or Coordinators, etc.) are automatically notified of problems relating to data. Problems such as: • Patient's dates of death not being synchronized between your local PATIENT file (#2) and the MPI. • Patient entries with missing required field(s) (i.e., Date of Birth or Name) when trying to add them to the MPI. • Potential matches were found during the initialization or during the Local/Missing ICN resolution job that need to be resolved manually in order to obtain an ICN.
ROUTINE	Program or a sequence of instructions called by a program that may have some general or frequent use. M (previously referred to as MUMPS) routines are groups of program lines, which are saved, loaded, and called as a single unit via a specific name.
SAC	**S**tandards **a**nd **C**onventions. Through a process of verification, **V***IST***A** packages are reviewed with respect to SAC guidelines as set forth by the Standards and Conventions Committee (SACC). Package documentation is similarly reviewed in terms of standards set by the Documentation Standards and Conventions Committee (DSCC).
SACC	**V***IST***A**'s **S**tandards **a**nd **C**onventions **C**ommittee. 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.

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 package. Forms are composed of blocks (stored in the BLOCK file [#.404]) and can be regular, full screen pages or smaller, pop-up pages for multiples.
SECONDARY MENUS	Options assigned to individual users to tailor their menu choices. If a user needs a few options in addition to those available on the Primary menu, the options can be assigned as secondary options. To facilitate menu jumping, secondary menus should be specific activities, not elaborate and deep menu trees.
SECURITY KEY	The purpose of Security Keys is to set a layer of protection on the range of computing capabilities available with a particular software package. The availability of options is based on the level of system access granted to each user.
SEGMENT TABLE DEFINITIONS	For each segment, the data elements are described in table format. The table includes the sequence number (SEQ), maximum length (LEN), data type (DT), required or optional (R/O), repeatable (RP/#), the table number (TBL #), the element name, and the **V***IST***A** description.
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 may be deemed sensitive by a facility, such as political figures, employees, and 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.
SENSITIVIT	This is a 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	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. This activity is specified in the OPTION 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	Patient who has been seen at more than one site. The CMOR keeps the Treating Facility List and Subscription List updated every time a new facility where the patient has been seen identifies itself to the MPI. The CMOR then broadcasts the updated lists to all the other facilities that share this patient.
SITE MANAGER/ IRM CHIEF	At each site, the individual who is responsible for managing computer systems, installing and maintaining new modules, and serving as liaison to the CIO Field Offices.
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.
SPOOLER	Spooling (under any system) provides an intermediate storage location for files (or program output) for printing at a later time. In the case of **V*IST*A**, the Kernel manages spooling so that the underlying OS mechanism is transparent. The Kernel subsequently transfers the text to the ^XMBS global for despooling (printing).
STOP CODE	Number (i.e., a subject area indicator) assigned to the various clinical, diagnostic, and therapeutic sections of a facility for reporting purposes. For example, all outpatient services within a given area (e.g., Infectious Disease, Neurology, and Mental Hygiene—Group) would be reported to the same clinic stop code.
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	Symbol that is associated with the name of a set to identify a particular subset or element. In M (previously referred to as MUMPS), a numeric or string value that: is enclosed in parentheses; is appended to the name of a local or global variable; identifies a specific node within an array.
SUBSCRIPTION	Process used to identify the sites that will receive clinical and/or descriptive information for a patient.
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 a re edited by a subscriber.
SYNONYM	Field in the OPTION file (#19). Options may be selected by their menu text or synonym (see Menu Text).

TASK MANAGER	Kernel module that schedules and processes background tasks (also called Task Manager).
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).
TIMED-READ	The amount of time a READ command waits for a user response before it times out.
TOOLKIT	Toolkit (or Kernel Toolkit) is a robust set of tools developed to aid the Veterans Health Information Systems and Technology Architecture **V*IST*A** development community, and Information Resources Management (IRM), in writing, testing, and analysis of code. They are a set of generic tools that are used by developers, documenters, verifiers, and packages to support distinct tasks. The Toolkit provides utilities for the management and definition of development projects. Many of these utilities have been used by the CIO Field Office - San Francisco for internal management and have proven valuable. Toolkit also includes tools provided by other CIO Field Offices based on their proven utility.
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.
TREE STRUCTURE	Term sometimes used to describe the structure of an M array. This has the same structure as a family tree, with the root at the top and ancestor nodes arranged below according to their depth of subscripting. All nodes with one subscript are at the first level, all nodes with two subscripts at the second level, and so on.
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 EVENTS	An activity in **V*IST*A** that creates HL7 messages.

TYPE-AHEAD	Buffer used to store characters that are entered before the corresponding prompt appears. Type-ahead is a shortcut for experienced users who can anticipate an expected sequence of prompts.
UCI	**U**ser **C**lass **I**dentification, a computing area. The MGR UCI is typically the manager's account, while VAH or ROU may be production accounts.
USER ACCESS	This term is used to refer to a limited level of access, to a computer system, which is sufficient for using/operating a package, but does not allow programming, modification to data dictionaries, or other operations that require programmer access. Any option, for example, can be locked with the key XUPROGMODE, which means that invoking that option requires programmer access. The user's access level determines the degree of computer use and the types of computer programs available. The Systems Manager assigns the user an access level.
VA	The Department of **V**eterans **A**ffairs, formerly called the **V**eterans **A**dministration.
VA FILEMAN	Set of programs used to enter, maintain, access, and manipulate a database management system consisting of files. A package of online computer routines written in the M language, which can be used as a stand-alone database system or as a set of application utilities. In either form, such routines can be used to define, enter, edit, and retrieve information from a set of computer stored files.
VARIABLE	Character, or group of characters, that refer 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).
VENDOR INDEPENDENCE	A goal of **V***IST***A**: to develop a system that does not assume the existence of a particular hardware/software platform supplied by a particular vendor. (See Operating System Independence.)
VERIFY CODE (see PASSWORD)	Additional security precaution used in conjunction with the Access Code. Like the Access Code, it is also 6 to 20 characters in length and, if entered incorrectly, will not allow the user to access the computer. To protect the user, both codes are invisible on the terminal screen.
VISN	**V**eterans **I**ntegrated **S**ervice **N**etwork

V*IST*A	**V**eterans **H**ealth **I**nformation **S**ystems and **T**echnology **A**rchitecture **V*IST*A** (formerly the Decentralized Hospital Computer Program [DHCP]) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). **V*IST*A** 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. **V*IST*A** is composed of packages, which undergo a verification process to ensure conformity with namespacing and other **V*IST*A** standards and conventions.
Z SEGMENTS	HL7 custom segment format. Z segments are used when the standard HL7 V. 2.3 does not meet the needs to share data. Each Z segment must be approved by the HL7 Administrator within Technical Services.

Appendix A – Product Description: What is the Master Patient Index?

There are 128 Veterans Health Information Systems and Technology Architecture VistA systems in use around the country. Due to the wide distribution of information, there is great potential for individual patient data to be kept under more than one identification number. To support maintenance of a unique patient identifier and a single master index of all VA patients and to allow messaging of patient information among the institutional partners (i.e., VHA, Veterans Benefits Administration (VBA), Board of Veterans Appeals (BVA), and National Cemetery Service (NCS)) the MPI Austin has been created. The MPI Austin maintains a central index to correctly identify each patient and track the Coordinating Master of Record (CMOR) site. MPI data is maintained in a centralized, dynamic database that is available to meet multiple information needs across many systems.

What is the Master Patient Index Composed Of?

Master Patient Index (Austin)

The MPI located at the Austin Automation Center (AAC) is the actual index. It maintains a list of associated systems that know a patient's Integration Control Number (ICN) along with corresponding demographic data connected to that associated system/correlated domain. This enables the sharing of patient data between operationally diverse systems, as each record (or index entry) contains a small amount of patient data used to identify individual entries.

The MPI Austin assigns each patient the following:

1. A unique patient identifier (Integration Control Number or ICN)

2. Initially assigns the requesting site as the Coordinating Master of Record (CMOR).

Each index entry on the MPI contains the patient's identifying information (e.g., Name, SSN, Date of Birth) and a current list of associated systems/correlated domains. The MPI is updated as new patients are added or demographic information is updated at any of those associated facilities.

Once a CMOR has been assigned to a patient, the MPI will only accept changes and/or updates to that patient's demographic data from the CMOR site. However, the CMOR can be changed at any time.

The MPI hardware is housed at the AAC in Austin, Texas; hardware and general support will be handled there. The software comprising the MPI was written by the MPI/PD Development Team of Health Systems Design and Development (HSD&D).

Master Patient Index/Patient Demographics (MPI/PD) VistA

This software resides in VistA and sends patient data to the MPI Austin. MPI/PD VistA enables sites to query the MPI Austin for known data, to request the assignment of an ICN, to inactivate an ICN, and to manage incoming and outgoing Change CMOR requests.

During the initialization of the MPI Austin each VA Medical Center sent batch HL7 messages to it, requesting ICNs for all of its patients whose records reflected activity in the past three fiscal years (i.e., patient records that contained CMOR Activity Scores). Patients were checked against the MPI Austin and one of the following scenarios occurred:

1. If a patient was introduced to the MPI for the first time, it was added directly to the index, an ICN was assigned to that patient, and the current (sending) site became the CMOR.

2. If an exact match was found for that patient (i.e., the patient was already initialized to the MPI from another site), the current (sending) site was added to the list of treating facilities where the patient had been seen. The CMOR remained the same.

3. If multiple patient entries were found on the MPI that closely matched the patient's identifying information:

    a. A notation was made in the CIRN HL7 EXCEPTION LOG (#991.1.) file indicating that a list of potential matches has been found. The HL7 message is sent back to the sending site and processed, instead of the ICN and CMOR normally returned.

    b. An option, View Potential Match Patient, is available on the Message Exception Menu. It prints a list of patients who have been identified as having multiple potential matches on the MPI and who haven't yet been resolved using the Single Patient Initialization to MPI. Patient entries are listed by Name, Social Security Number (SSN), Date of Birth, and DFN. The status of the patient entry is current as of the date/time the report is generated. This data is pulled from the CIRN HL7 EXCEPTION LOG (#991.1) file.

    c. If the correct patient entry was located on the report, it must then be resolved using the option Single Patient Initialization to MPI.

Once the initialization process was complete, the data at the MPI Austin was and still is, to be kept up-to-date through MPI/PD VistA, and Patient Information Management System (PIMS) menu options.

If you are using any of the following PIMS options:

- Load/Edit Patient Data
- Register a Patient
- 10-10T Registration, or
- Electronic 10-10EZ Processing

to add a new patient to your local PATIENT (#2) file, or if you select a patient who did not receive an ICN during initialization, a real-time request for an ICN and CMOR is sent to the MPI Austin. This ensures that the MPI Austin will be kept up-to-date with active patients.

Coordinating Master of Record (CMOR)

The function of the CMOR site (i.e., VAMC) is to advise other site(s), via the MPI Austin, when demographic data is changed for a shared patient after that patient has been established on the MPI

Austin. The CMOR is initially the first site that identifies a patient to the MPI Austin. It can be changed to a different site by using the MPI/PD VistA option Create a New CMOR Change Request. The CMOR is not analogous with the notion of Preferred Facility as it relates to PIMS. Additionally, CMOR sites do not receive endorsed funding that is NOT part of the regular course for patient care.

History of CMOR

During the pre-implementation phase of the MPI (i.e., the MPI/PD Pre-Implementation), patients who were seen during the last three years were assigned CMOR activity scores. Only patient records that contained a CMOR activity score were initialized to the MPI Austin.

During the initialization of VAMC patient databases with the MPI Austin, the first site to identify a patient to the MPI was designated as the CMOR. After that, every other site where that patient had activity in the last three years made itself known to the MPI and was added to the list of treating facilities for that patient.

Following the initialization process at each VAMC, patients' CMOR Activity Scores for all non-CMOR sites were compared to determine if the CMOR should have been changed. If a non-CMOR site had a higher Activity Score for a patient and the difference was greater than 80%, the current CMOR sent an HL7 message to the MPI Austin and to all sites that have treated this patient, informing them that the CMOR was changed.

Appendix B – MPI/PD Business Rules

CMOR CHANGES	Receiving site must be a treating facility (patient must be registered there).
DATE OF DEATH	A patient may be entered as deceased at a treating facility. If a shared patient is flagged as deceased, a bulletin is sent to the RG CIRN DEMOGRAPHIC ISSUES mail group. The bulleting tells where the deceased date was entered and the date the patient died. Each site can then review whether the patient should be marked as deceased at their site.
DUPLICATE ICNs	More than one patient in a single PATIENT (#2) file cannot have the same ICN. For example, lets say that the MPI returned an ICN to your local PATIENT (#2) file for a patient who previously did not have one assigned. If that same ICN is currently assigned to a different patient in your PATIENT (#2) file, an exception (problem) message is sent to the MPIF EXCEPTIONS mail group, and the ICN, CMOR, and treating facilities list is not updated for this new patient.
INITIAL CMOR	A patient's CMOR will be the first treating site that identifies the patient to the MPI.
INSTITUTION FILE	A site can be in only one VISN at a time. A record in the INSTITUTION (#4) file cannot have two parents of the same type. A record in the INSTITUTION (#4) file cannot be a child and have children of its own.
MPI (AUSTIN)	The MPI assigns a national ICN and the initial CMOR (i.e., the initial CMOR is the first site to identify the patient to the MPI). It accepts update messages only from the CMOR. The MPI maintains a copy of the treating facilities list, but not the subscription list. Subscriber messages are not sent to the MPI.
PATIENT SENSITIVITY	If a shared patient is flagged as sensitive at one of the treating sites, a bulletin is sent to the RG CIRN DEMOGRAPHIC ISSUES 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. If the site chooses to change the patient to a sensitive status, the option to do so would be used and then a bulletin would be sent to the mail group established in the PIMS package for notifying users of a sensitive patient change.

TREATING FACILITIES	Broadcast messages to add a treating facility for a patient will come only from the Coordinating Master of Record (CMOR), via the MPI. Site requesting to be added sends message to MPI, the MPI then routes it to the CMOR and a complete treating facility list will go out to all sites via the MPI.
UPDATE MESSAGES	Descriptive data update messages are broadcast by the MPI Austin.

Appendix C – Data Stored at the MPI (Austin)

Several groups have expressed an interest in know what data (fields) are stored on the MPI in Austin. This section has been included as a means for sharing the data.

Integration Control Number (ICN)
Surname
First Name
Middle Name
Name Prefix
Mother's Maiden Name
Date Of Birth
Claim Number
Gender
Date Of Death
Social Security Number
Name Suffix
CMOR
Place Of Birth - City
Place Of Birth - State