PIMS V. 5.3 Technical Manual

Revision History

Initiated on 11/9/04

Date	Description (Patch # if applic.)	Project Mgr	Technical Writer
11/9/04	DG*5.3*415 - Race and Ethnicity Addition to VADPT variable section (patch released in 2003- change omitted in error)	Jim Peterson - Developer	Corinne Bailey
11/15/04	Manual updated to comply with SOP 192-352 Displaying Sensitive Data	Lyn Litwa	Corinne Bailey
8/5/05	DG*5.3*666 Enhancement - added Background Job Option	Zach Fain	Corinne Bailey
8/12/05	DG*5.3*624 - (10-10EZ 3.0) Deleted DGRPT 10-10T REGISTRATION input template in the Compiled Template Routines section	Melissa Livingston	Tom Hamilton
3/22/06	DG*5.3*687 Maintenance – remove PTF Archive/Purge function	Carol Greening	Tim Dawson
4/28/06	DG*5.3*692 Enhancement - updated HL7 Interface Spec for Transmission of Ambulatory Care Data	Zach Fain	Corinne Bailey
10/20/06	DG*5.3*689 OEF/OIF Enhancements - updated SVC^VADPT Variable segment section	Katherine Harris	Tavia Leonard
11/27/06	DG*5.3*650 - added two new files - #26.19 and #26.21	Michaele Mahoney	Corinne Bailey
6/26/07	DG*5.3*707 – added "HL7 Generic PID,EVN,PV1 Segment Builder established by MPI" to the HL7 Interface Specifications section	Dan Soraoka	Susan Strack
1/16/08	SD*5.3*253, SD*5.3*275, SD*5.3*283, SD*5.3*285, SD*5.3*301, SD*5.3*310, SD*5.3*316, SD*5.3*347, SD*5.3*508 – Added/updated Scheduling Application Programmer Interfaces (APIs) section	Mike Guenther	John Owczarzak
6/4/08	DG*5.3*644 – Home Telehealth enhancements	Zach Fain	Corinne Bailey
6/20/08	DG*5.3*782 – updated Religion File	April Scott	Tim Dawson

Revision History

Date	Description (Patch # if applic.)	Project Mgr	Technical Writer
7/1/08	DG*5.3*779 – Added DGEN NEACL MGT RPT1BK background job option	Richard Muller	Corinne Bailey
7/23/08	DG*5.3*763 – Hold Debt to DMC – Added ENROLLMENT RATED DISABILITY UPLOAD AUDIT file to the Files Section (File List) and Security Section (FileMan Access Codes). Added DGEN RD UPLOAD AUDIT PURGE background job option.	Melissa Ickes	Thomas Hamilton
1/29/09	Name change update - Austin Automation Center (AAC) to Austin Information Technology Center (AITC)	Kevin Jackson	Tavia Leonard
3/30/09	DG*5.3*688 and SD*5.3*441 Enrollment VistA Changes Release 2 (EVC R2) • Added additional Value of "O" for "Other" to *Table VA0046 - Agent Orange Exposure Location*. Removed *Unknown* value. • Changed Environmental Contaminants to SW Asia Conditions. • Added entries to Part 5 of the *CALLABLE ENTRY POINTS IN VADPT* section. • SVC^VADPT modified to add VASV(14) and VASV(14,1) to the VASV array for project SHAD. Added alpha subscripts to ADD^VADPT section. Added alpha subscripts to SVC^VADPT to reflect the alpha translation. • Replaced HL7 Control Segment - 2.3.6 PID-Patient Identification Segment table - with referral to MPI site on VDL.	Laura Prietula	Tom Hamilton Cory Spielvogle Corinne Bailey
3/15/10	Corrected hyperlink address	Richard Muller	Corinne Bailey

Introduction

The **V***IST***A** PIMS package provides a comprehensive range of software supporting the administrative functions of patient registration, admission, discharge, transfer, and appointment scheduling.. Its functions apply throughout a patient's inpatient and/or outpatient stay from registration, eligibility and Means Testing through discharge with on-line transmission of PTF (Patient Treatment File) data and/or NPCDB (National Patient Care Database) data to the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)). The ADT module aids in recovery of cost of care by supplying comprehensive PTF/RUG-II options and Means Test options.

The ADT and Scheduling modules of PIMS are fully integrated with the VA FileMan, thus allowing ad hoc reports to be extracted by non-programmer personnel. ADT is integrated with V. 2.1 of the Fee Basis software allowing Fee personnel to register patients through a select Fee option.

Related manuals include the PIMS User Manual, the PIMS Release Notes which describe version specific changes to the PIMS package, and PIMS Installation Guide.

Several features have been designed into the PIMS package to maximize efficiency and maintain control over user access of specified sensitive patient records. The Consistency Checker reduces entry of inaccurate information by warning the user about incompatible or missing data. The Patient Sensitivity function allows a level of security to be assigned to certain records within a database in order to maintain control over unauthorized access. The Patient Lookup screens user access of these sensitive records, as well as providing for more efficient and faster retrieval of patient entries.

Tracking and calculation of data is performed transparently by the system to provide a variety of reports which assist in day-to-day operations as well as provide management with the necessary information to analyze workload and promote quality of care. Highlights include the following.

- Automation of the Daily Gains and Losses Sheet and Bed Status Report
- Inpatient Listings
- Seriously Ill Listings
- Bed Availability Reports
- AMIS Reporting
- Disposition Reporting
- Generic code sheets for reporting AMIS segments
- Automation of Appointment Status Update

With V. 2.5 of Order Entry/Results Reporting, OE/RR notifications for PIMS may be displayed for admissions, death discharges, deaths, and unscheduled (1010) visits. The notifications (ADMISSION, DECEASED, and UNSCHEDULED (1010) VISIT) will be displayed for patients who are defined as members of a list in the OE/RR LIST file (#100.21). The recipients of the notifications would need to be defined as users in the same OE/RR LIST entry. The notifications will appear as "alerts" when the user is prompted to select an option from a menu. Please refer to the documentation for Order Entry/Results Reporting for more information concerning OE/RR notifications.

Primary Care Management Module (PCMM)

The Primary Care Management Module was developed to assist VA facilities in implementing primary care. It will support both primary care teams and non-primary care teams. PCMM's functionality is divided into eight areas.

1. Setup & Define Team
2. Assign Staff to Positions in Teams
3. Assign Patient to Team
4. Assign Patient to Practitioner via Team Position and Enroll in a Clinic
5. Reports/Outputs/Mail Messages
6. Tools to Ease Startup Process of Primary Care
7. Other Changes to Scheduling Package
8. Application Program Interface (API) calls

The PCMM release will use a Graphical User Interface (GUI) to control the startup, setup, and assignment functions. To use the functionality in the PCMM, a site will need a Microsoft Windows™ workstation which has a connection to **V*IST*A** (either LAN or serial connection) for each location where a patient or staff member is assigned to a team. A typical site will want one workstation for each team, one for the PIMS ADPAC, plus one for the manager in charge of primary care. Existing Scheduling functionality will continue to be useable from "roll and scroll" terminals.

Orientation

The PIMS Technical Manual has been divided into sections for general clarity and simplification of the information being presented. This manual is intended to be a reference document. While the user is free to review the entire document, it is best used by selecting specific sections which contain the information sought for a particular need.

Information concerning package security may be found in the Security section of this manual.

How To Use This Manual

The PIMS Technical Manual is provided in Adobe Acrobat PDF (portable document format) files. The Acrobat Reader is used to view the documents. If you do not have the Acrobat Reader loaded, it is available from the **V***IST***A** Home Page, "Viewers" Directory.

Once you open the file, you may click on the desired entry name in the table of contents on the left side of the screen to go to that entry in the document. You may print any or all pages of the file. Click on the "Print" icon and select the desired pages. Then click "OK".

Note to Users With "QUME" Terminals

It is very important that you set up your Qume terminal properly. After entering your access and verify codes, you will see the following prompt.

```
Select TERMINAL TYPE NAME: {type}//
```

Please make sure that C-QUME is entered here. Once you enter this, it will become the default and you can then enter <RET> for all subsequent log-ins. If any other terminal type configuration is set, options using the List Manager utility (such as Appointment Management and Scheduling Parameters) will neither display nor function properly on your terminal.

General Information

Namespace Conventions

The namespaces assigned to the PIMS package are DG, DPT, SD, SC, and VA.

Background Job Options

OPTION NAME	SUGGESTED RUN FREQUENCY	DEVICE REQUIRED	REMARKS
DG G&L RECALCULATION AUTO	Nightly	NO	Recommended to run @ 9PM
DG PRE-REGISTER NIGHT JOB	Nightly	NO	Run during off hours. Set to null device for MSM sites.
DG PTF BACKGROUND JOB	Nightly	NO	Run during off hours
DG RUG BACKGROUND JOB	Daily	YES	
DG RUG SEMI ANNUAL - TASKED	*	YES	*Queued in advance to run on 10/1 and 4/1
DG SENSITIVE RCDS RPT-TASK	Nightly	NO	Run after midnight
DGEN NEACL MGT RPT1BK	Daily	YES	
DGEN RD UPLOAD AUDIT PURGE	Daily or Weekly	NO	Purges entries from the ENROLLMENT RATED DISABILITY UPLOAD AUDIT file (#390) after 365 days
DGPF BACKGROUND PROCESSING	Daily	NO	Run during off hours
DGQE BACKGROUND PROCESSING	Nightly	NO	Run during off hours
SCDX AMBCAR NIGHTLY XMIT	Nightly	NO	Collects workload information and sends it to NPCDB in Austin via HL7messages
SCENI IEMM SUMMARY BULLETIN	Nightly	NO	Run after nightly transmission to Austin
SCMC PCMM HL7	Nightly	NO	Collects PCMM data that needs to be transmitted to Austin in HL7 format

OPTION NAME	SUGGESTED RUN FREQUENCY	DEVICE REQUIRED	REMARKS
SCRPW APM TASK JOB	Monthly	NO	Runs on the 15th of the current month after hours. Generates info rolled up to AITC (formerly AAC) Additional Performance Monitors (TIU).
SDAM BACKGROUND JOB	Nightly	NO	
SDOQM PM NIGHTLY JOB	As directed	YES	Suggested run time @ 2AM
VAFC BATCH UPDATE	30 minutes	NO	Transmits changes to key patient demographical data
VAFH PIVOT PURGE	Weekly	NO	Purges entries greater than 1.5 years old from ADT/HL7 PIVOT file (#391.71)

SACC Exemptions/Non-Standard Code

The following are the steps you may take to obtain the SACC exemptions for the PIMS package.

1. FORUM
2. DBA Menu
3. SACC Exemptions Menu
4. Display Exemptions for a Package Option
5. Select SACC Exemptions package: ADT
   SD

Implementation and Maintenance

The PIMS package may be tailored specifically to meet the needs of the various sites. Instructions may be found in the User Manual under the ADT Module, Supervisor ADT and the Scheduling Module, Supervisor. A variety of options are included in these sections allowing each site to define its own configuration. The ADT portion of the PIMS package will function around the parameters defined through the MAS Parameter Entry/Edit option while the Scheduling portion parameters are defined through the Scheduling Parameters option. A great many other options are included in these Supervisor sections which assist in site configuration and maintenance functions. Among them are options which allow for specification of mail groups to receive certain bulletins, definition of devices, designation of transmission routers, entry/edit of Means Test data, ward set-up, and clinic set-up. All configurations may be modified at any time as the site's needs change.

The SCHEDULING PARAMETERS file (#404.91) may be used to modify the behavior of PCMM. The USE USR CLASS FUNCTIONALITY? field (#801) can be used to turn on/off the user class functionality provided by the Authorizations/ Subscriptions software. This functionality allows certain staff members/users (especially clinicians) to be classified in a very specific manner (e.g., cardiologist), and yet the software can determine that the staff member is a member of a more general class (e.g., provider). If a site has A/S installed prior to the PCMM installation, PCMM will default to use the user class functionality. Sites that have not populated the USR CLASS MEMBERSHIP file (#8930.3) for their potential team members should have this parameter set to NO. Sites that have fully populated this file should set this parameter to YES because the assignment of staff members to teams will be less error-prone and faster than the unscreened selection from the NEW PERSON file (#200).

The CHECK PC TEAM AT DISCHARGE? field (#802) can be used to turn off the PCMM functionality which, upon inpatient discharge, checks the patient's primary care assignments. If the patient has current primary care data, it is displayed. If the patient does not have a current primary care team assignment, the user will be prompted to assign the patient to a primary care team.

The ENABLE AUTOLINK FUNCTIONALITY? field (#803) should be turned off until OE/RR is installed. Although there is no harm in allowing users to add/edit autolink data, this will not be usable until OE/RR is installed. The autolink functionality was added for use by OE/RR teams.

Eligibility ID/Maintenance Menu

The Eligibility/ID Maintenance Menu provides the options needed to accommodate VA/DOD sharing agreement requirements with regard to Patient Identification Number. For most medical centers, the PT ID will be the social security number of the patient and the SHORT ID will be the last four digits of the patient's social security number. For those sites with DOD sharing agreements using VA/DOD software developed by the Dallas CIOFO, the PT ID will be determined by the ID number given that patient by the military.

For most sites, each eligibility simply needs to be associated with the VA STANDARD format. This association was first accomplished during the post-init of MAS V. 5.0.

Other than The Primary Eligibility ID Reset (All Patients) option, the remaining six options would only be used by DOD sites using VA/DOD software developed by the Dallas CIOFO. They should not be run without Central Office and/or DOD approval/direction. Please contact your local CIOFO for guidance if you feel your site needs to utilize these options.

Below is a brief description of each option and its utilization.

PRIMARY ELIGIBILITY ID RESET (ALL PATIENTS) - This option will set/reset the IDs associated with each patient's primary eligibility code. This utility will be called when first installing the new eligibility data structure. It will run automatically as part of the PIMS clean-up routine process. The option can be executed multiple times with no harmful effects. It should be run during non-peak hours, preferably over a weekend. A MailMan message will be sent to the user when the job is completed showing the start and completion date/time.

Eligibility ID/Maintenance Menu

ELIGIBILITY CODE ENTER/EDIT - This option allows the user to enter/edit eligibility codes used by the site. It should be run for all ELIGIBILITY file entries to associate each entry with an MAS Eligibility code and an Identification Format. An example of utilizing the option follows. User responses are shown in boldface type.

```
Select ELIGIBILITY CODE NAME: MARINE CORPS
   ARE YOU ADDING 'MARINE CORPS' AS A NEW ELIGIBILITY CODE (THE 5TH)? YES
   ELIGIBILITY CODE MAS ELIGIBILITY CODE: OTHER FEDERAL AGENCY    4
NAME: MARINE CORPS// <RET>
ABBREVIATION: MC
PRINT NAME: MARINE CORPS    (Enter abbreviated Eligibility Code name for
                              output in limited space)
INACTIVE: <RET>             (Null response for active; 1 - YES for inactive)
MAS ELIGIBILITY CODE: OTHER FEDERAL AGENCY// <RET>
ID FORMAT: DOD
AGENCY: ARMY
Select SYNONYM: <RET>
```

ID FORMAT ENTER/EDIT - This option allows the user to enter/edit Identification formats with description.

RESET ALL IDS FOR A PATIENT - This option is used to reset the corresponding IDs for all eligibilities for a single patient. The patient's eligibilities will be listed as the ID is reset. This utility would be used if, for some reason, a patient's ID got corrupted.

RESET ALL IDS FOR ALL PATIENTS - This option resets all IDs corresponding to each of the patient's eligibilities. The option should be executed during non-peak hours. When the job is completed, a MailMan message will be generated to the user showing the start and completion date/time.

SPECIFIC ELIGIBILITY ID RESET (ALL PATIENTS) - After prompting for an eligibility code and queue-to-run time, this option will update the IDs for all patients having the selected eligibility. This utility would allow a site to update their database with the new value if the ID FORMAT field in the ELIGIBILITY CODE file changed. The option should be run during off hours. When the job is completed, a MailMan message will be generated to the user showing the start and completion date/time.

Eligibility ID/Maintenance Menu

SPECIFIC ID FORMAT RESET - This option prompts for an ID format; then, all patients that have eligibility codes associated with that ID format will have their IDs reset. The utility allows sites to update their database if the DEFAULT LONG ID VALUE CODE field in the IDENTIFICATION FORMAT file was modified. This option should be executed during off hours. When the job is completed, a MailMan message will be sent to the user showing the start and completion date/time.

Station Number (Time Sensitive) Enter/Edit (D ^VASITE0)

The STATION NUMBER (TIME SENSITIVE) file (#389.9) is used to hold the time sensitive station number data. This file was initially populated by the post init routine for MAS V. 5.2. One entry was created for each medical center division with an effective date of Jan 1, 1980. It is not necessary to modify this data unless the station number for a division changes or a new division is added. Entering a new medical center division name through the Supervisor ADT Menu of the ADT module of PIMS will automatically create a new entry in this file. New divisions may not be added through this routine entry point.

The Station Number (Time Sensitive) Enter/Edit routine entry point is used to change an existing station number or enter a new station number for a new division. If you are changing a station number for a division, you should enter a new effective date and the new station number for that division. Once a new division has been added, you should select the new division and enter the effective date and new station number. The IS PRIMARY DIVISION field should be set to YES for the division where the station number has no suffix. Only one division may be primary at any given time.

Routines

Routines To Map

Routine mapping is not required with VMS/Cache systems.

Callable Routines

$$GETACT^DGPFAPI	Obtain active Patient Record Flag assignments
$$INSTPCTM^SCAPMC	Institution & team for pt's pc team
$$PRCL^SCAPMC	Practitioners for a Clinic
$$PRPT^SCAPMC	Practitioners for a Patient
$$PRTM^SCAPMC	Practitioners for a Team
$$PTTM^SCAPMC	Patients for a Team
$$SITE^VASITE	Obtain Station Number Information
$$TMPT^SCAPMC	Teams for a Patient
DGINPW	Obtain Inpatient Status
DGPMLOS	Obtain Length of Stay by Admission
$$GETALL^SCAPMCA	Return assignment information
$$OUTPTAP^SDUTL3	Return associate pc provider information
$$OUTPTRP^SDUTL3	Return primary care provider information
$$DATA2PTF^DGAPI	Send data to PTF
CPTINFO^DGAPI	Get CPTs from PTF
PTFINFOR^DGAPI	Delete CPTs from PTF
$$DELCPT^DGAPI	Get Prof Serv Dates from PTF
$$DELPOV^DGAPI	Delete POVs from PTF
ICDINFO^DGAPI	Get ICD9s from PTF
$$SDAPI^SDAMA301	Get Appointments
GETAPPT^SDAMA201	Get Appointments for a Patient
NEXTAPPT^SDAMA201	Get Next Appointment (1 Appointment) for a Patient
GETPLIST^SDAMA202	Get Appointments for a Clinic
$$PATAPPT^SDAMA204	Does Patient Have Any Appointments?
$$SDIMO^SDAMA203	Scheduling API for IMO
SDOE	ACRP Interface Toolkit
SDQ	ACRP Interface Toolkit
SDUTL3	Utility to enter and view primary care fields
$$COMMANUM^VAFCADT2	Build a list of numbers separated by comma
VACPT	Display CPT Copyright Info
VADATE	Generic Date Routine
VADPT	Obtain Patient Information
VALM	List Manager
BLDPID^VAFCQRY	Builds the PID HL7 segment
$$EVN^VAFHLEVN	Builds the EVN HL7 segment
$$EN^VAFHLPD1	Builds the PD1 HL7 segment
$$SITE^VASITE	Returns the institution and station numbers

Callable Routines

VAFMON	Obtain Income or Dependent Information
VATRAN	Establish VADATS Transmission Variables
VATREDIT	Enter/Edit TRANSMISSION ROUTERS File
VAUQWK	Quick Lookup for Patient Data
VAUTOMA	Generic One, Many, All Routine

See the Package-Wide Variables section of this manual for entry points.

Compiled Template Routines

It is recommended you recompile the following templates at 4000 bytes.

Input Templates

FILE #	TEMPLATE NAME	ROUTINES
2	DG CONSISTENCY CHECKER	DGRPXC*
	DG LOAD EDIT SCREEN 7	DGRPXX7*
	DGRP COLLATERAL REGISTER	DGRPXCR*
	SDM1	SDM1T*
40.8	DGTS	DGXTS
44	SDB	SDBT*
45	DG PTF CREATE PTF ENTRY	DGPTXC*
	DG PTF POST CREATE	DGPTXCA*
	DG 101	DGPTX1*
	DG 401	DGPTX4*
	DG 501	DGPTX5*
	DG 501F	DGPTX5F*
	DG 701	DGPTX7*
45.5	DG PTF ADD MESSAGE	DGPTXMS*

Compiled Template Routines

Input Templates

FILE #	TEMPLATE NAME	ROUTINES
46.1	DG801	DGPTX8*
405	DGPM ADMIT	DGPMX1*
	DGPM TRANSFER	DGPMX2*
	DGPM DISCHARGE	DGPMX3*
	DGPM CHECK-IN LODGER	DGPMX4*
	DGPM LODGER CHECK-OUT	DGPMX5*
	DGPM SPECIALTY TRANSFER	DGPMX6*
	DGPM ASIH ADMIT	DGPMXA*
408.21	DGMT ENTER/EDIT ANNUAL INCOME	DGMTXI
	DGMT ENTER/EDIT EXPENSES	DGMTXE
	DGRP ENTER/EDIT ANNUAL INCOME	DGRPXIS
	DGRP ENTER/EDIT MON BENEFITS	DGRPXMB
408.22	DGMT ENTER/EDIT DEPENDENTS	DGMTXD
	DGMT ENTER/EDIT MARITAL STATUS	DGMTXM
408.31	DGMT ENTER/EDIT COMPLETION	DGMTXC
409.5	SDAMBT	SDXA*
	SDXACSE	SDXACSE*
409.68	SD ENCOUNTER ENTRY	SDAMXOE*
	SD ENCOUNTER LOG	SDAMXLG

Compiled Template Routines

Print Templates

FILE #	TEMPLATE NAME	ROUTINES
45	DG PTF PT BRIEF LIST	DGPTXB*
45.86	DGPT QUICK PROFILE	DGPTXCP*
409.65	SDAMVLD	SDAMXLD

Compiled Cross-Reference Routines

FILE #	FILE NAME	ROUTINES
45	PTF	DGPTXX*
405	PATIENT MOVEMENT	DGPMXX*
408.21	INDIVIDUAL ANNUAL INCOME	DGMTXX1*
408.22	INCOME RELATION	DGMTXX2*
408.31	ANNUAL MEANS TEST	DGMTXX3*

Routine List

The following are the steps you may take to obtain a listing of the routines contained in the PIMS package.

1. Programmer Options Menu
2. Routine Tools Menu
3. First Line Routine Print Option
4. Routine Selector: DG* (ADT)
   SD* SC* (Scheduling)

Files

Globals and Files

The main globals used in the PIMS package are ^DG, ^DPT, ^DGPM, ^SC, and ^SCE.
The main files are PATIENT, PATIENT MOVEMENT, MAS MOVEMENT TYPE, PTF, CENSUS, WARD LOCATION, and HOSPITAL LOCATION.
The PIMS Package also uses globals ^DGSL, ^DGIN, ^DGS, ^DGAM, ^DGCPT, ^DGICD9, ^DGWAIT, ^DGPR, ^DGMT, ^DGPT, ^DGM, ^DGNT, ^DGP, ^DGPF, ^DGQE, ^ICPT, ^VA, ^VAS, ^VAT, ^DIC, ^SCPT, ^SCTM, ^SDASF, ^SDASE, ^SDV, ^SD, ^SDD.

Journalling of the following globals is mandatory: ^DPT, ^DGEN, ^DGPT, ^DGPM, ^SDV, ^SC, ^SCE, ^SCTM, ^SDD.
Journalling of the following globals is optional: ^DGS, ^DG.
Journalling of the following global is recommended: ^DGPF.

File List

FILE NUMBER	FILE NAME	GLOBAL
2	PATIENT	^DPT(
5	STATE	^DIC(5,
8	ELIGIBILITY CODE	^DIC(8,
8.1**	MAS ELIGIBILITY CODE	^DIC(8.1,
8.2*	IDENTIFICATION FORMAT	^DIC(8.2,
10*	RACE	^DIC(10,
11**	MARITAL STATUS	^DIC(11,
13*	RELIGION	^DIC(13,
21**	PERIOD OF SERVICE	^DIC(21,
22**	POW PERIOD	^DIC(22,
23*	BRANCH OF SERVICE	^DIC(23,
25*	TYPE OF DISCHARGE	^DIC(25,
26.11	PRF LOCAL FLAG	^DGPF(26.11,
26.12	PRF LOCAL FLAG HISTORY	^DGPF(26.12,
26.13	PRF ASSIGNMENT	^DGPF(26.13,
26.14	PRF ASSIGNMENT HISTORY	^DGPF(26.14,
26.15	PRF NATIONAL FLAG	^DGPF(26.15,
26.16	PRF TYPE	^DGPF(26.16,
26.17	PRF HL7 TRANSMISSION LOG	^DGPF(26.17,
26.18	PRF PARAMETERS	^DGPF(26.18,
26.19	PRF HL7 QUERY LOG	^DGPF(26.19,
26.21	PRF HL7 EVENT	^DGPF(26.21,
27.11	PATIENT ENROLLMENT	^DGEN(27.11,

File List

FILE NUMBER	FILE NAME	GLOBAL
27.12	ENROLLMENT QUERY	^DGEN(27.12,
27.14	ENROLLMENT/ELIGIBILITY UPLOAD AUDIT	^DGENA(27.14,
27.15	ENROLLMENT STATUS	^DGEN(27.15,
27.16	ENROLLMENT GROUP THRESHOLD	^DGEN(27.16,
27.17*	CATASTROPHIC DISABILITY REASONS	^DGEN(27.17,
28.11	NOSE AND THROAT RADIUM HISTORY	^DGNT(28.11,
29.11	MST HISTORY	^DGMS(29.11,
30**	DISPOSITION LATE REASON	^DIC(30,
35*	OTHER FEDERAL AGENCY	^DIC(35,
35.1	SHARING AGREEMENT CATEGORY	^DG(35.1,
35.2	SHARING AGREEMENT SUB-CATEGORY	^DG(35.2)
37**	DISPOSITION	^DIC(37,
38.1	DG SECURITY LOG	^DGSL(38.1,
38.5	INCONSISTENT DATA	^DGIN(38.5,
38.6**	INCONSISTENT DATA ELEMENTS	^DGIN(38.6,
39.1*	EMBOSSED CARD TYPE	^DIC(39.1,
39.2*	EMBOSSING DATA	^DIC(39.2,
39.3	EMBOSSER EQUIPMENT FILE	^DIC(39.3,
39.4	ADT/HL7 TRANSMISSION	^DIC(39.4,
39.6	VIC REQUEST	^DGQE(39.6,
39.7	VIC HL7 TRANSMISSION LOG	^DGQE(39.7,
40.7*	CLINIC STOP	^DIC(40.7,
40.8	MEDICAL CENTER DIVISION	^DG(40.8,
40.9**	LOCATION TYPE	^DIC(40.9
41.1	SCHEDULED ADMISSION	^DGS(41.1,
41.41	PRE-REGISTRATION AUDIT	^DGS(41.41,
41.42	PRE-REGISTRATION CALL LIST	^DGS(41.42,
41.43	PRE-REGISTRATION CALL LOG	^DGS(41.43,
41.9	CENSUS	^DG(41.9,
42	WARD LOCATION	^DIC(42,
42.4*	SPECIALTY	^DIC(42.4,
42.5	WAIT LIST	^DGWAIT(
42.55**	PRIORITY GROUPING	^DIC(42.55,
42.6	AMIS 334-341	^DGAM(334,
42.7	AMIS 345&346	^DGAM(345,
43	MAS PARAMETERS	^DG(43,
43.1	MAS EVENT RATES	^DG(43.1,
43.11**	MAS AWARD	^DG(43.11,
43.4**	VA ADMITTING REGULATION	^DIC(43.4,
43.5	G&L CORRECTIONS	^DGS(43.5,
43.61	G&L TYPE OF CHANGE	^DG(43.61,
43.7**	ADT TEMPLATE	^DG(43.7,
44	HOSPITAL LOCATION	^SC(
45	PTF	^DGPT(
45.1**	SOURCE OF ADMISSION	^DIC(45.1,
45.2	PTF TRANSFERRING FACILITY	^DGTF(
45.3*	SURGICAL SPECIALTY	^DIC(45.3,

File List

FILE NUMBER	FILE NAME	GLOBAL
45.4*	PTF DIALYSIS TYPE	^DG(45.4,
45.5	PTF MESSAGE	^DGM(
45.6*	PLACE OF DISPOSITION	^DIC(45.6,
45.61*	PTF ABUSED SUBSTANCE	^DIC(45.61,
45.64*	PTF AUSTIN ERROR CODES	^DGP(45.64,
45.68	FACILITY SUFFIX	^DIC(45.68,
45.7	FACILITY TREATING SPECIALTY	^DIC(45.7,
45.81*	STATION TYPE	^DIC(45.81,
45.82*	CATEGORY OF BENEFICIARY	^DIC(45.82,
45.83	PTF RELEASE	^DGP(45.83,
45.84	PTF CLOSE OUT	^DGP(45.84,
45.85	CENSUS WORKFILE	^DG(45.85,
45.86*	PTF CENSUS DATE	^DG(45.86,
45.87	PTF TRANSACTION REQUEST LOG	^DGP(45.87,
45.88*	PTF EXPANDED CODE CATEGORY	^DIC(45.88,
45.89*	PTF EXPANDED CODE	^DIC(45.89,
45.9	PAF	^DG(45.9,
45.91	RUG-II	^DG(45.91,
46	INPATIENT CPT CODE	^DGCPT(46
46.1	INPATIENT POV	^DGICT9(46.1,
47**	MAS FORMS AND SCREENS	^DIC(47,
48**	MAS RELEASE NOTES	^DG(48,
48.5**	MAS MODULE	^DG(48.5,
389.9	STATION NUMBER (TIME SENSITIVE)	^VA(389.9,
390	ENROLLMENT RATED DISABILITY UPLOAD AUDIT	^DGRDUA(390,
391**	TYPE OF PATIENT	^DG(391,
391.1	AMIS SEGMENT	^DG(391.1,
391.31	HOME TELEHEALTH PATIENT	^DGHT(391.31,
403.35	SCHEDULING USER PREFERENCE	^SCRS(403.35,
403.43*	SCHEDULING EVENT	^SD(403.43,
403.44*	SCHEDULING REASON	^SD(403.44,
403.46*	STANDARD POSITION	^SD(403.46,
403.47*	TEAM PURPOSE	^SD(403.47,
404.41	OUTPATIENT PROFILE	^SCPT(404.41,
404.42	PATIENT TEAM ASSIGNMENT	^SCPT(404.42,
404.43	PATIENT TEAM POSITION ASSIGNMENT	^SCPT(404.43,
404.44	PCMM PARAMETER	^SCTM(404.44,
404.45	PCMM SERVER PATCH	^SCTM(404.45,
404.46	PCMM CLIENT PATCH	^SCTM(404.46,
404.471	PCMM HL7 TRANSMISSION LOG	^SCPT(404.471,
404.472	PCMM HL7 ERROR LOG	^SCPT(404.472,
404.48	PCMM HL7 EVENT	^SCPT(404.48,
404.49	PCMM HL7 ID	^SCPT(404.49,
404.51	TEAM	^SCTM(404.51,
404.52	POSITION ASSIGNMENT HISTORY	^SCTM(404.52,
404.53	PRECEPTOR ASSIGNMENT HISTORY	^SCTM(404.53,
404.56	TEAM AUTOLINK	^SCTM(404.56,
404.57	TEAM POSITION	^SCTM(404.57,

File List

FILE NUMBER	FILE NAME	GLOBAL
404.58	TEAM HISTORY	^SCTM(404.58,
404.59	TEAM POSITION HISTORY	^SCTM(404.59,
404.91	SCHEDULING PARAMETER	^SD(404.91,
404.92*	SCHEDULING REPORT DEFINTION	^SD(404.92,
404.93*	SCHEDULING REPORT FIELDS DEFINITION	^SD(404.93,
404.94*	SCHEDULING REPORT GROUP	^SD(404.94,
404.95*	SCHEDULING REPORT QUERY TEMPLATE	^SD(404.95,
404.98	SCHEDULING CONVERSION SPECIFICATION TEMPLATE	^SD(404.98,
405	PATIENT MOVEMENT	^DGPM(
405.1	FACILITY MOVEMENT TYPE	^DG(405.1,
405.2**	MAS MOVEMENT TYPE	^DG(405.2,
405.3**	MAS MOVEMENT TRANSACTION TYPE	^DG(405.3,
405.4	ROOM-BED	^DG(405.4,
405.5**	MAS OUT-OF-SERVICE	^DG(405.5,
405.6	ROOM-BED DESCRIPTION	^DG(405.6,
406.41**	LODGING REASON	^DG(406.41,
407.5	LETTER	^VA(407.5,
407.6**	LETTER TYPE	^VA(407.6,
407.7**	TRANSMISSION ROUTERS	^VAT(407.7,
408	DISCRETIONARY WORKLOAD	^VAT(408,
408.11*	RELATIONSHIP	^DG(408.11,
408.12	PATIENT RELATION	^DGPR(408.12,
408.13	INCOME PERSON	^DGPR(408.13,
408.21	INDIVIDUAL ANNUAL INCOME	^DGMT(408.21,
408.22	INCOME RELATION	^DGMT(408.22,
408.31	ANNUAL MEANS TEST	^DGMT(408.31,
408.32**	MEANS TEST STATUS	^DG(408.32,
408.33**	TYPE OF TEST	^DG(408.33,
408.34**	SOURCE OF INCOME TEST	^DG(408.34,
408.41	MEANS TEST CHANGES	^DG(408.41,
408.42**	MEANS TEST CHANGES TYPE	^DG(408.42,
409.1**	APPOINTMENT TYPE	^SD(409.1,
409.2**	CANCELLATION REASONS	^SD(409.2,
409.41**	OUTPATIENT CLASSIFICATION TYPE	^SD(409.41,
409.42	OUTPATIENT CLASSIFICATION	^SDD(409.42,
409.45**	OUTPATIENT CLASSIFICATION STOP CODE EXCEPTION	^SD(409.45,
409.62**	APPOINTMENT GROUP	^SD(409.62,
409.63**	APPOINTMENT STATUS	^SD(409.63,
409.64	QUERY OBJECT	^SD(409.64,
409.65	APPOINTMENT STATUS UPDATE LOG	^SDD(409.65,

File List

FILE NUMBER	FILE NAME	GLOBAL
409.66**	APPOINTMENT TRANSACTION TYPE	^SD(409.66
409.67	CLINIC GROUP	^SD(409.67,
409.68	OUTPATIENT ENCOUNTER	^SCE(
409.73	TRANSMITTED OUTPATIENT ENCOUNTER	^SD(409.73,
409.74	DELETED OUTPATIENT ENCOUNTER	^SD(409.74,
409.75	TRANSMITTED OUTPATIENT ENCOUNTER ERROR	^SD(409.75,
409.76**	TRANSMITTED OUTPATIENT ENCOUNTER ERROR CODE	^SD(409.76,
409.77	ACRP TRANSMISSION HISTORY	^SD(409.77,
409.91	ACRP REPORT TEMPLATE	^SDD(409.91,
409.92	ACRP REPORT TEMPLATE PARAMETER	^SD(409.92,

* File comes with data
** File comes with data which will overwrite existing data, if specified

The following are the steps you may take to obtain information concerning the files and templates contained in the PIMS package.

File Flow (Relationships between files)

1. VA FileMan Menu
2. Data Dictionary Utilities Menu
3. List File Attributes Option
4. Enter File # or range of File #s
5. Select Listing Format: Standard
6. You will see what files point to the selected file. To see what files the selected file points to, look for fields that say "POINTER TO".

Templates

1. VA FileMan Menu
2. Print File Entries Option
3. Output from what File: Print Template
   Sort Template
   Input Template
   List Template
4. Sort by: Name
5. Start with name: DG to DGZ, VA to VAZ, (ADT)
   SD to SDZ, SC to SCZ (scheduling)
6. Within name, sort by: <RET>
7. First print field: Name

VA FileMan Function

Included with the ACRP Reports Menu is the FileMan function, SCRPWDATA. This function can be used from within the OUTPATIENT ENCOUNTER file to provide any of the following data elements as data within FileMan output. It may be used to sort or print data.

This function has one argument which is the name (or acronym) of the data element you wish to return. For example, if you wish to sort or print a patient's current GAF score, the function could be used as follows.

```
THEN PRINT FIELD: SCRPWDATA("GAF SCORE (CURRENT)");"CURRENT GAF SCORE";L8
```

(OR)

```
THEN PRINT FIELD: SCRPWDATA("DXGC");"CURRENT GAF SCORE";L8
```

VA FileMan Function

Data elements that have multiple values (like procedure codes, diagnoses, etc.) are returned as a single semicolon delimited string which may be as long as 245 characters. Some data of these elements may be omitted due to truncation to stay within this limit.

The following is a list of data elements and associated acronyms that may be specified as arguments to the SCRPWDATA function.

Data Element	**Acronym**
CATEGORY: AMBULATORY PROCEDURE	
EVALUATION & MANAGEMENT CODES	APEM
AMBULATORY PROCEDURE (NO E&M CODES)	APAP
ALL AMBULATORY PROCEDURE CODES	APAC
CATEGORY: CLINIC	
CLINIC NAME	CLCN
CLINIC GROUP	CLCG
CLINIC SERVICE	CLCS
CATEGORY: DIAGNOSIS	
PRIMARY DIAGNOSIS	DXPD
SECONDARY DIAGNOSIS	DXSD
ALL DIAGNOSES	DXAD
GAF SCORE (HISTORICAL)	DXGH
GAF SCORE (CURRENT)	DXGC
CATEGORY: ENROLLMENT (CURRENT)	
ENROLLMENT DATE (CURRENT)	ECED
SOURCE OF ENROLLMENT (CURRENT)	ECSE
ENROLLMENT STATUS (CURRENT)	ECES
ENROLLMENT FACILITY RECEIVED (CURRENT)	ECFR
ENROLLMENT PRIORITY (CURRENT)	ECEP
ENROLLMENT EFFECTIVE DATE (CURRENT)	ECEF
CATEGORY: ENROLLMENT (HISTORICAL)	
ENROLLMENT DATE (HISTORICAL)	EHED
SOURCE OF ENROLLMENT (HISTORICAL)	EHSE
ENROLLMENT STATUS (HISTORICAL)	EHES
ENROLLMENT FACILITY RECEIVED (HISTORICAL)	EHFR
ENROLLMENT PRIORITY (HISTORICAL)	EHEP
ENROLLMENT EFFECTIVE DATE (HISTORICAL)	EHEF

VA FileMan Function

Data Element	Acronym
CATEGORY: OUTPATIENT ENCOUNTER	
PATIENT	OEPA
ORIGINATING PROCESS TYPE	OEOP
APPT. TYPE	OEAT
STATUS	OEST
ELIG. OF ENCOUNTER	PEPW
MEANS TEST (HISTORICAL)	PEMH
MEANS TEST (CURRENT)	PEMC
SC PERCENTAGE	PESP
AGENT ORANGE EXPOSURE	PEAO
IONIZING RADIATION EXPOSURE	PEIR
SW ASIA CONDITIONS EXPOSURE	PEEC
CATEGORY: PRIMARY CARE	
PC PROVIDER (HISTORICAL)	PCPH
PC TEAM (HISTORICAL)	PCTH
PC PROVIDER (CURRENT)	PCPC
PC TEAM (CURRENT)	PCTC
CATEGORY: PROVIDER	
PRIMARY PROVIDER	PRPP
SECONDARY PROVIDER	PRSP
ALL PROVIDERS	PRAP
PRIMARY PROVIDER PERSON CLASS	PRPC
SECONDARY PROVIDER PERSON CLASS	PRSC
ALL PROVIDERS PERSON CLASS	PRAC
CATEGORY: STOP CODE	
PRIMARY STOP CODE	SCPC
SECONDARY STOP CODE	SCSC
BOTH STOP CODES	SCBC
CREDIT PAIR	SCCP
CATEGORY: V FILE ELEMENT	
EXAMINATION	VFEX
HEALTH FACTOR	VFHF
IMMUNIZATION	VFIM
PATIENT EDUCATION	VFPE
TREATMENTS	VFTR
SKIN TEST	VFST

Exported Options

The following are the steps you may take to obtain information about menus, exported protocols, exported options, exported remote procedures, and exported HL7 applications concerning the PIMS package.

Menu Diagrams

1. Programmers Options
2. Menu Management Menu
3. Display Menus and Options Menu
4. Diagram Menus
5. Select User or Option Name: O.DG Manager Menu (ADT)
   O.SDMGR (Scheduling)

Exported Protocols

1. VA FileMan Menu
2. Print File Entries Option
3. Output from what File: PROTOCOL
4. Sort by: Name
5. Start with name: DG to DGZ, VA to VAZ (ADT)
   SD to SDZ, SC to SCZ (Scheduling)
6. Within name, sort by: <RET>
7. First print field: Name

Exported Options

1. VA FileMan Menu
2. Print File Entries Option
3. Output from what File: OPTION
4. Sort by: Name
5. Start with name: DG to DGZ, VA to VAZ (ADT)
   SD to SDZ, SC to SCZ (Scheduling)
6. Within name, sort by: <RET>
7. First print field: Name

Exported Remote Procedures

1. VA FileMan Menu
2. Print File Entries Option
3. Output from what File: REMOTE PROCEDURE
4. Sort by: Name
5. Start with name: DG to DGZ, VA to VAZ (ADT)
   SD to SDZ, SC to SCZ (Scheduling)
6. Within name, sort by: <RET>
7. First print field: Name

Exported HL7 Applications for Ambulatory Care Reporting

1. HL7 Main Menu
2. V1.6 Options Menu
3. Interface Workload Option
4. Look for AMBCARE-DHCP and NPCD-AAC*

Exported HL7 Applications for Inpatient Reporting to National Patient Care Database

1. HL7 Main Menu
2. V1.6 Options Menu
3. Interface Workload Option
4. Look for VAFC PIMS and NPTF

Exported HL7 Applications for Home Telehealth Care Database

DG HOME TELEHEALTH

*AAC stands for Austin Automation Center. The name of that facility has been changed to Austin Information Technology Center.

Archiving and Purging

Archiving

With the release of PIMS V. 5.3, a new archive/purge option has been created for PTF-related records. Please refer to the Release Notes for details.

Purging

The PIMS package allows for purging of data associated with log of user access to sensitive records, consistency checker, scheduled admissions, local breakeven data for DRGs, special transaction requests, and scheduling data. Following is a list of the purge options and where the documentation may be found in the user manual.

ADT Module

OPTION NAME	MENU NAME
Purge Breakeven Data for a Fiscal Year	PTF
Purge Special Transaction Request Log	PTF
Purge Non-Sensitive Patients from Security Log	Security Officer
Purge Record of User Access from Security Log	Security Officer
Purge Inconsistent Data Elements	Supervisor ADT
Purge Scheduled Admissions	Supervisor ADT

Scheduling Module

OPTION NAME	MENU NAME
Purge Ambulatory Care Reporting files	Ambulatory Care Reporting
Purge Appointment Status Update Log File	Supervisor
Purge rejections that are past database close-out	Ambulatory Care Reporting
Purge Scheduling Data	Supervisor

ACRP Database Conversion Option

The purpose of the database conversion is to convert old Scheduling encounter information into the Visit Tracking/Patient Care Encounter (PCE) database. Once you have converted all the data, you may wish to delete the old Scheduling files. A list of the files which may be deleted will be displayed when selecting the *Delete Old Files* action in this option. It is recommended you back up these files before deletion.

HL7 Purger

It is recommended that the option Purge Message Text File Entries [HL PURGE TRANSMISSIONS] be scheduled to run every day or every other day.

External/Internal Relations

External Relations

1. The following minimum package versions are required: VA FileMan V. 21.0, Kernel V. 8.0, Kernel Toolkit V. 7.3, VA MailMan V. 7.1, PCE V. 1.0, OE/RR V. 1.96, IB V. 2.0, IFCAP V. 3.0, DRG Grouper V. 13.0, HL7 V. 1.6, and Generic Code Sheet V. 1.5. Sites should verify that all patches to these packages have been installed.

2. If your site is running any of the following packages, you MUST be running the listed version or higher.

AMIE	None
Dental	V. 1.2
Dietetics	V. 4.33
Inpatient Meds	None
IVM	V. 2.0
Laboratory	V. 5.2
Mental Health	V. 4.18
Nursing	V. 2.2
Occurrence Screening	V. 2.0
Outpatient Pharmacy	V. 5.6
Patient Funds	V. 3.0
Radiology/Nuclear Medicine	V. 4.5
Record Tracking	V. 2.0
Social Work	V. 3.0
Utilization Review	V. 1.06

NOTE: If you are not running one of the above packages, you do NOT need to install it.

3. You must have all current Kernel V. 8.0, Kernel Toolkit V. 7.3, VA FileMan V. 21.0, RPC Broker V. 1.0, and PIMS V. 5.3 patches installed prior to the installation of PCMM (SD*5.3*41, DG*5.3*84). You must have KIDS patch 44 (XU*8*44) installed prior to loading the VIC software.

4. OE/RR will be using the PCMM files and GUI interface for inpatient teams.

External Relations

5. The following is a list of all elements that are checked for installation of Ambulatory Care Reporting Project.

Element Checked	Check Performed	Required for Install
PCE V. 1.0	Installed	Yes
HL7 V. 1.6	Installed	Yes
XU*8.0*27	Installed	Yes
HL*1.6*8	Installed	Yes
IB*2.0*60	Installed	Yes
Q-ACS.MED.VA.GOV in DOMAIN file (#4.2)	Entry exists	Yes[1]
SD*5.3*41	Installed	No
RA*4.5*4	Installed	No[2]
LR*5.2*127	Installed	No[3]
SOW*3*42	Installed	No
OPC GENERATION MAIL GROUP field (#216) of the MAS PARAMETER file (#43)	Contains valid Mail Group	No

DBIA AGREEMENTS

The following are the steps you may take to obtain the database integration agreements for the PIMS package.

DBIA AGREEMENTS - CUSTODIAL PACKAGE

1. FORUM
2. DBA Menu
3. Integration Agreements Menu
4. Custodial Package Menu
5. Active by Custodial Package Option
6. Select Package Name: Registration
   Scheduling

[1] This domain was distributed by patch XM*DBA*99.

[2] Not installing this patch will result in the loss of workload credit.

[3] Not installing this patch will result in the loss of workload credit.

DBIA AGREEMENTS - SUBSCRIBER PACKAGE

1. FORUM
2. DBA Menu
3. Integration Agreements Menu
4. Subscriber Package Menu
5. Print Active by Subscriber Package Option
6. Start with subscriber package: DG to DGZ, VA to VAZ (ADT)
   SD to SDZ, SC to SCZ (scheduling)

Internal Relations

Any PIMS option in File 19 which is a menu option should be able to run independently provided the user has the appropriate keys and FileMan access.

In order to use the PCMM client software, the user must be assigned the SC PCMM GUI WORKSTATION option as either a primary or secondary menu option - unless the user has been assigned the XUPROGMODE security key. This key, usually given to IRM staff, allows use of the client software without the SC PCMM GUI WORKSTATION option being assigned.

Package-Wide Variables

There are no package-wide variables associated with the PIMS package.

VADPT Variables

See the VADPT Variables section of this file.

Scheduling Variables

SDUTL3 contains utilities used to display and retrieve data from the CURRENT PC TEAM and CURRENT PC PRACTITIONER fields in the PATIENT file. Documentation can also be found in the routine.

$$OUTPTPR^SDUTL3(PARM 1) - displays data from CURRENT PC PRACTITIONER field.

Input	PARM 1	The internal entry of the PATIENT file.
Output		CURRENT PC PRACTIONER in Internal^External format. If look-up is unsuccessful, 0 will be returned.

$$OUTPTTM^SDUTL3(PARM 1) - displays data from CURRENT PC TEAM field.

Input	PARM 1	The internal entry of the PATIENT file.
Output		CURRENT PC TEAM in Internal^External format. If look-up is unsuccessful, 0 will be returned.

$$OUTPTAP^SDUTL3(PARM 1, PARM 2)

Input	PARM 1	The internal entry of the PATIENT file.
	PARM 2	The relevant data.
Output		Pointer to File 200^external value of the name.

$$GETALL^SCAPMCA(PARM 1, PARM 2, PARM 3)
This tag returns all information on a patient's assignment. Please review the documentation in the SCAPMCA routine.

Scheduling Variables

INPTPR^SDUTL3(PARM 1, PARM 2) - stores data in CURRENT PC PRACTITIONER field.

Input	PARM 1	The internal entry of the PATIENT file.
	PARM 2	Pointer to the NEW PERSON file indicating the practitioner associated with the patient's care.
Output	SDOKS	1 if data is stored successfully; 0 otherwise

INPTTM^SDUTL3(PARM 1, PARM 2) - stores data in CURRENT PC TEAM field.

Input	PARM 1	The internal entry of the PATIENT file.
	PARM 2	Pointer to the TEAM file indicating the team associated with the patient's care.
Output	SDOKS	1 if data is stored successfully; 0 otherwise

VAUTOMA

VAUTOMA is a routine which will do a one/many/all prompt - returning the chosen values in a subscripted variable specified by the calling programmer.

Input variables:

VAUTSTR	string which describes what is to be entered.
VAUTNI	defines if array is sorted alphabetically or numerically.
VAUTVB	name of the subscripted variable to be returned.
VAUTNALL	define this variable if you do not want the user to be given the ALL option.

Other variables as required by a call to ^DIC (see VA FileMan Programmers Manual).

Output variables:

As defined in VAUTVB

VAFMON

VAFMON is a routine which will return income or dependent information on a patient.

$$INCOME^VAFMON(PARM 1,PARM 2)
PARM 1 - The internal entry of the PATIENT file.
PARM 2 - The date the income is calculated for.

$$DEP^VAFMON(PARM 1,PARM 2)
PARM 1 - The internal entry of the PATIENT file.
PARM 2 - The date the income is calculated for.

AIT

See the Ambulatory Care Reporting Project Interface Toolkit. The AIT is a set of programmer tools that provide access to outpatient encounter data.

How To Generate On-Line Documentation

This section describes some of the various methods by which users may secure PIMS technical documentation. On-line technical documentation pertaining to the PIMS software, in addition to that which is located in the help prompts and on the help screens which are found throughout the PIMS package, may be generated through utilization of several KERNEL options. These include but are not limited to: XINDEX, Menu Management Inquire Option File, Print Option File, and FileMan List File Attributes.

Entering question marks at the "Select ... Option:" prompt may also provide users with valuable technical information. For example, a single question mark (?) lists all options which can be accessed from the current option. Entering two question marks (??) lists all options accessible from the current one, showing the formal name and lock for each. Three question marks (???) displays a brief description for each option in a menu while an option name preceded by a question mark (?OPTION) shows extended help, if available, for that option.

For a more exhaustive option listing and further information about other utilities which supply on-line technical information, please consult the **V*IST*A** Kernel Reference Manual.

XINDEX

This option analyzes the structure of a routine(s) to determine in part if the routine(s) adheres to **V*IST*A** Programming Standards. The XINDEX output may include the following components: compiled list of errors and warnings, routine listing, local variables, global variables, naked globals, label references, and external references. By running XINDEX for a specified set of routines, the user is afforded the opportunity to discover any deviations from **V*IST*A** Programming Standards which exist in the selected routine(s) and to see how routines interact with one another, that is, which routines call or are called by other routines.

To run XINDEX for the PIMS package, specify the following namespaces at the "routine(s) ?>" prompt: DG*, DPT*, SD*, VA*, SC*.

PIMS initialization routines which reside in the UCI in which XINDEX is being run, compiled template routines, and local routines found within the PIMS namespaces should be omitted at the "routine(s) ?>" prompt. To omit routines from selection, preface the namespace with a minus sign (-).

INQUIRE TO OPTION FILE

This Menu Manager option provides the following information about a specified option(s): option name, menu text, option description, type of option, and lock (if any). In addition, all items on the menu are listed for each menu option.

To secure information about PIMS options, the user must specify the name or namespace of the option(s) desired. Below is a list of namespaces associated with the PIMS package.

DG - Registration, ADT, Means Test, PTF/RUG

DPT - Patient File Look-up, Patient Sensitivity

SD and SC - Scheduling

VA - Generic utility processing

PRINT OPTIONS FILE

This utility generates a listing of options from the OPTION file. The user may choose to print all of the entries in this file or may elect to specify a single option or range of options. To obtain a list of PIMS options, the following option namespaces should be specified: DG to DGZ, SD to SDZ.

LIST FILE ATTRIBUTES

This FileMan option allows the user to generate documentation pertaining to files and file structure. Utilization of this option via the "Standard" format will yield the following data dictionary information for a specified file(s): file name and description, identifiers, cross-references, files pointed to by the file specified, files which point to the file specified, input templates, print templates, and sort templates. In addition, the following applicable data is supplied for each field in the file: field name, number, title, global location, description, help prompt, cross-reference(s), input transform, date last edited, and notes.

Using the "Global Map" format of this option generates an output which lists all cross-references for the file selected, global location of each field in the file, input templates, print templates, and sort templates.

Security

General Security

Routines that generate statistics for AMIS or NPCDB workload should NOT be locally modified.

Security Keys

The following are the steps you may take to obtain information about the security keys contained in the PIMS package.

1. VA FileMan Menu
2. Print File Entries Option
3. Output from what File: SECURITY KEY
4. Sort by: Name
5. Start with name: DG to DGZ, VA to VAZ (ADT)
   SD to SDZ, SC to SCZ (scheduling)
6. Within name, sort by: <RET>
7. First print field: Name
8. Then print field: Description

Legal Requirements

The PIMS software package makes use of Current Procedural Terminology (CPT) codes which is an American Medical Association (AMA) copyrighted product. Its use is governed by the terms of the agreement between the Department of Veterans Affairs and the AMA. The CPT copyright notice is displayed for various PIMS users and should not be turned off.

FileMan Access Codes

Below is a list of recommended FileMan Access Codes associated with each file contained in the PIMS package. This list may be used to assist in assigning users appropriate FileMan Access Codes.

FILE NUMBER	FILE NAME	DD ACCESS	RD ACCESS	WR ACCESS	DEL ACCESS	LAYGO ACCESS
2	PATIENT	@	d	D	@	D
5	STATE	@	d	@	@	@
8	ELIGIBILITY CODE	@	d	@	@	@
8.1	MAS ELIGIBILITY CODE	@	d	@	@	@
8.2	IDENTIFICATION FORMAT	@	d	@	@	@
10	RACE	@	d	@	@	@
11	MARITAL STATUS	@	d	@	@	@
13	RELIGION	@	d	@	@	@
21	PERIOD OF SERVICE	@	d	@	@	@
22	POW PERIOD	@	d	@	@	@
23	BRANCH OF SERVICE	@	d	@	@	@
25	TYPE OF DISCHARGE	@	d	@	@	@
26.11	PRF LOCAL FLAG	@	@	@	@	@
26.12	PRF LOCAL FLAG HISTORY	@	@	@	@	@
26.13	PRF ASSIGNMENT	@	d	@	@	@
26.14	PRF ASSIGNMENT HISTORY	@	@	@	@	@
26.15	PRF NATIONAL FLAG	@	@	@	@	@
26.16	PRF TYPE	@	@	@	@	@
26.17	PRF HL7 TRANSMISSION LOG	@	@	@	@	@
26.18	PRF PARAMETERS	@	@	@	@	@
26.19	PRF HL7 QUERY LOG	@	@	@	@	@
26.21	PRF HL7 EVENT	@	@	@	@	@
27.11	PATIENT ENROLLMENT	@	d	@	@	@
27.12	ENROLLMENT QUERY LOG	@		@	@	@
27.14	ENROLLMENT/ELIGIBILITY UPLOAD AUDIT					
27.15	ENROLLMENT STATUS	@	d	@	@	@
27.16	ENROLLMENT GROUP THRESHOLD	@	@	@	@	@
27.17	CATASTROPHIC DISABILITY REASONS	@	@	@	@	@
28.11	NOSE AND THROAT RADIUM HISTORY	@	d	@	@	@
29.11	MST HISTORY					
30	DISPOSITION LATE REASON	@	d	@	@	@
35	OTHER FEDERAL AGENCY	@	d	@	@	@
35.1	SHARING AGREEMENT CATEGORY	@	@	@	@	@
35.2	SHARING AGREEMENT SUB-CATEGORY	@	@	@	@	@
37	DISPOSITION	@	d	@	@	@
38.1	DG SECURITY LOG	@	d	D	@	D
38.5	INCONSISTENT DATA	@	d	@	@	@
38.6	INCONSISTENT DATA ELEMENTS	@	d	@	@	@
39.1	EMBOSSED CARD TYPE	@	d	@	@	@
39.2	EMBOSSING DATA	@	d	@	@	@
39.3	EMBOSSER EQUIPMENT FILE	@	d	@	@	@

FileMan Access Codes

FILE NUMBER	FILE NAME	DD ACCESS	RD ACCESS	WR ACCESS	DEL ACCESS	LAYGO ACCESS
39.4	ADT/HL7 TRANSMISSION	@	@	@	@	@
39.6	VIC REQUEST	@	@	@	@	@
39.7	VIC HL7 TRANSMISSION LOG	@	@	@	@	@
40.7	CLINIC STOP	@	d	@	@	@
40.8	MEDICAL CENTER DIVISION	@	d	@	@	@
40.9	LOCATION TYPE	@	d	@	@	@
41.1	SCHEDULED ADMISSION	@	d	D	D	D
41.41	PRE-REGISTRATION AUDIT	@	d	D	D	D
41.42	PRE-REGISTRATION CALL LIST	@	d	D	D	D
41.43	PRE-REGISTRATION CALL LOG	@	d	D	D	D
41.9	CENSUS	@	d	@	@	@
42	WARD LOCATION	@	d	D	@	D
42.4	SPECIALTY	@	d	@	@	@
42.5	WAIT LIST	@	d	D	D	D
42.55	PRIORITY GROUPING	@	d	@	@	@
42.6	AMIS 334-341	@	d	D	D	D
42.7	AMIS 345&346	@	d	D	D	D
43	MAS PARAMETERS	@	d	D	@	@
43.1	MAS EVENT RATES	@	d	D	D	D
43.11	MAS AWARD	@	d	D	D	D
43.4	VA ADMITTING REGULATION	@	d	@	@	@
43.5	G&L CORRECTIONS	@	d	D	D	D
43.61	G&L TYPE OF CHANGE	@	d	@	@	@
43.7	ADT TEMPLATE	@	d	@	@	@
44	HOSPITAL LOCATION	@	d	D	@	D
45	PTF	@	d	D	@	@
45.1	SOURCE OF ADMISSION	@	d	@	@	@
45.2	PTF TRANSFERRING FACILITY	@	d	D	@	D
45.3	SURGICAL SPECIALTY	@	d	@	@	@
45.4	PTF DIALYSIS TYPE	@	d	@	@	@
45.5	PTF MESSAGE	@	d	@	@	@
45.6	PLACE OF DISPOSITION	@	d	@	@	@
45.61	PTF ABUSED SUBSTANCE	@	d	@	@	@
45.64	PTF AUSTIN ERROR CODES	@	d	@	@	@
45.68	FACILITY SUFFIX	@	d	@	@	@
45.7	FACILITY TREATING SPECIALTY	@	d	D	@	D
45.81	STATION TYPE	@	d	@	@	@
45.82	CATEGORY OF BENEFICIARY	@	d	@	@	@
45.83	PTF RELEASE	@	d	@	@	@
45.84	PTF CLOSE OUT	@	d	@	@	@
45.85	CENSUS WORKFILE	@	d	D	@	@
45.86	PTF CENSUS DATE	@	d	@	@	@
45.87	PTF TRANSACTION REQUEST LOG	@	d	@	@	@
45.88	PTF EXPANDED CODE CATEGORY	@	d	@	@	@
45.89	PTF EXPANDED CODE	@	d	@	@	@
45.9	PAF	@	d	D	D	D
45.91	RUG-II	@	d	@	@	@
46	INPATIENT CPT	@	d	D	#	@
46.1	INPATIENT POV	@	d	D	#	@
47	MAS FORMS AND SCREENS	@	d	D	#	@
48	MAS RELEASE NOTES	@	d	D	@	@
48.5	MAS MODULE	@	d	@	@	@
389.9	STATION NUMBER (TIME SENSITIVE)	@	d	@	@	@

FileMan Access Codes

FILE NUMBER	FILE NAME	DD ACCESS	RD ACCESS	WR ACCESS	DEL ACCESS	LAYGO ACCESS
390	ENROLLMENT RATED DISABILITY UPLOAD AUDIT	@	@	@	@	@
391	TYPE OF PATIENT	@	d	@	@	@
391.1	AMIS SEGMENT	@	d	@	@	@
391.31	HOME TELEHEALTH PATIENT	@	@	@	@	@
403.35	SCHEDULING USER PREFERENCE	@	d	@	@	@
403.43	SCHEDULING EVENT	@	d	@	@	@
403.44	SCHEDULING REASON	@	d	@	@	@
403.46	STANDARD POSITION	@	d	@	@	@
403.47	TEAM PURPOSE	@	d	@	@	@
404.41	OUTPATIENT PROFILE	@	d	@	@	@
404.42	PATIENT TEAM ASSIGNMENT	@	d	@	@	@
404.43	PATIENT TEAM POSITION ASSIGNMENT	@	d	@	@	@
404.44	PCMM PARAMETER	@	@	@	@	@
404.45	PCMM SERVER PATCH	@	@	@	@	@
404.46	PCMM CLIENT PATCH	@	@	@	@	@
404.471	PCMM HL7 TRANSMISSION LOG	@	@	@	@	@
404.472	PCMM HL7 ERROR LOG	@	@	@	@	@
404.48	PCMM HL7 EVENT	@	@	@	@	@
404.49	PCMM HL7 ID	@	@	@	@	@
404.51	TEAM	@	d	@	@	@
404.52	POSITION ASSIGNMENT HISTORY	@	d	@	@	@
404.53	PRECEPTOR ASSIGNMENT HISTORY	@	d	@	@	@
404.56	TEAM AUTOLINK	@	d	@	@	@
404.57	TEAM POSITION	@	d	@	@	@
404.58	TEAM HISTORY	@	d	@	@	@
404.59	TEAM POSITION HISTORY	@	d	@	@	@
404.91	SCHEDULING PARAMETER	@	d	@	@	@
404.92	SCHEDULING REPORT DEFINITION	@	d	@	@	@
404.93	SCHEDULING REPORT FIELDS DEFINITION	@	d	@	@	@
404.94	SCHEDULING REPORT GROUP	@	d	@	@	@
404.95	SCHEDULING REPORT QUERY TEMPLATE	@	d	@	@	@
404.98	SCHEDULING CONVERSATION SPECIFICATON TEMPLATE	@	d	@	@	@
405	PATIENT MOVEMENT	@	d	@	@	@
405.1	FACILITY MOVEMENT TYPE	@	d	D	@	D

FileMan Access Codes

FILE NUMBER	FILE NAME	DD ACCESS	RD ACCESS	WR ACCESS	DEL ACCESS	LAYGO ACCESS
405.2	MAS MOVEMENT TYPE	@	d	@	@	@
405.3	MAS MOVEMENT TRANSACTION TYPE	@	d	@	@	@
405.4	ROOM-BED	@	d	D	@	D
405.5	MAS OUT-OF-SERVICE	@	d	@	@	@
405.6	ROOM-BED DESCRIPTION	@	d	D	@	D
406.41	LODGING REASON	@	d	D	@	D
407.5	LETTER	@	d	D	D	D
407.6	LETTER TYPE	@	d	@	@	@
407.7	TRANSMISSION ROUTERS	@	d	@	@	@
408	DISCRETIONARY WORKLOAD	@	d	@	@	@
408.11	RELATIONSHIP	@	d	@	@	@
408.12	PATIENT RELATION	@	d	@	@	@
408.13	INCOME PERSON	@	d	@	@	@
408.21	INDIVIDUAL ANNUAL INCOME	@	d	@	@	@
408.22	INCOME RELATION	@	d	@	@	@
408.31	ANNUAL MEANS TEST	@	d	@	@	@
408.32	MEANS TEST STATUS	@	d	@	@	@
408.33	TYPE OF TEST	@	d	@	@	@
408.34	SOURCE OF INCOME TEST	@	d	@	@	@
408.41	MEANS TEST CHANGES	@	d	@	@	@
408.42	MEANS TEST CHANGES TYPE	@	d	@	@	@
409.1	APPOINTMENT TYPE	@	d	@	@	@
409.2	CANCELLATION REASONS	@	d	@	@	@
409.41	OUTPATIENT CLASSIFICATION TYPE	@	d	@	@	@
409.42	OUTPATIENT CLASSIFICATION	@	d	D	D	D
409.45	OUTPATIENT CLASSIFICATION STOP CODE EXCEPTION	@	d	@	@	@
409.62	APPOINTMENT GROUP	@	d	@	@	@
409.63	APPOINTMENT STATUS	@	d	@	@	@
409.64	QUERY OBJECT	@	d	@	@	@
409.65	APPOINTMENT STATUS UPDATE LOG	@	d	@	@	@
409.66	APPOINTMENT TRANSACTION TYPE	@	d	@	@	@
409.67	CLINIC GROUP	@		D	@	D
409.68	OUTPATIENT ENCOUNTER	@	d	@	@	@
409.73	TRANSMITTED OUTPATIENT ENCOUNTER	@	d	@	@	@
409.74	DELETED OUTPATIENT ENCOUNTER	@	d	@	@	@
409.75	TRANSMITTED OUTPATIENT ENCOUNTER ERROR	@	d	@	@	@

FileMan Access Codes

FILE NUMBER	FILE NAME	DD ACCESS	RD ACCESS	WR ACCESS	DEL ACCESS	LAYGO ACCESS
409.76	TRANSMITTED OUTPATIENT ENCOUNTER ERROR CODE	@	d	@	@	@
409.77	ACRP TRANSMISSION HISTORY	@	d	@	@	@
409.91	ACRP REPORT TEMPLATE	@		@	@	@
409.92	ACRP REPORT TEMPLATE PARAMETER	@		@	@	@

VADPT Variables

I. OVERVIEW

VADPT is a utility routine designed to provide a central point where a programmer can obtain information concerning a patient's record. Supported entry points are provided which will return demographics, inpatient status, eligibility information, etc.

Access to patient information is not limited to using the supported entry points in VADPT. Integration agreements can be established through the DBA between PIMS and other packages to reference information. Additionally, several data elements are supported without an integration agreement.

II. SUPPORTED REFERENCES

The following references to patient information (PATIENT file #2) are supported **without** an integration agreement. All nationally distributed cross-references on these fields are also supported.

Field Name	Field #	Global Location	Type of Access
NAME	(#.01)	0;1	Read
SEX	(#.02)	0;2	Read
DATE OF BIRTH	(#.03)	0;3	Read
AGE	(#.033)	N/A	Read
MARITAL STATUS	(#.05)	0;5	Read
RACE	(#.06)	0;6	Read
OCCUPATION	(#.07)	0;7	Read
RELIGIOUS PREFERENCE	(#.08)	0;8	Read
DUPLICATE STATUS	(#.081)	0;18	
PATIENT MERGED TO	(#.082)	0;19	
CHECK FOR DUPLICATE	(#.083)	0;20	
SOCIAL SECURITY NUMBER	(#.09)	0;9	Read
REMARKS	(#.091)	0;10	Read
PLACE OF BIRTH [CITY]	(#.092)	0;11	Read
PLACE OF BIRTH [STATE]	(#.093)	0;12	Read
WHO ENTERED PATIENT	(#.096)	0;15	Read
DATE ENTERED INTO FILE	(#.097)	0;16	Read
WARD LOCATION	(#.1)	.1;1	Read
ROOM-BED	(#.101)	.101;1	Read
CURRENT MOVEMENT	(#.102)	.102;1	Read
TREATING SPECIALTY	(#.103)	.103;1	Read
PROVIDER	(#.104)	.104;1	Read
ATTENDING PHYSICIAN	(#.1041)	.1041;1	Read
CURRENT ADMISSION	(#.105)	.105;1	Read
LAST DMMS EPISODE NUMBER	(#.106)	.106;1	Read
LODGER WARD LOCATION	(#.107)	.107;1	Read
CURRENT ROOM	(#.108)	.108;1	Read
CURRENT MEANS TEST STATUS	(#.14)	0;14	Read
DATE OF DEATH	(#.351)	.35;1	Read
DEATH ENTERED BY	(#.352)	.35;2	Read
PRIMARY LONG ID	(#.363)	.36;3	
PRIMARY SHORT ID	(#.364)	.36;4	
CURRENT PC PRACTITIONER	(#404.01)	PC;1	Read
CURRENT PC TEAM	(#404.02)	PC;2	Read
LAST MEANS TEST	(#999.2)	N/A	Read

III. CALLABLE ENTRY POINTS IN VADPT

1. **DEM^VADPT**

This entry point returns demographic information for a patient.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAPTYP	This optional variable can be set to the internal number of a patient eligibility. The variable can be used to indicate the patient's type such as VA, DOD, or IHS through the eligibility. If this variable is not defined or the eligibility does not exist, the VA patient IDs will be returned.
	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VADM(1) would be VADM("NM")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VADM",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VADM",$J,"NM"))
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGDEM")

Output:	VADM(1)	The NAME of the patient. (e.g., ADTPATIENT,ONE)
	VADM(2)	The SOCIAL SECURITY NUMBER of the patient in internal^external format. (e.g., 000456789^000-45-6789)
	VADM(3)	The DATE OF BIRTH of the patient in internal^external format. (e.g., 2551025^OCT 25,1955)
	VADM(4)	The AGE of the patient as of today, unless a date of death exists, in which case the age returned will be as of that date. (e.g., 36)
	VADM(5)	The SEX of the patient in internal ^external format. (e.g., M^MALE)
	VADM(6)	The DATE OF DEATH of the patient, should one exist, in internal^external format. (e.g., 2881101.08^NOV 1,1988@08:00)
	VADM(7)	Any REMARKS concerning this patient which may be on file. (e.g., Need to obtain dependent info.)
	VADM(8)	The RACE of the patient in internal ^external format. (e.g., 1^WHITE,NON-HISPANIC) **NOTE:** This has been left for historical purposes only as the RACE field has been replaced by the RACE INFORMATION multiple.
	VADM(9)	The RELIGION of the patient in internal^external format. (e.g., 99^CATHOLIC)
	VADM(10)	The MARITAL STATUS of the patient in internal^external format. (e.g., 1^MARRIED)

VADM(11) Number of entries found in the ETHNICITY INFORMATION multiple. (e.g., 1)

VADM(11,1..n) Nth repetition of ETHNICITY INFORMATION for the patient in internal^external format. (e.g., 1^HISPANIC OR LATINO)

VADM(11,1..n,1) METHOD OF COLLECTION for the Nth repetition of ETHNICITY INFORMATION for the patient in internal^external format. (e.g., 2^PROXY))

VADM(12) Number of entries found in the RACE INFORMATION multiple. (e.g., 1)

VADM(12,1..n) Nth repetition of RACE INFORMATION for the patient in internal^external format. (e.g., 11^WHITE)

VADM(12,1..n,1) METHOD OF COLLECTION for the Nth repetition of RACE INFORMATION for the patient in internal^external format. (e.g., 2^PROXY))

	VA("PID")	The PRIMARY LONG ID for a patient. The format of this variable will depend on the type of patient if VAPTYP is set. (e.g., 000-45-6789)
	VA("BID")	The PRIMARY SHORT ID for a patient. The format of this variable will depend on the type of patient if VAPTYP is set. (e.g., 6789)
	VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

2. **ELIG^VADPT**

This entry point returns eligibility information for a patient.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAEL(1) would be VAEL("EL")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAEL",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAEL",$J,"EL"))

	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGELG")
Output:	VAEL(1)	The PRIMARY ELIGIBILITY CODE of the patient in internal^external format. (e.g., 1^SERVICE CONNECTED 50-100%)
	VAEL(1,#)	An array of other PATIENT ELIGIBILITIES to which the patient is entitled to care, in internal^external format. The # sign represents the internal entry number of the eligibility in the ELIGIBILITY CODE file. (e.g., 13^PRISONER OF WAR)
	VAEL(2)	The PERIOD OF SERVICE of the patient in internal^external format. (e.g., 19^WORLD WAR I)
	VAEL(3)	If the SERVICE CONNECTED? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If service connected, the SERVICE CONNECTED PERCENTAGE field will be returned in the second piece. (e.g., 1^70)
	VAEL(4)	If the VETERAN (Y/N)? field is YES, a "1" will be returned; otherwise, a "0" will be returned. (e.g., 1)
	VAEL(5)	If an INELIGIBLE DATE exists, a "0" will be returned indicating the patient is ineligible; otherwise, a "1" will be returned. (e.g., 0)
	VAEL(5,1)	If ineligible, the INELIGIBLE DATE of the patient in internal^external format. (e.g., 2880101^JAN 1,1988)

VAEL(5,2) If ineligible, the INELIGIBLE TWX SOURCE in internal^external format. (e.g., 2^REGIONAL OFFICE)

VAEL(5,3) If ineligible, the INELIGIBLE TWX CITY. (e.g., ALBANY)

VAEL(5,4) If ineligible, the INELIGIBLE TWX STATE from which the ineligible notification was received in internal^external format. (e.g., 36^NEW YORK)

VAEL(5,5) If ineligible, the INELIGIBLE VARO DECISION. (e.g., UNABLE TO VERIFY)

VAEL(5,6) If ineligible, the INELIGIBLE REASON. (e.g., NO DD214)

VAEL(6) The TYPE of patient in internal ^external format. (e.g., 1^SC VETERAN)

VAEL(7) The CLAIM NUMBER of the patient. (e.g., 123456789)

VAEL(8) The current ELIGIBILITY STATUS of the patient in internal^external format. (e.g., V^VERIFIED)

VAEL(9) The CURRENT MEANS TEST STATUS of the patient CODE^ NAME. (e.g., A^MEANS TEST EXEMPT)

VAERR The error flag will have one of the following values.
0 -- no errors encountered
1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

3. **MB^VADPT**

This entry point returns monetary benefit information for a patient.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAMB(1) would be VAMB("AA")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAMB",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAMB",$J,"AA"))
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGMB")
Output:	VAMB(1)	If the RECEIVING A&A BENEFITS? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving A&A benefits, the TOTAL ANNUAL VA CHECK AMOUNT will be returned in the second piece. (e.g., 1^1000)

VAMB(2) If the RECEIVING HOUSEBOUND BENEFITS? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving housebound benefits, the TOTAL ANNUAL VA CHECK AMOUNT will be returned in the second piece. (e.g., 1^0)

VAMB(3) If the RECEIVING SOCIAL SECURITY field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving social security, the AMOUNT OF SOCIAL SECURITY will be returned in the second piece. (e.g., 0)

VAMB(4) If the RECEIVING A VA PENSION? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving a VA pension, the TOTAL ANNUAL VA CHECK AMOUNT will be returned in the second piece. (e.g., 1^563.23)

VAMB(5) If the RECEIVING MILITARY RETIREMENT? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving military retirement, the AMOUNT OF MILITARY RETIREMENT will be returned in the second piece. (e.g., 0)

VAMB(6) The RECEIVING SUP. SECURITY (SSI) field is being eliminated. Since v5.2, a "0" is returned for this variable.

	VAMB(7)	If the RECEIVING VA DISABILITY? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving VA disability, the TOTAL ANNUAL VA CHECK AMOUNT will be returned in the second piece. (e.g., 0)
	VAMB(8)	If the TYPE OF OTHER RETIREMENT field is filled in, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving other retirement, the AMOUNT OF OTHER RETIREMENT will be returned in the second piece. (e.g., 1^2500.12)
	VAMB(9)	If the GI INSURANCE POLICY? field is YES, a "1" will be returned in the first piece; otherwise, a "0" will be returned. If receiving GI insurance, the AMOUNT OF GI INSURANCE will be returned in the second piece. (e.g., 1^100000)
	VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

4. **SVC^VADPT**

This entry point returns service information for a patient.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.

	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VASV(1) would be VASV("VN")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VASV",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VASV",$J,"VN"))
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGSVC")
Output:	VASV(1)	If the VIETNAM SERVICE INDICATED field is YES, a "1" will be returned; otherwise a "0" will be returned. (e.g., 0)
	VASV(1,1)	If Vietnam Service, the VIETNAM FROM DATE in internal^external format. (e.g., 2680110^JAN 10,1968)
	VASV(1,2)	If Vietnam Service, the VIETNAM TO DATE in internal^external format. (e.g., 2690315^MAR 15,1969)
	VASV(2)	If the AGENT ORANGE EXPOS. INDICATED field is YES, a "1" will be returned; otherwise a "0" will be returned. (e.g., 0)

VASV(2,1)	If Agent Orange exposure, the AGENT ORANGE REGISTRATION DATE in internal^external format. (e.g., 2870513^MAY 13,1987)
VASV(2,2)	If Agent Orange exposure, the AGENT ORANGE EXAMINATION DATE in internal^external format. (e.g., 2871101^NOV 1,1987)
VASV(2,3)	If Agent Orange exposure, AGENT ORANGE REPORTED TO C.O. date in internal^external format. (e.g., 2871225^DEC 25,1987)
VASV(2,4)	If Agent Orange exposure, AGENT ORANGE REGISTRATION #. (e.g., 123456)
VASV(2,5)	If Agent Orange exposure, the AGENT ORANGE EXPOSURE LOCATION in internal^external format (e.g., V^VIETNAM)
VASV(3)	If the RADIATION EXPOSURE INDICATED field is YES, a "1" will be returned; otherwise a "0" will be returned (e.g., 0)
VASV(3,1)	If Radiation Exposure, RADIATION REGISTRATION DATE in internal^external format. (e.g., 2800202^FEB 02,1980)
VASV(3,2)	If Radiation Exposure, RADIATION EXPOSURE METHOD in internal^external format. (e.g., T^NUCLEAR TESTING)
VASV(4)	If the POW STATUS INDICATED field is YES, a "1" will be returned; otherwise a "0" will be returned. (e.g., 0)

VASV(4,1) If POW status, POW FROM DATE in internal^external format.
(e.g., 2450319^MAR 19,1945)

VASV(4,2) If POW status, POW TO DATE in internal^external format.
(e.g., 2470101^JAN 1,1947)

VASV(4,3) If POW status, POW CONFINEMENT LOCATION in internal^external format.
(e.g., 2^WORLD WAR II - EUROPE)

VASV(5) If the COMBAT SERVICE INDICATED field is YES, a "1" will be returned; otherwise a "0" will be returned. (e.g., 0)

VASV(5,1) If combat service, COMBAT FROM DATE in internal^external format.
(e.g., 2430101^JAN 1,1943)

VASV(5,2) If combat service, COMBAT TO DATE in internal^external format.
(e.g., 2470101^JAN 1,1947)

VASV(5,3) If combat service, COMBAT SERVICE LOCATION in internal^external format.
(e.g., 2^WORLD WAR II - EUROPE)

VASV(6) If a SERVICE BRANCH [LAST] field is indicated, a "1" will be returned in the first piece; otherwise a "0" will be returned. (e.g., 0)

VASV(6,1) If service branch, BRANCH OF SERVICE field in internal^external format. (e.g., 3^AIR FORCE)

VASV(6,2) If service branch, SERVICE NUMBER field in internal^external format. (e.g., 123456789)

VASV(6,3) If service branch, SERVICE DISCHARGE TYPE in internal^external format. (e.g., 1^HONORABLE)

VASV(6,4) If service branch, SERVICE ENTRY DATE in internal^external format. (e.g., 2440609^JUN 9,1944)

VASV(6,5) If service branch, SERVICE SEPARATION DATE in internal^external format. (e.g., 2480101^JAN 1,1948)

VASV(6,6) If service branch, SERVICE COMPONENT in internal code^external format. (e.g., R^REGULAR)

VASV(7) If a SERVICE SECOND EPISODE field is indicated, a "1" will be returned; otherwise a "0" will be returned. (e.g., 0)

VASV(7,1) If second episode, BRANCH OF SERVICE field in internal^external format. (e.g., 3^AIR FORCE)

VASV(7,2) If second episode, SERVICE NUMBER field in internal^external format. (e.g., 123456789)

VASV(7,3) If second episode, SERVICE DISCHARGE TYPE in internal^external format. (e.g., 1^HONORABLE)

VASV(7,4) If second episode, SERVICE ENTRY DATE in internal^external format. (e.g., 2440609^JUN 9,1944)

VASV(7,5)	If second episode, SERVICE SEPARATION DATE in internal^external format. (e.g., 2480101^JAN 1,1948)
VASV(7,6)	If second episode, SERVICE COMPONENT in internal^external format. (e.g., R^REGULAR)
VASV(8)	If a SERVICE THIRD EPISODE field is indicated, a "1" will be returned; otherwise a "0" will be returned. (e.g., 0)
VASV(8,1)	If third episode, BRANCH OF SERVICE field in internal^external format. (e.g., 3^AIR FORCE)
VASV(8,2)	If third episode, SERVICE NUMBER field in internal^external format. (e.g., 123456789)
VASV(8,3)	If third episode, SERVICE DIS-CHARGE TYPE in internal^external format. (e.g., 1^HONORABLE)
VASV(8,4)	If third episode, SERVICE ENTRY DATE in internal^external format. (e.g., 2440609^JUN 9,1944)
VASV(8,5)	If third episode, SERVICE SEPARATION DATE in internal^external format. (e.g., 2480101^JAN 1,1948)
VASV(8,6)	If third episode, SERVICE COMPONENT in internal code^external format. (e.g., R^REGULAR)
VASV(9)	If the CURRENT PH INDICATOR field is YES, a “1” will be returned; otherwise a “0” will be returned (e.g., 0)

VASV(9,1) If the CURRENT PH INDICATOR field is YES, CURRENT PURPLE HEART STATUS in internal^external format.(e.g., 2^IN PROCESS)

VASV(9,2) If the CURRENT PH INDICATOR field is NO, CURRENT PURPLE HEART REMARKS in internal^ external format. (e.g., 5^VAMC)

VASV(10) Is either 1 or 0, 1 if there is a value for Combat Vet End Date, 0 if not

VASV(10,1) Internal Combat Vet End Date ^external Combat Vet End Date (e.g., 3060101^JAN 1, 2006)

VASV(11) the # of OIF conflict entries found for the veteran in the SERVICE [OEF OR OIF] #2.3215 SUB-FILE. [n = 1-> total number of OIF conflict entries]

VASV(11,n,1) SERVICE LOCATION (#2.3215; .01) internal code=1^external (e.g., 1^OIF) 'n'--> This number will be used to provide a unique number for each OIF conflict being returned.

VASV(11,n,2) OEF/OIF FROM DATE (#2.3215; .02) internal format ^external format (e.g., 3060101^JAN 1, 2006) 'n'--> This number will be used to provide a unique number for each OIF conflict being returned.

VASV(11,n,3) OEF/OIF TO DATE (#2.3215; .03) internal format ^external format (e.g., 3060101^MAR 1, 2006) 'n'--> This number will be used to provide a unique number for each OIF conflict being returned.

VASV(12) the # of OEF conflict entries found for the veteran in the SERVICE [OEF OR OIF] #2.3215 SUB-FILE. [n = 1->VASV(12)]

VASV(12,n,1) SERVICE LOCATION (#2.3215; .01) internal code = 2 ^external (e.g., 2^OEF) 'n'--> This number will be used to provide a unique number for each OEF conflict being returned.

VASV(12,n,2) OEF/OIF FROM DATE (#2.3215; .02) internal format ^external format (e.g., 3060101^JAN 1, 2006) 'n'--> This number will be used to provide a unique number for each OEF conflict being returned.

VASV(12,n,3) OEF/OIF TO DATE (#2.3215; .03) internal format ^external format (e.g., 3060101^MAR 1, 2006) 'n'--> This number will be used to provide a unique number for each OEF conflict being returned.

VASV(13) the # of UNKNOWN OEF/OIF conflict entries found for the veteran in the SEVICE [OEF OR OIF] #2.3215 SUB-FILE. [n = 1->VASV(13)]

VASV(13,n,1) SERVICE LOCATION (#2.3215; .01) internal CODE = 3^external format (e.g., 3^UNKNOWN OEF/OIF) 'n'--> This number will be used to provide a unique number for each UNKNOWN OEF/OIF conflict being returned.

VASV(13,n,2) OEF/OIF FROM DATE (#2.3215; .02) internal format ^external format (e.g., 3060101^JAN 1, 2006) 'n'--> This number will be used to provide a unique number for each UNKNOWN OEF/OIF conflict being returned.

VASV(13,n,3) OEF/OIF TO DATE (#2.3215; .03) internal format ^external format (e.g., 3060101^MAR 1, 2006) 'n'--> This number will be used to provide a unique number for each UNKNOWN OEF/OIF conflict being returned.

VASV(14) If the PROJ 112/ SHAD field is populated, a "1" will be returned; otherwise, a "0" will be returned (e.g., 0)

VASV(14,1) If the PROJ 112/SHAD field is populated, PROJ 112/SHAD in internal^external format.(e.g., 1^YES)

VAERR The error flag will have one of the following values.
0 -- no errors encountered
1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

5. **ADD^VADPT**

This entry point returns address data for a patient. If a temporary address is in effect, the data returned will be that pertaining to that temporary address; otherwise, the permanent patient address information will be returned.

Input: DFN This required variable is the internal entry number in the PATIENT file.

VAHOW This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts.
1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAPA(1) would be VAPA("L1"))
2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAPA", $J,1))

	12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAPA",$J,"L1"))
VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGADD")
VAPA("P")	This optional variable can be set to force the return of the patient's permanent address. The permanent address array will be returned regardless of whether or not a temporary address is in effect. (e.g., VAPA("P")="")
VAPA("CD")	This is an optional input parameter set to an effective date in VA File Manager format to manipulate the active/inactive status returned in the VAPA(12) node. The indicator reflects the active status as of the date specified or the current date if VAPA("CD") is undefined.
VATEST("ADD",9)	This optional variable can be defined to a beginning date in VA File-Manager format. If the entire range specified is not within the effective time window of the temporary address start and stop dates, the patient's regular address is returned. (e.g., VATEST("ADD",9)=2920101)
VATEST("ADD",10)	This optional variable can be defined to a ending date in VA FileManager format. If the entire range specified is not within the effective time window of the temporary address start and stop dates, the patient's regular address is returned. (e.g., VATEST("ADD",10)=2920301)

Output:	VAPA(1)	The first line of the STREET ADDRESS. (e.g., 123 South Main Street)
	VAPA(2)	The second line of the STREET ADDRESS. (e.g., Apartment #1245.)
	VAPA(3)	The third line of the STREET ADDRESS. (e.g., P.O. Box 1234)
	VAPA(4)	The CITY corresponding to the street address previously indicated. (e.g., ALBANY)
	VAPA(5)	The STATE corresponding to the city previously indicated in internal^ external format. (e.g., 6^CALIFORNIA)
	VAPA(6)	The ZIP CODE of the city previously indicated. (e.g., 12345)
	VAPA(7)	The COUNTY in which the patient is residing in internal^external format. (e.g., 1^ALAMEDA)
	VAPA(8)	The PHONE NUMBER of the location in which the patient is currently residing. (e.g., (123) 456-7890)
	VAPA(9)	If the address information provided pertains to a temporary address, the TEMPORARY ADDRESS START DATE in internal^external format. (e.g., 2880515^MAY 15,1988)
	VAPA(10)	If the address information provided pertains to a temporary address, the TEMPORARY ADDRESS END DATE in internal^external format. (e.g., 2880515^MAY 15,1988)
	VAPA(11)	The ZIP+4 (5 or 9 digit zip code) of the city previously indicated in internal^external format. (e.g., 123454444^12345-4444)

VAPA(12)	Confidential Address Active indicator. (O=Inactive 1=Active)
VAPA(13)	The first line of the Confidential Street Address.
VAPA(14)	The second line of the Confidential Street Address.
VAPA(15)	The third line of the Confidential Street Address.
VAPA(16)	The city for the Confidential Address.
VAPA(17)	The state for the Confidential Address in internal^external format. (e.g., 36^NEW YORK)
VAPA(18)	The 5 digit or 9 digit Zip Code for the Confidential Address in internal^external format. (e.g., 12208^12208 or 122081234^12208-1234)
VAPA(19)	The county for the Confidential Address in internal^external format. (e.g., 1^ALBANY)
VAPA(20)	The start date for the Confidential Address in internal^external format. (e.g., 3030324^MAR 24,2003)
VAPA(21)	The end date for the Confidential Address in internal^external format. (e.g., 3030624^JUN 24,2003)
VAPA(22,N)	The Confidential Address Categories in internal^external format^status (n=internal value) (e.g., VAPA(22,4)=4^MEDICAL RECORDS^Y)

VAPA(23)	The Permanent or Temporary Province (if temp address is current and active, it's temp)
VAPA(24)	The Permanent or Temporary Postal Code (if temp address is current and active, it's temp)
VAPA(25)	The Permanent or Temporary Country (if temp address is current and active, it's temp)
VAPA(26)	The Confidential Province
VAPA(27)	The Confidential Postal Code
VAPA(28)	The Confidential Country
VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

6. **OAD^VADPT**

This entry point returns other specific address information.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAOA(1) would be VAOA("L1")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAOA",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAOA,$J,"L1")
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGOA")

	VAOA("A")	This optional variable may be passed to indicate which specific address the programmer wants returned. If it is not defined, the PRIMARY NEXT-OF-KIN will be returned. Otherwise, the following will be returned based on information desired. VAOA("A")=1 primary emergency contact VAOA("A")=2 designee for personal effects VAOA("A")=3 secondary next-of-kin VAOA("A")=4 secondary emergency contact VAOA("A")=5 patient employer VAOA("A")=6 spouse's employer
Output:	VAOA(1)	The first line of the STREET ADDRESS. (e.g., 123 South First Street)
	VAOA(2)	The second line of the STREET ADDRESS. (e.g., Apartment 9D)
	VAOA(3)	The third line of the STREET ADDRESS. (e.g., P.O. Box 1234)
	VAOA(4)	The CITY in which the contact/ employer resides. (e.g., NEWINGTON)
	VAOA(5)	The STATE in which the contact/ employer resides in internal^external format. (e.g., 6^CALIFORNIA)
	VAOA(6)	The ZIP CODE of the location in which the contact/employer resides. (e.g., 12345)

VAOA(7)	The COUNTY in which the contact/ employer resides in internal^external format. (e.g., 1^ALAMEDA)
VAOA(8)	The PHONE NUMBER of the contact/employer. (e.g., (415) 967-1234)
VAOA(9)	The NAME of the contact or, in case of employment, the employer to whom this address information applies. (e.g., SMITH,ROBERT P.)
VAOA(10)	The RELATIONSHIP of the contact (if applicable) to the patient; otherwise, null. (e.g., FATHER)
VAOA(11)	The ZIP+4 (5 or 9 digit zip code) of the location in which the contact/employer resides in internal^external format. (e.g., 123454444^12345-4444)
VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

7. **INP^VADPT**

This entry point will return data related to an inpatient episode.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.

	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAIN(1) would be VAIN("AN")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAIN",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAIN,$J,"AN")
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGIN")
	VAINDT	This optional variable may be set to a past date/time for which the programmer wishes to know the patient's inpatient status. This must be passed as an internal VA FileManager date/time format. If time is not passed, it will assume anytime during that day. If this variable is not defined, it will assume now as the date/time. (e.g., 2880101.08)
Output:	VAIN(1)	The INTERNAL NUMBER [IFN] of the admission if one was found for the date/time requested. If no inpatient episode was found for the date/time passed, then all variables in the VAIN array will be returned as null. (e.g., 123044)

VAIN(2) The PRIMARY CARE PHYSICIAN [PROVIDER] assigned to the patient at the date/time requested in internal^external format. (e.g., 3^SMITH,JOSEPH L.)

VAIN(3) The TREATING SPECIALTY assigned to the patient at the date/time requested in internal^external format. (e.g., 19^GERIATRICS)

VAIN(4) The WARD LOCATION to which the patient was assigned at the date/time requested in internal^external format. (e.g., 27^IBSICU)

VAIN(5) The ROOM-BED to which the patient was assigned at the date/time requested in external format. (e.g., 123-B)

VAIN(6) This will return a "1" in the first piece if the patient is in a bed status; otherwise, a "0" will be returned. A non-bed status is made based on the last transfer type to a non-bed status, (i.e., authorized absence, unauthorized absence, etc.) The second piece will contain the name of the last transfer type should one exist. (e.g., 1^FROM AUTHORIZED ABSENCE)

VAIN(7) The ADMISSION DATE/TIME for the patient in internal^external format. (e.g., 2870213.0915^FEB 13,1987@ 09:15)

VAIN(8) The ADMISSION TYPE for the patient in internal^external format. (e.g., 3^DIRECT)

	VAIN(9)	The ADMITTING DIAGNOSIS for the patient. (e.g., PSYCHOSIS)
	VAIN(10)	The internal entry number of the PTF record corresponding to this admission. (e.g., 2032)
	VAIN(11)	The ATTENDING PHYSICIAN in internal^external format. (e.g., 25^ADTPROVIDER,ONE)
	VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

8. **IN5^VADPT**

This entry point will return data related to an inpatient episode.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAIP(1) would be VAIP("MN")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAIP",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAIP",$J,"MN")

VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGI5")
VAIP("D")	This optional variable can be defined as follows. VAIP("D")=VA FileManager date in internal format. If the patient was an inpatient at the date/time passed, movement data pertaining to that date/time will be returned. VAIP("D")="LAST" Movement data pertaining to the last movement on file, regardless if patient is a current inpatient. VAIP("D")=valid date without time Will return movement data if patient was an inpatient at any time during the day on the date that was passed in. VAIP("D") - not passed Will return movement data if the patient was in inpatient based on "now".
VAIP("L")	This optional variable, when passed, will include lodgers movements in the data. (e.g., VAIP("L")="")
VAIP("V")	Can be defined as the variable used instead of VAIP(. (e.g., VAIP("V")="SD")
VAIP("E")	This optional variable is defined as the internal file number of a specific movement. If this is defined, VAIP("D") is ignored. (e.g., VAIP("E")=123445)

	VAIP("M")	This optional variable can be passed as a "1" or a "0" (or null). VAIP("M")=0 - The array returned will be based on the admission movement associated with the movement date/time passed. VAIP("M")=1 - The array returned will be based on the last movement associated with the date/time passed.
Output:	VAIP(1)	The INTERNAL FILE NUMBER [IFN] of the movement found for the specified date/time. (e.g., 231009)
	VAIP(2)	The TRANSACTION TYPE of the movement in internal^external format where: 1=admission 2=transfer 3=discharge 4=check-in lodger 5=check-out lodger 6=specialty transfer (e.g., 3^DISCHARGE)
	VAIP(3)	The MOVEMENT DATE/TIME in internal^external date format. (e.g., 2880305.09^MAR 5,1988@09:00)
	VAIP(4)	The TYPE OF MOVEMENT in internal^external format. (e.g., 4^INTERWARD TRANSFER)
	VAIP(5)	The WARD LOCATION to which patient was assigned with that movement in internal^external format. (e.g., 32^1B-SURG)

VAIP(6)	The ROOM-BED to which the patient was assigned with that movement in internal^external format. (e.g., 88^201-01)
VAIP(7)	The PRIMARY CARE PHYSICIAN assigned to the patient in internal^ external format. (e.g., 3^ADTPROVIDER,TEN)
VAIP(8)	The TREATING SPECIALTY assigned with that movement in internal^external format. (e.g., 98^OPTOMETRY)
VAIP(9)	The DIAGNOSIS assigned with that movement. (e.g., UPPER GI BLEEDING)
VAIP(10)	This will return a "1" in the first piece if the patient is in a bed status; otherwise, a "0" will be returned. A non-bed status is made based on the last transfer type, if one exists, and a transfer to a non-bed status, (i.e., authorized absence, unauthorized absence, etc.) The second piece will contain the name of the last transfer type should one exist. (e.g., 1^FROM AUTHORIZED ABSENCE)
VAIP(11)	If patient is in an absence status on the movement date/time, this will return the EXPECTED RETURN DATE from absence in internal^external format. (e.g., 2880911^SEP 11,1988)
VAIP(12)	The internal entry number of the PTF record corresponding to this admission. (e.g., 2032)

VAIP(13) The INTERNAL FILE NUMBER of the admission associated with this movement. (e.g., 200312)

VAIP(13,1) The MOVEMENT DATE/TIME in internal^external format.
(e.g., 2881116.08^NOV 16,1988@08:00)

VAIP(13,2) The TRANSACTION TYPE in internal^external format.
(e.g., 1^ADMISSION)

VAIP(13,3) The MOVEMENT TYPE in internal^external format.
(e.g., 15^DIRECT)

VAIP(13,4) The WARD LOCATION associated with this patient with this movement in internal^external format.
(e.g., 5^7BSCI)

VAIP(13,5) The PRIMARY CARE PHYSICIAN assigned to the patient for this movement in internal^external format.
(e.g., 16^JONES, CHARLES C)

VAIP(13,6) The TREATING SPECIALTY for the patient for this movement in internal^external format.
(e.g., 3^NEUROLOGY)

VAIP(14) The INTERNAL FILE NUMBER of the last movement associated with this movement.
(e.g., 187612)

VAIP(14,1) The MOVEMENT DATE/TIME in internal^external format.
(e.g., 2881116.08^NOV 16,1988@08:00)

VAIP(14,2) The TRANSACTION TYPE in internal^external format.
(e.g., 2^TRANSFER)

VAIP(14,3) The MOVEMENT TYPE in internal^ external format.
(e.g., 4^INTERWARD TRANSFER)

VAIP(14,4) The WARD LOCATION associated with this patient with this movement in internal^external format.
(e.g., 5^7BSCI)

VAIP(14,5) The PRIMARY CARE PHYSICIAN assigned to the patient for this movement in internal^external format.
(e.g., 16^JONES, CHARLES C)

VAIP(14,6) The TREATING SPECIALTY for the patient for this movement in internal^external format.
(e.g., 3^NEUROLOGY)

VAIP(15) The INTERNAL FILE NUMBER of the movement which occurred immediately prior to this one, if one exists. (e.g., 153201)

VAIP(15,1) The MOVEMENT DATE/TIME in internal^external format.
(e.g., 2881116.08^NOV 16,1988@08:00)

VAIP(15,2) The TRANSACTION TYPE in internal^external format.
(e.g., 2^TRANSFER)

VAIP(15,3) The MOVEMENT TYPE in internal^ external format.
(e.g., 4^INTERWARD TRANSFER)

VAIP(15,4) The WARD LOCATION associated with this patient with this movement in internal^external format.
(e.g., 5^7BSCI)

VAIP(15,5) The PRIMARY CARE PHYSICIAN assigned to the patient for this movement in internal^external format.
(e.g., 16^ADTPROVIDER,TWO)

VAIP(15,6) The TREATING SPECIALTY for the patient for this movement in internal^external format.
(e.g., 3^NEUROLOGY)

VAIP(16) The INTERNAL FILE NUMBER of the movement which occurred immediately following this one, if one exists. (e.g., 146609)

VAIP(16,1) The MOVEMENT DATE/TIME in internal^external format.
(e.g., 2881116.08^NOV 16,1988@08:00)

VAIP(16,2) The TRANSACTION TYPE in internal^external format.
(e.g., 2^TRANSFER)

VAIP(16,3) The MOVEMENT TYPE in internal^ external format.
(e.g., 4^INTERWARD TRANSFER)

VAIP(16,4) The WARD LOCATION associated with this patient with this movement in internal^external format.
(e.g., 5^7BSCI)

VAIP(16,5) The PRIMARY CARE PHYSICIAN assigned to the patient for this movement in internal^external format.
(e.g., 16^ADTPROVIDER,THREE)

VAIP(16,6) The TREATING SPECIALTY for the patient for this movement in internal^external format.
(e.g., 3^NEUROLOGY)

VAIP(17)	The INTERNAL FILE NUMBER of the discharge associated with this movement. (e.g., 1902212)
VAIP(17,1)	The MOVEMENT DATE/TIME in internal^external format. (e.g., 2881116.08^NOV 16,1988@08:00)
VAIP(17,2)	The TRANSACTION TYPE in internal^external format. (e.g., 3^DISCHARGE)
VAIP(17,3)	The MOVEMENT TYPE in internal^ external format. (e.g., 16^REGULAR)
VAIP(17,4)	The WARD LOCATION associated with this patient for this movement in internal^external format. (e.g., 5^7BSCI)
VAIP(17,5)	The PRIMARY CARE PHYSICIAN assigned to the patient for this movement in internal^external format. (e.g., 16^ADTPROVIDER,ONE)
VAIP(17,6)	The TREATING SPECIALTY for the patient for this movement in internal^external format. (e.g., 3^NEUROLOGY)
VAIP(18)	The ATTENDING PHYSICIAN assigned to the patient for this movement in internal^external format. (e.g., 25^ADTPROVIDER,TEN)

VAIP(19,1)	Will contain whether or not the patient chose to be excluded from the facility directory for the admission related to this movement in internal^external format. (e.g., 1^YES)
VAIP(19,2)	Date/time answer to facility directory question was answered in internal^external format. (e.g., 3030426.08^APR26,2003@08:00)
VAIP(19,3)	User entering answer to facility directory question in internal^external format. (e.g., 1934^ADTEMPLOYEE,ONE)
VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

9. **OPD^VADPT**

Returns other pertinent patient data which is commonly used but not contained in any other calls to VADPT.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAHOW	This optional variable can be set to a requested format for the output array. If this variable is not defined or does not contain one of the following values, the output array will be returned with numeric subscripts. 1 -- return the output array with alpha subscripts - see alpha subscripts section (e.g., VAPD(1) would be VAPD("BC")) 2 -- return the output in the ^UTILITY global with numeric subscripts (e.g., ^UTILITY("VAPD",$J,1)) 12 -- return the output in the ^UTILITY global with alpha subscripts (e.g., ^UTILITY("VAPD",$J,"BC")
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGPD")
Output:	VAPD(1)	The PLACE OF BIRTH [CITY]. (e.g., SAN FRANCISCO)
	VAPD(2)	The PLACE OF BIRTH [STATE] in internal^external format. (e.g., 6^CALIFORNIA)
	VAPD(3)	The FATHER'S NAME. (e.g., ADTFATHER,ONE)

	VAPD(4)	The MOTHER'S NAME. (e.g., MARY)
	VAPD(5)	The MOTHER'S MAIDEN NAME. (e.g., ADTMOTHER,ONE)
	VAPD(6)	The patient's OCCUPATION. (e.g., CARPENTER)
	VAPD(7)	The patient's EMPLOYMENT STATUS in internal^external format. (e.g., 4^SELF EMPLOYED)
	VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

10. **REG^VADPT**
Returns REGISTRATION/DISPOSITION data.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAROOT	This optional variable can be set to a local variable or global name in which to return the output. (e.g., VAROOT="DGADD")
	VARP("F")	Can be defined as the "from" date for which registrations are desired. This must be passed as a valid VA File-Manager date. (e.g., VARP("F")=2930101)

VARP("T") Can be defined as the "to" date for which registrations are desired. This must be passed as a valid VA File-Manager date. If neither VARP("F") nor VARP("T") are defined, all registrations will be returned. (e.g., VARP("T")=2930530)

VARP("C") Can be defined as the number of registrations you want returned in the array. (e.g., VARP("C")=5 - will return 5 most recent)

Output:

^UTILITY("VARP",$J,#,"I")		Internal format
^UTILITY("VARP",$J,#,"E")		External format
	Piece 1	Registration Date/Time
	Piece 2	Status
	Piece 3	Type of Benefit applied for
	Piece 4	Facility Applying to
	Piece 5	Who Registered
	Piece 6	Log out (disposition) date/time
	Piece 7	Disposition Type
	Piece 8	Who Dispositioned

VAERR The error flag will have one of the following values.
0 -- no errors encountered
1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

11. **SDE^VADPT**

Returns ACTIVE clinic enrollments for a patient.

Input: DFN This required variable is the internal entry number in the PATIENT file.

Output: ^UTILITY("VAEN",$J,#,"I") Internal format
^UTILITY("VAEN",$J,#,"E") External format

Piece 1	Clinic Enrolled in
Piece 2	Enrollment Date
Piece 3	OPT or AC

VAERR The error flag will have one of the following values.
0 -- no errors encountered
1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

12. **SDA^VADPT**
Returns APPOINTMENT DATE/TIME data for a patient.

Input: DFN This required variable is the internal entry number in the PATIENT file.

VASD("T") Can be defined as the "to" date for which registrations are desired. This must be passed as a valid VA File-Manager date. If neither VASD("F") nor VASD("T") are defined, all future appointments will be returned.

VASD("F") Can be defined as the "from" date for which appointments are desired. This must be passed as a valid VA File-Manager date. If not defined, it is assumed only future appointments should be returned.

VASD("W") Can be passed as the specific STATUS desired in the following format. If not passed, only those appointments which are still scheduled (or kept in the event of a past date) for both inpatients and outpatients will be returned.

If VASD("W")

Contains a	These appts. are returned
1	Active/Kept
2	Inpatient appts. only
3	No-shows
4	No-shows, auto-rebook
5	Cancelled by Clinic
6	Cancelled by Clinic, auto rebook
7	Cancelled by Patient
8	Cancelled by Patient, auto rebook
9	No action taken

VASD("C",Clinic IFN)

Can be set up to contain only those internal file entries from the HOSPITAL LOCATION file for clinics which you would like to see appointments for this particular patient. You may define this array with just one clinic or with many. If you do not define this variable, it will be assumed that you want appointments for this patient in all clinics returned.

Output:

^UTILITY("VASD",$J,#,"I") Internal format
^UTILITY("VASD",$J,#,"E") External format

Piece 1	Date/Time of Appointment
Piece 2	Clinic
Piece 3	Status
Piece 4	Appointment Type

VAERR The error flag will have one of the following values.

0 -- no errors encountered
1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

13. **PID^VADPT**
This call is used to obtain the patient identifier in long and brief format.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.
	VAPTYP	This optional variable can be set to the internal number of a patient eligibility. The variable can be used to indicate the patient's type such as VA, DOD, or IHS through the eligibility. If this variable is not defined or the eligibility does not exist, the VA patient IDs will be returned.
Output:	VA("PID")	The long patient identifier. (e.g., 000-22-3333P)
	VA("BID")	The short patient identifier. (e.g., 3333P)
	VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

14. **PID^VADPT6**
This call returns the same variables as the call mentioned above, but will eliminate the unnecessary processing time required calling PID^VADPT.

15. **ADM^VADPT2**
This returns the internal file number of the admission movement. If VAINDT is not defined, this will use "NOW" for the date/time.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.

	VAINDT	This optional variable may be set to a past date/time for which the programmer wishes to know the patient's inpatient status. This must be passed as an internal VA FileManager date/time format. (e.g., 2880101.08)
Output:	VADMVT	Returns the internal file number of the admission movement.
	VAERR	The error flag will have one of the following values. 0 -- no errors encountered 1 -- error encountered - DFN or ^DPT(DFN,0) is not defined

16. **KVAR^VADPT**
This call is used to remove all variables defined by the VADPT routine. The programmer should elect to utilize this call to remove the arrays which were returned by VADPT.

17. **KVA^VADPT**
This call is used as above and will also kill the VA("BID") and VA("PID") variables.

18. **COMBINATIONS**
The following calls may be made to return a combination of arrays with a single call.

Input:	DFN	This required variable is the internal entry number in the PATIENT file.

See specific call for other variable input

Output:

CALL	DEMOGRAPHIC VADM	ELIGIBILITY VAEL	INPATIENT VAIN	INPATIENT VAIP	ADDRESS VAPA	SERVICE VASV	MONETARY VAMB	REGISTRATION UTILITY("VARP"	ENROLLMENT UTILITY("VAEN"	APPOINTMENT UTILITY("VASD"
OERR	X		X							
1	X		X							
2	X	X								
3		X	X							
4	X				X					
5			X		X					
6	X	X			X					
7		X				X				
8		X				X	X			
9	X							X	X	X
10									X	X
51	X			X						
52		X		X						
53				X	X					
ALL	X	X	X		X	X	X	X	X	X
A5	X	X		X	X	X	X	X	X	X

Alpha Subscripts

Call	Variable	Alpha Translation
DEM^VADPT	VADM(1)	VADM("NM")
	VADM(2)	VADM("SS")
	VADM(3)	VADM("DB")
	VADM(4)	VADM("AG")
	VADM(5)	VADM("SX")
	VADM(6)	VADM("EX")
	VADM(7)	VADM("RE")
	VADM(8)	VADM("RA")
	VADM(9)	VADM("RP")
	VADM(10)	VADM("MS")

ELIG^VADPT	VAEL(1)	VAEL("EL")
	VAEL(1,#)	VAEL("EL",#)
	VAEL(2)	VAEL("PS")
	VAEL(3)	VAEL("SC")
	VAEL(4)	VAEL("VT")
	VAEL(5)	VAEL("IN")
	VAEL(5,#)	VAEL("IN",#)
	VAEL(6)	VAEL("TY")
	VAEL(7)	VAEL("CN")
	VAEL(8)	VAEL("ES")
	VAEL(9)	VAEL("MT")

MB^VADPT	VAMB(1)	VAMB("AA")
	VAMB(2)	VAMB("HB")
	VAMB(3)	VAMB("SS")
	VAMB(4)	VAMB("PE")
	VAMB(5)	VAMB("MR")
	VAMB(6)	VAMB("SI")
	VAMB(7)	VAMB("DI")
	VAMB(8)	VAMB("OR")
	VAMB(9)	VAMB("GI")

Call	Variable	Alpha Translation
SVC^VADPT	VASV(1)	VASV("VN")
	VASV(1,#)	VASV("VN",#)
	VASV(2)	VASV("AO")
	VASV(2,#)	VASV("AO",#)
	VASV(3)	VASV("IR")
	VASV(3,#)	VASV("IR",#)
	VASV(4)	VASV("PW")
	VASV(4,#)	VASV("PW",#)
	VASV(5)	VASV("CS")
	VASV(5,#)	VASV("CS",#)
	VASV(6)	VASV("S1")
	VASV(6,#)	VASV("S1",#)
	VASV(7)	VASV("S2")
	VASV(7,#)	VASV("S2",#)
	VASV(8)	VASV("S3")
	VASV(8,#)	VASV("S3",#)
	VASV(9)	VASV(“PH”)
	VASV(9,#)	VASV(“PH”,#)
	VASV(10)	VASV(“CV”)
	VASV(10,#)	VASV(“CV”,#)
	VASV(11)	VASV(“OIF”)
	VASV(11,#)	VASV(“OIF”,#)
	VASV(12)	VASV(“OEF”)
	VASV(12,#)	VASV(“OEF”,#)
	VASV(13)	VASV(“UNK”)
	VASV(13,#)	VASV(“UNK”,#)
	VASV(14)	VASV(“SHD”)
	VASV(14,#)	VASV(“SHD”,#)

Call	Variable	Alpha Translation
ADD^VADPT	VAPA(1)	VAPA("L1")
	VAPA(2)	VAPA("L2")
	VAPA(3)	VAPA("L3")
	VAPA(4)	VAPA("CI")
	VAPA(5)	VAPA("ST")
	VAPA(6)	VAPA("ZP")
	VAPA(7)	VAPA("CO")
	VAPA(8)	VAPA("PN")
	VAPA(9)	VAPA("TS")
	VAPA(10)	VAPA("TE")
	VAPA(11)	VAPA("Z4")
	VAPA(12)	VAPA(“CCA”)
	VAPA(13)	VAPA(“CL1”)
	VAPA(14)	VAPA(“CL2”)
	VAPA(15)	VAPA(“CL3”)
	VAPA(16)	VAPA(“CCI”)
	VAPA(17)	VAPA(“CST”)
	VAPA(18)	VAPA(“CZP”)
	VAPA(19)	VAPA(“CCO”)
	VAPA(20)	VAPA(“CCS”)
	VAPA(21)	VAPA(“CCE”)
	VAPA(22)	VAPA(“CTY”)
	VAPA(23)	VAPA(“PR”)
	VAPA(24)	VAPA(“PC”)
	VAPA(25)	VAPA(“CT”)
	VAPA(26)	VAPA(“CPR”)
	VAPA(27)	VAPA(“CPC”)
	VAPA(28)	VAPA(“CCT”)

Call	Variable	Alpha Translation
OAD^VADPT	VAOA(1)	VAOA("L1")
	VAOA(2)	VAOA("L2")
	VAOA(3)	VAOA("L3")
	VAOA(4)	VAOA("CI")
	VAOA(5)	VAOA("ST")
	VAOA(6)	VAOA("ZP")
	VAOA(7)	VAOA("CO")
	VAOA(8)	VAOA("PN")
	VAOA(9)	VAOA("NM")
	VAOA(10)	VAOA("RE")
	VAOA(11)	VAOA("Z4")

INP^VADPT	VAIN(1)	VAIN("AN")
	VAIN(2)	VAIN("DR")
	VAIN(3)	VAIN("TS")
	VAIN(4)	VAIN("WL")
	VAIN(5)	VAIN("RB")
	VAIN(6)	VAIN("BS")
	VAIN(7)	VAIN("AD")
	VAIN(8)	VAIN("AT")
	VAIN(9)	VAIN("AF")
	VAIN(10)	VAIN("PT")
	VAIN(11)	VAIN("AP")

Call	Variable	Alpha Translation
IN5^VADPT	VAIP(1)	VAIP("MN")
	VAIP(2)	VAIP("TT")
	VAIP(3)	VAIP("MD")
	VAIP(4)	VAIP("MT")
	VAIP(5)	VAIP("WL")
	VAIP(6)	VAIP("RB")
	VAIP(7)	VAIP("DR")
	VAIP(8)	VAIP("TS")
	VAIP(9)	VAIP("MF")
	VAIP(10)	VAIP("BS")
	VAIP(11)	VAIP("RD")
	VAIP(12)	VAIP("PT")
	VAIP(13)	VAIP("AN")
	VAIP(13,#)	VAIP("AN",#)
	VAIP(14)	VAIP("LN")
	VAIP(14,#)	VAIP("LN",#)
	VAIP(15)	VAIP("PN")
	VAIP(15,#)	VAIP("PT",#)
	VAIP(16)	VAIP("NN")
	VAIP(16,#)	VAIP("NN",#)
	VAIP(17)	VAIP("DN")
	VAIP(17,#)	VAIP("DN",#")
	VAIP(18)	VAIP("AP")

OPD^VADPT	VAPD(1)	VAPD("BC")
	VAPD(2)	VAPD("BS")
	VAPD(3)	VAPD("FN")
	VAPD(4)	VAPD("MN")
	VAPD(5)	VAPD("MM")
	VAPD(6)	VAPD("OC")
	VAPD(7)	VAPD("ES")

Scheduling Application Programmer Interfaces (APIs)

Introduction

The Scheduling functions and data that support outpatient scheduling are being re-engineered and re-hosted as a Government Off-the-Shelf (GOTS) application. During implementation, the appointment data currently stored in the Patient sub-file (2.98) and the Hospital Location sub-files (44.001, 44.003) will be moved into an Enterprise Oracle database on an external platform. The API released in this patch is one of several that provide the only authorized interface to appointment data. It is designed to retrieve appointments from either data source: VistA or the Oracle database.

Existing direct global references to Scheduling globals, as well as FileManager calls in all M-based applications, must be removed or redesigned. There are two possible options:

1) **Remove.** Eliminate uses of appointment data whenever possible. Access to appointment data over the network may be slower than direct access in VistA. For example, if the application displays patient appointments as a convenience feature, the display could be removed from the function because the user can get the same information directly using the Scheduler Graphical User Interface (GUI). Keeping the display in the application may become an inconvenience feature when the network is slow or unavailable. This strategy emphasizes application un-coupling in preparation for a future Clinical Context Object Workgroup (CCOW)-based application environment.

2) **Replace.** If the appointment data are required to support the business processes of the application, one of the encapsulation APIs must be used to interface the application with the new Resource Scheduling System. The look and feel of the application will remain the same although retrieval times may be slower.

   Data Layer. To optimize an application process that uses appointments, it is important to call the API only once during process execution. In most cases to achieve this it will be necessary to use the API to create a data layer. The API is called once and stores the data in a temporary global. Business processing does not start until after all the required data are retrieved in the 'data layer'.

Error Handling. As the data is retrieved from a remote database, errors could occur which may be returned to applications; therefore, it is also important to design error handling. If this is implemented now, it will not be necessary to add it later when the data is retrieved from the remote database.

Special Features

This section describes the special features of the Scheduling Replacement API "SDAPI" that retrieves appointment information stored in sub-files 2.98, 44.001, and 44.003. Appointment data can be retrieved by patient(s), clinic(s), both, or neither. Three other appointment fields are available for filtering. See "SDAPI - Filters" for a complete list of available appointment filters. This API is an encapsulation API and has special features.

- **Flexibility**. This API can be implemented now without re-programming later because it will retrieve the same information from either database (FM globals or SQL tables). Each field in the table below has been assigned an independent identifying number that is used in the input parameter of the API. See "SDAPI - Data Fields" for a more detailed list of the available data fields.

1	APPOINTMENT DATE/TIME
2	CLINIC IEN and NAME
3	APPOINTMENT STATUS
4	PATIENT DFN and NAME
5	LENGTH OF APPOINTMENT
6	COMMENTS
7	OVERBOOK
8	ELIGIBILITY OF VISIT IEN and NAME
9	CHECK-IN DATE/TIME
10	APPOINTMENT TYPE IEN and NAME
11	CHECK-OUT DATE/TIME
12	OUTPATIENT ENCOUNTER IEN
13	PRIMARY STOP CODE IEN and CODE
14	CREDIT STOP CODE IEN and CODE
15	WORKLOAD NON-COUNT
16	DATE APPOINTMENT MADE
17	DESIRED DATE OF APPOINTMENT
18	PURPOSE OF VISIT and SHORT DESCRIPTION
19	EKG DATE/TIME
20	X-RAY DATE/TIME
21	LAB DATE/TIME
22	STATUS
23	X-RAY FILMS
24	AUTO-REBOOKED APPOINTMENT DATE/TIME
25	NO-SHOW/CANCEL DATE/TIME
26	RSA APPOINTMENT ID
28	DATA ENTRY CLERK DUZ AND NAME
29	NO-SHOW/CANCELED BY DUZ AND NAME
30	CHECK-IN USER DUZ AND NAME
31	CHECK-OUT USER DUZ AND NAME
32	CANCELLATION REASON IEN AND NAME
33	CONSULT LINK

Note: Field 27 is reserved for the 2507 Request IEN to be available in a future release.

- **Error Code 101**. The API returns error code 101 when the network is too slow or is down. Applications that depend upon information stored in an external database must be re-programmed to handle this condition. Without network error handling, applications may either hang indefinitely or error out. At this point, there is one error code to indicate a network problem. See "SDAPI - Error Codes" for a complete list of all API error codes.

- **Error Code 116**. The API returns error code 116 when the data returned from the RSA database doesn't match the data on VistA. An example of this would be if the RSA returns an IEN that doesn't exist on VistA. Applications must be re-programmed to handle this condition. See "SDAPI - Error Codes" for a complete list of all API error codes.

- **Error Code 117**. The API returns error code 117 when the other error codes don't apply. This error code will incorporate any additional errors that may be included or returned in the future. Adding this error code will prevent re-coding of current applications, as these new error codes are introduced. See "SDAPI - Error Codes" for a complete list of all API error codes.

- **External Data Source**. The API is designed to be used with an external database. The API pulls over all the data required by the application function in one request and stores it in a temporary global. The temporary global can then be used in place of the Hospital Location sub-files (44.001, 44.003) and the Patient sub-file (2.98) to perform the business logic of the application, separating the data layer from the business layer. See the example below.

Example

The process of encapsulation will involve, in part, replacing direct global references in routines with APIs. As an example, consider the following piece of code. This code is designed to retrieve appointment date/time, patient DFN and name, and length of appointment for all DGCLN clinic appointments up to DGLAST date.

```
F  S DGDATE=$O(^SC(DGCLN,"S",DGDATE)) Q:'DGDATE!(DGDATE>DGLAST)  D
. S DGAPT=0 F  S DGAPT=$O(^SC(DGCLN,"S",DGDATE,1,DGAPT)) Q:'DGAPT  D
.. S DGPAT=$P(^SC(DGCLN,"S",DGDATE,1,DGAPT,0),U,1)
.. I $G(DGPAT) S DGPATNAM=$P(^DPT(DGPAT,0),U,1))
.. S DGLOAPPT=$P(^SC(DGCLN,"S",DGDATE,1,DGAPT,0),U,2)
.. continue processing as needed
```

Using the API, the code may be changed as follows:

```
      ;Data Layer

      S DGARRAY(1)=";"_DGLAST
      S DGARRAY("FLDS")="1;4;5"
      S DGARRAY(2)=DGCLN
      S DGCNT=$$SDAPI^SDAMA301(.DGARRAY)

      ;Business Layer
      ; if data is returned, process appointment data
      I DGCNT>0 S DGPAT=0 F  S DGPAT=$O(^TMP($J,”SDAMA301”,DGCLN,DGPAT)
Q:DGPAT=””  D
      . S DGDATE=0 F  S DGDATE=$O(^TMP($J,"SDAMA301",DGCLN,DGPAT,DGDATE)
Q:DGDATE=""  D
      .. S DGLOAPPT=$P($G(^TMP($J,”SDAMA301”,DGCLN,DGPAT,DGDATE)),U,5) ;length
of appt
      .. S DGPINFO=$P($G(^TMP($J,”SDAMA301”,DGCLN,DGPAT,DGDATE)),U,4) ;patient
DFN and Name
      .. S DGPATNAM=$P(DGPINFO,";",2) ;patient name
      .. continue processing appointment data as needed
      ; if error returned, process error
      I DGCNT<0 D
      . ;check error array for DATABASE IS UNAVAILABLE error
      . I $D(^TMP($J,”SDAMA301,101)) D
      . . process error as needed (calling application to determine how to
handle this)
      . ;check error array for DATA MISMATCH error
      . I $D(^TMP($J,”SDAMA301,116)) D
      . . process error as needed (calling application to determine how to

      ;kill the temporary array
      I DGCNT'=0 K ^TMP($J,”SDAMA301”)
```

Application Programmer Interface - SDAPI

Name: SDAPI ; Retrieve Filtered Appointment Data

Declaration: $$SDAPI^SDAMA301(**.**ARRAY)

Description: This API returns filtered appointment information and should be called using an EXTRINSIC call. To use this API, subscribe to Integration Agreement #4433.

Argument: ARRAY – An array, passed by value, that is defined and name-spaced by the calling application, containing the following parameters:

Field List	Required, ARRAY("FLDS"). List of appointment field IDs requested, each ID separated by a semicolon or "ALL" to indicate all fields are being requested. See "SDAPI - Data Fields" for a complete list of available appointment fields and their associated IDs.
Filters	Optional. See "SDAPI - Filters" for a complete list of available appointment filters and their input array format.
Max Appts	Optional, ARRAY("MAX"). Maximum appointments requested. See "SDAPI - Filters" for a description and valid values of this array entry.
Sort	Optional, ARRAY("SORT"). Allows the output to be sorted by patient DFN, instead of by Patient and Clinic IENs. See "SSDAPI - Filters" for a description and valid values of this array entry.

Purged — Optional, ARRAY("PURGED"). Output will include non-canceled appointments that were purged from the Hospital Location file yet still exist on the patient file. See "SDAPI - Filters" for a description and the valid value for this array entry. If this optional array entry is passed into the API, there are 2 other conditions that must be met else error 115 will be generated: ARRAY(4) must be populated, and several fields will not be available to request because those fields are either located on the Hospital Location file (which was purged of the appointment) or are calculated using data from the Hospital Location file. Those fields are 5-9, 11, 22, 28, 30, 31, and 33. See "SDAPI - Data Fields" for a description of those fields.

Return Values:

From the extrinsic call, this API will return "-1" if an error occurred, "0" if no appointment is found that matches the filter criteria, or account of the returned appointments. If no appointment is found that matches the filter criteria, the `^TMP($J,"SDAMA301")`global will not be generated.

If appointments are found that match the filter criteria, fields 1 through 5 and 7 through 26 of the appointments will be returned in:

```
^TMP($J,"SDAMA301",SORT1,SORT2,APPT DATE/TIME)
=field1^field2^field3^…
```

where SORT1 and SORT2 are driven by the patient filter and defined in the table below, and field1 is appointment data ID 1 (appt date/time) if requested, field2 is appointment data ID 2 (clinic IEN and name) if requested, etc. **Note:** Piece 6 will always be null, because if field 6 (Appointment comments) is requested, the comments will appear on the subscript ("C") of the global reference:

```
^TMP($J,"SDAMA301",SORT1,SORT2,APPT DATE/TIME,"C")=field 6.
```

Fields 28 through 33 will be returned in:

```
^TMP($J,"SDAMA301",SORT1,SORT2,APPT DATE/TIME,0) =
field28^field29^field30^…
```

Patient Filter is…	**Sort Values**
Populated	SORT1 is Patient DFN, SORT2 is Clinic IEN
Not Populated	SORT1 is Clinic IEN, SORT2 is Patient DFN

In addition, there is another filter value which can be set to alter the output. If ARRAY("SORT")="P", then the output will only include the subscript Patient DFN and not Clinic IEN, overriding the Sort Values described above. `IE. ^TMP($J,"SDAMA301",DFN,APPT DATE/TIME)=field1^field2…`

Note: As mentioned above, field 6 will always be null and if field 6 (Appointment Comments) is requested, the comments will appear on the next subscript ("C") of the global reference.
`IE. ^TMP($J,"SDAMA301",DFN,APPT DATE/TIME,"C")=field 6.`

If an error occurs, the error codes and messages will be returned in
`^TMP($J,"SDAMA301",error code) = error message`
See "SDAPI - Error Codes" for a list of error codes and messages.

Other: When processing has completed, kill the temporary array:
`^TMP($J,"SDAMA301")`
See "SDAPI - Constraints" for constraints.

SDAPI - Examples

1) By Clinic. Get all appointments for clinic 501 on 01/05/04. Get patient DFN and name, and appointment status. Note that the output will be sorted first by clinic, then patient, then appointment date/time. Clinic is first sort because the patient filter is not populated.

```
N SDARRAY,SDCOUNT,SDDFN,SDDATE,SDAPPT,SDPAT,SDPATNAM,SDSTATUS
S SDARRAY(1)="3040105;3040105"
S SDARRAY(2)=501
S SDARRAY("FLDS")="4;3"      ← order is irrelevant
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get patient
. S SDDFN=0 F  S SDDFN=$O(^TMP($J,"SDAMA301",501,SDDFN)) Q:SDDFN="" D
.. ;get appointment date/time
.. S SDDATE=0 F  S SDDATE=$O(^TMP($J,"SDAMA301",501,SDDFN,SDDATE))
Q:SDDATE="" D
... S SDAPPT=$G(^TMP($J,"SDAMA301",501,SDPATDFN,SDDATE)) ;appointment
data
... S SDSTATUS=$P($G(SDAPPT),"^",3) ;appointment status
... S SDPAT=$P($G(SDAPPT),"^",4) ;patient DFN and Name
... S SDPATNAM=$P($G(SDPAT),";",2) ;patient Name only
... continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill the output array
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

2) By Patient. Get the next (after today) scheduled/regular appointment for patient 100. Get the appointment date/time, clinic IEN and name, and appointment status. Note that the output will be sorted first by patient, then clinic, then appointment date/time. Patient is first sort because it is populated.

```
N SDARRAY,SDCOUNT,SDCLIEN,SDDATE,SDAPPT,SDSTATUS,SDCLINFO,SDCLNAME
S SDARRAY(1)=DT_".2359"
S SDARRAY(3)="R;I"
S SDARRAY(4)=100
S SDARRAY("MAX")=1
S SDARRAY("FLDS")="1;2;3"
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get clinic
. S SDCLIEN=0 F  S SDCLIEN=$O(^TMP($J,"SDAMA301",100,SDCLIEN))
Q:SDCLIEN="" D
.. ;get appointment date/time
.. S SDDATE=0 F  S SDDATE=$O(^TMP($J,"SDAMA301",100,SDCLIEN,SDDATE))
Q:SDDATE="" D
... S SDAPPT=$G(^TMP($J,"SDAMA301",100,SDCLIEN,SDDATE)) ;appointment
data
... S SDSTATUS=$P(SDAPPT,"^",3) ;appt status
... S SDCLINFO=$P(SDAPPT,"^",2) ;clinic IEN and Name
... S SDCLNAME=$P(SDCLINFO,";",2) ;clinic Name only
... continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill output array
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

3) By Patient and Clinic. Get all appointments for patient 100 in clinic 501, for January 2004. Get the appointment date/time and credit stop code IEN. Note that the output will be sorted first by patient, then clinic, then appointment date/time. Patient is first sort because it is populated.

```
N SDARRAY,SDCOUNT,SDDATE,SDAPPT,SDCRSTOP
S SDARRAY(1)="3040101;3040131"
S SDARRAY(2)=501
S SDARRAY(4)=100
S SDARRAY("FLDS")="1;14;16"
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get appointment date/time
. S SDDATE=0 F  S SDDATE=$O(^TMP($J,"SDAMA301",100,501,SDDATE))
Q:SDDATE="" D
.. S SDAPPT=$G(^TMP($J,"SDAMA301",100,501,SDDATE)) ;appointment data
.. S SDCREDIT=$P(SDAPPT,"^",14) ;credit stop code IEN
.. I $G(SDCREDIT)'=";" S SDCRIEN=$P(SDCREDIT,";",1) ;credit stop code
IEN only
.. continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill output array
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

4) By neither Patient nor Clinic. Get all appointments for primary stop code 300, for January 2004. Get the appointment status. Note that the output will be sorted first by clinic, then patient, then appointment date/time. Clinic is first sort because the patient filter is not populated.

```
N SDARRAY,SDCOUNT,SDCLIEN,SDDFN,SDDATE,SDAPPT,SDSTATUS
S SDARRAY(1)="3040101;3040131"
S SDARRAY(13)=300
S SDARRAY(4)=100
S SDARRAY("FLDS")="3"
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get clinic
. S SDCLIEN=0 F  S SDCLIEN=$O(^TMP($J,"SDAMA301",SDCLIEN))
Q:SDCLIEN="" D
.. ;get patient
.. S SDDFN=0 F  S SDDFN=$O(^TMP($J,"SDAMA301",SDCLIEN,SDDFN))
Q:SDDFN="" D
... ;get appointment date/time
... S SDDATE=0 F  S
SDDATE=$O(^TMP($J,"SDAMA301",SDCLIEN,SDDFN,SDDATE)) Q:SDDATE="" D
.... S SDSTATUS=$P($G(^TMP($J,"SDAMA301",100,501,SDDATE)),"^",3)
;appointment status
.... continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill output array
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

Warning: For the quickest performance, this API should be run with a patient and/or clinic filter. Omission of both filters will result in a lengthy query (time and data).

5) By Clinic with "Sort" filter defined. Get all appointments for clinic 501 on 01/05/04. Get patient DFN and name, and appointment status. Note that the output will be sorted first by patient, then appointment date/time. Patient is *only* sort because the SORT filter is populated.

```
N SDARRAY,SDCOUNT,SDDFN,SDDATE,SDAPPT,SDPAT,SDPATNAM,SDSTATUS
S SDARRAY(1)="3040105;3040105"
S SDARRAY(2)=501
S SDARRAY("SORT")="P"
S SDARRAY("FLDS")="4;3"      ← order is irrelevant
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get patient
. S SDDFN=0 F  S SDDFN=$O(^TMP($J,"SDAMA301",SDDFN)) Q:SDDFN="" D
.. ;get appointment date/time
.. S SDDATE=0 F  S SDDATE=$O(^TMP($J,"SDAMA301",SDDFN,SDDATE))
Q:SDDATE="" D
... S SDAPPT=$G(^TMP($J,"SDAMA301",SDDFN,SDDATE)) ;appointment data
... S SDSTATUS=$P($G(SDAPPT),"^",3) ;appointment status
... S SDPAT=$P($G(SDAPPT),"^",4) ;patient DFN and Name
... S SDPATNAM=$P($G(SDPAT),";",2) ;patient Name only
... continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill the output array
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

6) By Clinic with "Sort" filter defined. Get all appointments for Clinic 501 on 01/05/04. Get patient DFN, and name, and appointment comments. Note that the output will be sorted first by patient, then appointment date/time, and the comments will appear on the next reference with the subscript "C". Patient is *only* sort because the SORT filter is populated.

```
N SDARRAY,SDCOUNT,SDDFN,SDDATE,SDAPPT,SDPAT,SDPATNAM,SDCMMNT
S SDARRAY(1)="3040105;3040105"
S SDARRAY(2)=501
S SDARRAY("SORT")="P"
S SDARRAY("FLDS")="4;6"      ← order is irrelevant
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get patient
. S SDDFN=0 F  S SDDFN=$O(^TMP($J,"SDAMA301",SDDFN)) Q:SDDFN="" D
.. ;get appointment date/time
.. S SDDATE=0 F  S SDDATE=$O(^TMP($J,"SDAMA301",SDDFN,SDDATE))
Q:SDDATE="" D
... S SDAPPT=$G(^TMP($J,"SDAMA301",SDDFN,SDDATE)) ;appointment data
... S SDPAT=$P($G(SDAPPT),"^",4) ;patient DFN and Name
... S SDPATNAM=$P($G(SDPAT),";",2) ;patient Name only
... S SDCMMNT=$G(^TMP($J, ,"SDAMA301",SDDFN,SDDATE,"C"))
... continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill the output array
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

7) Does patient 999 have any appointments on file?

```
N SDARRAY,SDCOUNT
S SDARRAY(4)=999
S SDARRAY("FLDS")=1
S SDARRAY("MAX")=1
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;patient has appointments on file
I SDCOUNT<0 D
. do processing for errors 101 and 116
; kill output array when processing is done
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
```

8) Similar to example #4, but with a global list of patients

```
N SDARRAY,SDCOUNT,SDCLIEN,SDDFN,SDDATE,SDAPPT,SDSTATUS
S SDARRAY(1)="3040101;3040131"
S SDARRAY(13)=300
S ^SDDFN(1019974)=""
S ^SDDFN(1019975)=""
S ^SDDFN(1019976)=""
S ^SDDFN(1019977)=""
S ^SDDFN(1019978)=""
S ^SDDFN(1019979)=""
S SDARRAY(4)="^SDDFN("
S SDARRAY("FLDS")="3"
S SDCOUNT=$$SDAPI^SDAMA301(.SDARRAY)
I SDCOUNT>0 D
. ;get clinic
. S SDCLIEN=0 F  S SDCLIEN=$O(^TMP($J,"SDAMA301",SDCLIEN))
Q:SDCLIEN="" D
.. ;get patient
.. S SDDFN=0 F  S SDDFN=$O(^TMP($J,"SDAMA301",SDCLIEN,SDDFN))
Q:SDDFN="" D
... ;get appointment date/time
... S SDDATE=0 F  S
SDDATE=$O(^TMP($J,"SDAMA301",SDCLIEN,SDDFN,SDDATE)) Q:SDDATE="" D
.... S SDSTATUS=$P($G(^TMP($J,"SDAMA301",100,501,SDDATE)),"^",3)
;appointment status
.... continue processing this appointment as needed
I SDCOUNT<0 D
. do processing for errors 101 and 116
; when finished with all processing, kill output array and user-
defined patient list
I SDCOUNT'=0 K ^TMP($J,"SDAMA301")
K ^SDDFN
```

SDAPI - Data Fields

Available Appointment Data Fields

ID	FIELD NAME	DATA TYPE	Format/Valid Values	Description	Examples of Returned Data
1	APPOINTMENT DATE/TIME	DATE/TIME	YYYMMDD.HHMM	The scheduled Appointment Date/Time	3031215.113 3031201.0815
2	CLINIC IEN and NAME	TEXT	ID^name	Clinic IEN and name	150;CARDIOLOGY 32;BLOOD DONOR
3	APPOINTMENT STATUS	TEXT	**R (**Scheduled/Kept) **I** (Inpatient) **NS** (No-Show) **NSR** (No-Show, Rescheduled) **CP** (Cancelled by Patient) **CPR** (Cancelled by Patient, Rescheduled) **CC** (Cancelled by Clinic) **CCR** (Cancelled by Clinic, Rescheduled) **NT** (No Action Taken)	The status of the appointment.	R;SCHEDULED/KEPT I;INPATIENT NS;N0-SHOW NSR;NO-SHOW & RESCHEDULED CP;CANCELLED BY PATIENT CPR;CANCELLED BY PATIENT & RESCHEDULED CC;CANCELLED BY CLINIC CCR;CANCELLED BY CLINIC & RESCHEDULED NT;NO ACTION TAKEN
4	PATIENT DFN and NAME	TEXT	DFN;name	Patient DFN and Patient Name.	34877;JONES,BOB 455;SCHILSON,BRIAN
5	LENGTH OF APPOINTMENT	TEXT	NNN	The scheduled length of appointment, in minutes.	20 60
6	COMMENTS	TEXT	free text	Any comments associated with the appointment.	PATIENT NEEDS WHEELCHAIR **Note: Comments shall be located on the "C" subscript.**
7	OVERBOOK	TEXT	**Y** or **N**	"Y" if appointment is an overbook else "N".	Y N
8	ELIGIBILITY OF VISIT IEN and NAME	TEXT	**Local** IEN; **Local** Name; **National** IEN; **National** Name	Local & National Eligibility codes and names associated with the appointment.	2;AID & ATTENDANCE;2;AID & ATTENDANCE 7;ALLIED VETERAN;7;ALLIED VETERAN 12;COLLATERAL OF VET.;13; COLLATERAL OF VET.
9	CHECK-IN DATE/TIME	DATE/TIME	YYYMMDD.HHMM	Date/time the patient checked in for the appointment.	3031215.113
10	APPOINTMENT TYPE IEN and NAME	TEXT	IEN;name	Type of Appointment IEN and name.	1;COMPENSATION & PENSION 3;ORGAN DONORS 7;COLLATERAL OF VET.
11	CHECK-OUT DATE/TIME	DATE/TIME	YYYMMDD.HHMM	Date/time the patient checked out of the appointment.	3031215.113
12	OUTPATIENT ENCOUNTER IEN	TEXT	NNN	The outpatient encounter IEN associated with this appointment.	4578
13	PRIMARY STOP CODE IEN and CODE	TEXT	IEN;code	Primary Stop code IEN and code associated with the clinic.	301;350
14	CREDIT STOP CODE IEN and CODE	TEXT	IEN;code	Credit Stop code IEN and code associated with the clinic.	549;500
15	WORKLOAD NON-COUNT	TEXT	**Y** or **N**	"Y" if clinic is non-count else "N".	Y N
16	DATE APPOINTMENT MADE	DATE	YYYMMDD	Date the appointment was entered into the Scheduling system.	3031215

17	DESIRED DATE OF APPOINTMENT	DATE	YYYMMDD	The date the clinician or patient desired for the scheduling of this appointment.	3031215
18	PURPOSE OF VISIT	TEXT	Code (1, 2, 3, or 4) and short description (C&P, 10-10, SV, or UV)	The Purpose of Visit.	1;C&P 2;10-10 3;SV 4;UV
19	EKG DATE/TIME	DATE/TIME	YYYMMDD.HHMM	The scheduled date/time of the EKG tests in conjunction with this appointment.	3031215.083
20	X-RAY DATE/TIME	DATE/TIME	YYYMMDD.HHMM	The scheduled date/time of the X-RAY in conjunction with this appointment.	3031215.083
21	LAB DATE/TIME	DATE/TIME	YYYMMDD.HHMM	The scheduled date/time of the Lab tests in conjunction with this appointment.	3031215.083
22	STATUS	TEXT	Status Code, Status Description, Print Status, Checked In Date/Time, Checked Out Date/Time, and Admission Movement IFN	Status Information for the Visit.	8;INPATIENT APPOINTMENT;INPATIENT/CHECKED OUT;;3030218.1548;145844
23	X-RAY FILMS	TEXT	**Y** or **N**	"**Y**" if x-ray films are required at clinic else "**N**".	Y N
24	AUTO-REBOOKED APPOINTMENT DATE/TIME	DATE/TIME	YYYMMDD.HHMM	The date/time that the appointment was Auto-Rebooked (rescheduled) to.	3031215.083
25	NO-SHOW / CANCEL DATE/TIME	DATE/TIME	YYYMMDD.HHMM	The date/time that the appointment was No-Showed or Cancelled.	3031215.083
26	RSA APPOINTMENT ID	TEXT	NNN	The unique numeric Oracle ID that identifies a specific RSA appointment. This field will be null for appointments in legacy VistA.	34983
28	DATA ENTRY CLERK	TEXT	DUZ;Name	The DUZ and name of the clerk who scheduled the appointment.	24569;PERSON,NEW A
29	NO-SHOW / CANCELED BY	TEXT	DUZ;Name	The DUZ and name of the clerk who no-showed or canceled the appointment.	24569;PERSON,NEW A
30	CHECK IN USER	TEXT	DUZ;Name	The DUZ and name of the clerk who checked in the appointment.	24569;PERSON,NEW A
31	CHECK OUT USER	TEXT	DUZ;Name	The DUZ and name of the clerk who checked out the appointment.	24569;PERSON,NEW A
32	CANCELLATION REASON	TEXT	DUZ;Name	IEN and Name of Cancellation Reason.	11;OTHER
33	CONSULT LINK	TEXT	NNN	The Consult Link IEN associated with the appointment.	23123

Note: Field 27 is reserved for the 2507 Request IEN to be available in a future release.

SDAPI - Filters

Input – Available Data Filters

Six fields will allow a filter. All 6 fields can be filtered in one API call. A null/undefined filter will result in all values being returned.

APPOINTMENT DATA TO BE FILTERED	**ARRAY ENTRY**	**Format**	**Examples of M code to set array with filter values**
APPOINTMENT DATE/TIME	ARRAY(1)	Range of appointment date/times, "from" and "to" date/time separated by semicolon. Dates must be FileMan format YYYMMDD.HHMMSS ARRAY(1)="from date;to date"	S ARRAY(1)="3030101;3030101" (one day) S ARRAY(1)="3040101" (appts after 2003) S ARRAY(1)=";3031231" (all appts thru 3031231) S ARRAY(1)=DT (all appts from today forward) S ARRAY(1)=DT_";3041231" (all appts from today through 3041231)
CLINIC IEN	ARRAY(2)	List of valid clinic IENs (each separated by a semicolon) or a global root or a local root. Clinic must exist on Hospital Location file. ARRAY(2)="ien1;ien2" etc. ARRAY(2)="^global(" ARRAY(2)="^global(#" ARRAY(2)="^global(#," ARRAY(2)="local(" ARRAY(2)="local(#" ARRAY(2)="local(#,"	S ARRAY(2)=300 S ARRAY(2)="300;301;304" S ARRAY(2)="^GBL(" S ARRAY(2)="^GBL(""DFN""" S ARRAY(2)="^GBL(""DFN""," S ARRAY(2)="LOCAL(" S ARRAY(2)="LOCAL(""DFN""" S ARRAY(2)="LOCAL(""DFN"","
APPOINTMENT STATUS	ARRAY(3)	List of valid Appointment Status values, each separated by a semicolon. Valid values: **R (**Scheduled/Kept) **I** (Inpatient) **NS** (No-Show) **NSR** (No-Show, Rescheduled) **CP** (Cancelled by Patient) **CPR** (Cancelled by Patient, Rescheduled) **CC** (Cancelled by Clinic) **CCR** (Cancelled by Clinic, Rescheduled) **NT** (No Action Taken) ARRAY(3)="status1;status2" etc.	S ARRAY(3)="I" S ARRAY(3)="R;I;NT" S ARRAY(3)="CC;CCR;CP;CPR"

PATIENT DFN	ARRAY(4)	List of valid patient DFNs (each separated by a semicolon) or a global root or a local root. DFN must exist on PATIENT file. ARRAY(4)="dfn1;dfn2" etc. ARRAY(4)="^global(" ARRAY(4)="^global(#" ARRAY(4)="^global(#," ARRAY(4)="local(" ARRAY(4)="local(#" ARRAY(4)="local(#,"	S ARRAY(4)=7179940 S ARRAY(4)="7179940;7179939;7179920" S ARRAY(4)="^GBL(" S ARRAY(4)="^GBL(""IENLIST""" S ARRAY(4)="^GBL(""IENLIST""," S ARRAY(4)="LOCAL(" S ARRAY(4)="LOCAL(""IENLIST""" S ARRAY(4)="LOCAL(""IENLIST"","
PRIMARY STOP CODE	ARRAY(13)	List of valid Primary Stop Code values (not IENs). Must be a valid AMIS REPORTING STOP CODE (field #1) on the CLINIC STOP file (#40.7). ARRAY(13)="code1;code2" etc.	S ARRAY(13)=197 S ARRAY(13)="197;198;200;203;207"
DATE APPOINTMENT MADE	ARRAY(16)	Range of Date Appointment Made dates; "from" and "to" dates separated by a semicolon. Dates must be in the FileMan format YYYMMDD (note: time is not allowed). Array(16)= "from date; to date"	S ARRAY(16)= "3040101;3040101" (all appts that have a Date Appointment Made date of 3040101) S ARRAY(16)= "3040101" (appts that have a Date Appointment Made date from 3040101 forward) S ARRAY(16)= ";3031231" (all appts that have a Date Appointment Made date through 3031231) S ARRAY(16)=DT (all appts that have a Date Appointment Made date from today forward) S ARRAY(16)= DT_";3041231" (all appts that have a Date Appointment Made date from today through 3041231)

Input – Other Array Entries

DESCRIPTION	ARRAY ENTRY	Format	Examples of Array with filter
Field List - **Required**.	ARRAY("FLDS")	List of appointment field IDs, each separated by a semicolon. Order of fields is irrelevant. See "Data Fields" for the list of appointment field IDs. Or if all fields are required, then set array to "ALL" (case is irrelevant). ARRAY("FLDS")="id1;id2;id3", etc. ARRAY("FLDS")="ALL"	ARRAY("FLDS")="1;2;3;6;7;14;20" ARRAY("FLDS")=1 ARRAY("FLDS")="ALL" ARRAY("FLDS")="all"
Max Appointments - Optional	ARRAY("MAX")	Maximum number of appointments requested. Must be a whole number not equal to 0. ARRAY("MAX")=value If value > 0 or value="" return first "**N**" appointments. Else if value < 0 return last **"N**" appointments.	ARRAY("MAX")=1 ARRAY("MAX")=-1
Sort Appointments by Patient DFN – Optional	ARRAY("SORT")	Allows the output to be sorted by Patient, instead of by Patient and Clinic. Must be set to 'P'. ARRAY("SORT")=value	ARRAY("SORT")="P"
Include Purged Appointments - Optional	ARRAY("PURGED")	Allows the user to receive non-canceled Appts that were purged from sub-file #44.003. ARRAY("PURGED")=1	ARRAY("PURGED")=1

The Field List array entry must be populated, or else error 115 will be generated. See "SDAPI - Error Codes" for a complete list of error codes and messages.

The Maximum Appointments array entry is best used to retrieve the next or last **"n**" appointments for 1 patient and/or 1 clinic, in conjunction with the appointment date/time filter.

Note: If the Maximum Appointment array entry is set to a valid value and more than 1 patient and/or more than 1 clinic are passed to the API, or if no patient and clinic is passed to the API, the error 115 will be generated. See "SDAPI - Error codes" for a complete list of error codes and messages.

SDAPI - Error Codes

Error Codes and Associated Messages

Error Code	Error Message	Occurs…
101	DATABASE IS UNAVAILABLE	If the Scheduling database or VistALink is unavailable
115	INVALID INPUT ARRAY ENTRY	If the input array has an invalid entry or the field list is null
116	DATA MISMATCH	If VistA and the database are out of sync. i.e., the database returns an IEN not found on VistA
117	SDAPI ERROR	For catching new error codes that could be added at a later time.

Error codes 101, 116 and 117 will not occur until the RSA has been implemented. Coding for these error codes needs to be done now so that no other coding changes will need to be made in the future. Each application will need to decide how to handle the return of those three error codes.

SDAPI - Constraints

API Constraints

Cancelled appointments are returned only if the patient filter is populated.

Cancelled appointments will always have null values in the following fields:

Length of Appointment	Eligibility of Visit	Comments
Check-Out Date/Time	Check-In Date/Time	Overbook

Note: If you want canceled appointments, but don't want to specify a subset of patients, then set the patient filter [ARRAY(4)] equal to "^DPT(". This will result in canceled appointments being returned. Note, however, that this will decrease the performance time of the API, as it will spin through the entire VistA Patient file, looking for appointments in the specified clinics (if filter is populated). It will, however, have no negative performance impact when it retrieves appointments from the RSA.

The Max Appointments array entry can only be used with 1 patient and/or 1 clinic. If multiple patients and/or clinics are passed or no clinic and/or patient is passed, an error message will be generated.

Use of the PURGED array parameter requires 2 conditions to be met: the patient filter must be populated; and the field list must not contain fields 5-9, 11, 22, 28, 30, 31, or 33, otherwise error 115 will be returned.

Application Programmer Interface - GETAPPT

Name: GETAPPT ; Retrieve Appointment Data for a Patient ID

Declaration: GETAPPT^SDAMA201(SDIEN,SDFIELDS,SDAPSTAT, SDSTART,SDEND,SDRESULT,SDIOSTAT)

Description: Returns appointment information for a specific patient ID. To use this API, subscribe to Integration Agreement #3859.

Arguments:

SDIEN	Patient IEN (required)
SDFIELDS	Field List (optional, each field number separated by a semi-colon)
SDAPSTAT	Appointment Status Filter (optional, each value separated by a semi-colon. See "Filters" for default and valid values)
SDSTART	Start Date (optional, internal FileMan format)
SDEND	End Date (optional, internal FileMan format)
SDRESULT	Local variable to hold returned appointment Count (optional, passed by reference)
SDIOSTAT	Patient Status Filter (optional, see "Filters" for default and valid values)

Field List: A null value in this parameter will result in ALL appointment data fields being returned. See "Data Fields" for a list of the field numbers and corresponding data available in this API.

Return Values:

If no errors occur and appointments are found, SDRESULT will contain the appointment count and the requested data will be returned in: ^TMP($J,"SDAMA201","GETAPPT",x,y) = field y data where 'x' is an incremental appointment count (starting with 1) and 'y' is the field number requested.

If no errors occur and no appointments are found, then SDRESULT will contain a value of 0 and the ^TMP($J,"SDAMA201","GETAPPT",x,y) array will not be generated.

If an error occurs, SDRESULT will be –1 and the error codes and messages will be returned in ^TMP($J,"SDAMA201","GETAPPT","ERROR",error code) = error message. See "Error Codes" for a list of error codes and messages.

Other: When processing has completed, kill the temporary array: ^TMP($J,"SDAMA201","GETAPPT")

GETAPPT Examples

1) Retrieve scheduled/kept inpatient appointment date/time, clinic ID, appt status, comments, and patient status for patient 99 from 1/1/02 through 1/31/02:

```
>D
GETAPPT^SDAMA201(99,"1;2;3;6;12","R",3020101,3020131,.SDRESULT,"I")
>ZW SDRESULT
SDRESULT=3

>ZW ^TMP($J,"SDAMA201","GETAPPT")

^TMP(1000,"SDAMA201","GETAPPT",1,1)=3020101.10
^TMP(1000,"SDAMA201","GETAPPT",1,2)=130^TOM'S CLINIC
^TMP(1000,"SDAMA201","GETAPPT",1,3)="R"
^TMP(1000,"SDAMA201","GETAPPT",1,6)="PATIENT REQUESTS A RIDE HOME"
^TMP(1000,"SDAMA201","GETAPPT",1,12)="I"
^TMP(1000,"SDAMA201","GETAPPT",2,1)=3020115.08
^TMP(1000,"SDAMA201","GETAPPT",2,2)= 150^BOB'S CLINIC
^TMP(1000,"SDAMA201","GETAPPT",2,3)="R"
^TMP(1000,"SDAMA201","GETAPPT",2,6)=
^TMP(1000,"SDAMA201","GETAPPT",2,12)="I"
^TMP(1000,"SDAMA201","GETAPPT",3,1)=3020115.09
^TMP(1000,"SDAMA201","GETAPPT",3,2)= 150^BOB'S CLINIC
^TMP(1000,"SDAMA201","GETAPPT",3,3)="R"
^TMP(1000,"SDAMA201","GETAPPT",3,6)="WHEELCHAIR REQUESTED"
^TMP(1000,"SDAMA201","GETAPPT",3,12)="I"
```

2) Retrieve inpatient and outpatient appointment date/time, clinic ID, appointment status, and comments for patient 99 from 1/1/02 at 8am through 1/31/02 for scheduled/kept appointments:

```
>D GETAPPT^SDAMA201(99,"1;2;3;6","R",3020101.08,3020131,.SDRESULT)
>ZW SDRESULT
SDRESULT=2

>ZW ^TMP($J,"SDAMA201","GETAPPT")

^TMP(1000,"SDAMA201","GETAPPT",1,1)=3020101.10
^TMP(1000,"SDAMA201","GETAPPT",1,2)=130^TOM'S CLINIC
^TMP(1000,"SDAMA201","GETAPPT",1,3)="R"
^TMP(1000,"SDAMA201","GETAPPT",1,6)="PATIENT REQUESTS A RIDE HOME"
^TMP(1000,"SDAMA201","GETAPPT",2,1)=3020115.09
^TMP(1000,"SDAMA201","GETAPPT",2,2)= 150^BOB'S CLINIC
^TMP(1000,"SDAMA201","GETAPPT",2,3)="R"
^TMP(1000,"SDAMA201","GETAPPT",2,6)="WHEELCHAIR REQUESTED"
```

Application Programmer Interface - NEXTAPPT

Name: NEXTAPPT ; Retrieve Next Appointment Data for a Patient ID

Declaration: $$NEXTAPPT^SDAMA201(SDIEN,SDFIELDS, SDAPSTAT,SDIOSTAT)

Description: This API returns requested next appointment information for a patient ID and should be called using an EXTRINSIC call. The "next" appointment is defined as the next appointment on file after the current date/time. To use this API, subscribe to Integration Agreement #3859.

Arguments:

SDIEN	Patient IEN (required)
SDFIELDS	Field List (optional, each field number separated by a semi-colon)
SDAPSTAT	Appointment Status Filter (optional, each value separated by a semi-colon. See "Filters" for default and valid values)
SDIOSTAT	Patient Status Filter (optional, see "Filters" for default and valid values)

Field List: A null value in this parameter will result in NO appointment data fields being returned. See "Data Fields" for a list of the field numbers and corresponding data available in this API.

Return Values:

This API will return "-1" if an error occurred, "0" if no future appointment is found, or "1" if a future appointment was found.

If no future appointment is found, then the ^TMP($J,"SDAMA201","NEXTAPPT",y) array will not be generated.

If the user enters an optional field list and a future appointment is found, the data for the next appointment will be returned in ^TMP($J,"SDAMA201","NEXTAPPT",y) = field y data where 'y' is the field number requested.

If an error occurs, the error codes and messages will be returned in ^TMP($J,"SDAMA201","NEXTAPPT","ERROR",error code) = error message. See "Error Codes" for a list of error codes and messages.

Other: When processing has completed, kill the temporary array: ^TMP($J,"SDAMA201","NEXTAPPT")

NEXTAPPT Examples

1) See if patient 321 has a future appointment (inpatient or outpatient).

```
I  $$NEXTAPPT^SDAMA201(321) D
. ; insert code here to continue processing as needed
```

No appointment data is returned from the above example because no fields were passed in.

2) If patient 99 has a future scheduled inpatient appointment, retrieve appointment date/time, clinic ID, appointment status, and patient status:

```
I $$NEXTAPPT^SDAMA201(99,"1;2;3;12","R","I")  D
. S NEXTDATE=$G(^TMP($J,"SDAMA201","NEXTAPPT",1))
. S CLINIEN=+$G(^TMP($J,"SDAMA201","NEXTAPPT",2))
. S APPTSTAT=$G(^TMP($J,"SDAMA201","NEXTAPPT",3))
. S PATSTATS=$G(^TMP($J,"SDAMA201","NEXTAPPT",12))
```

```
>ZW ^TMP($J,"SDAMA201","NEXTAPPT")
^TMP(1000,"SDAMA201","NEXTAPPT",1)=3030115.10
^TMP(1000,"SDAMA201","NEXTAPPT",2)=130^SAM'S CLINIC
^TMP(1000,"SDAMA201","NEXTAPPT",3)=R
^TMP(1000,"SDAMA201","NEXTAPPT",12)="I"
```

3) If patient 111 has a future appointment (scheduled, cancelled, or no-show), retrieve appointment date/time, clinic ID, appointment status, and patient status:

```
I $$NEXTAPPT^SDAMA201(111,"1;2;3;12")  D
. S NEXTDATE=$G(^TMP($J,"SDAMA201","NEXTAPPT",1))
. S CLINIEN=+$G(^TMP($J,"SDAMA201","NEXTAPPT",2))
. S APPTSTAT=$G(^TMP($J,"SDAMA201","NEXTAPPT",3))
. S PATSTATS=$G(^TMP($J,"SDAMA201","NEXTAPPT",12))


>ZW ^TMP($J,"SDAMA201","NEXTAPPT")
^TMP(1000,"SDAMA201","NEXTAPPT",1)=3030130.10
^TMP(1000,"SDAMA201","NEXTAPPT",2)=130^SAM'S CLINIC
^TMP(1000,"SDAMA201","NEXTAPPT",3)=C
^TMP(1000,"SDAMA201","NEXTAPPT",12)=""
```

Note that a cancelled appointment was returned above because the appointment status filter was undefined and it was the next appointment on the file. The patient status was returned with a value of null.

Application Programmer Interface - GETPLIST

Name: GETPLIST ; Retrieve Appointment Data for a Clinic ID

Declaration: GETPLIST^SDAMA202(SDIEN,SDFIELDS,SDAPSTAT, SDSTART,SDEND,SDRESULT, SDIOSTAT)

Description: Returns requested clinic appointment information for a specific clinic ID. To use this API, subscribe to Integration Agreement #3869. Note: This API will return appointment information for 'regular', 'no-show', and 'no action taken' appointments only; while the appointment data is located in VistA, cancelled appointments will not be returned because they are not retained on the Hospital Location sub-files (44.001, 44.003).

Arguments:

SDIEN	Clinic IEN (required)
SDFIELDS	Field List (optional, each field number separated by a semi-colon)
SDAPSTAT	Appointment Status Filter (optional, each value separated by a semi-colon. See "Filters" for default and valid values)
SDSTART	Start Date/time (optional, internal FileMan format)
SDEND	End Date/time (optional, internal FileMan format)
SDRESULT	Local variable to hold returned appointment count (optional, passed by reference)
SDIOSTAT	Patient Status Filter (optional, see "Filters" for default and valid values)

Field List: A null value in this parameter will result in ALL appointment data fields being returned. See "Data Fields" for a list of the field numbers and corresponding data available in this API.

Return Values:

If no errors occur and appointments are found, SDRESULT will contain the appointment count and the data will be returned in ^TMP($J,"SDAMA202","GETPLIST",x,y) = field y data where 'x' is an incremental appointment count (starting with 1) and 'y' is the field number requested.

If no errors occur and no appointments are found, then SDRESULT will contain a value of 0 and the ^TMP($J,"SDAMA202","GETPLIST",x,y) array will not be generated.

If an error occurs, SDRESULT will be –1 and the error codes and messages will be returned in ^TMP($J,"SDAMA202","GETPLIST","ERROR",error code) = error message. See "Error Codes" for a list of error codes and messages.

Other: When processing has completed, kill the temporary array: ^TMP($J,"SDAMA202","GETPLIST")

GETPLIST Example

Retrieve inpatient and outpatient appointment date/time, patient ID, and length of appointment for clinic 100 for 1/1/02 from 8am to 10am:

```
>D GETPLIST^SDAMA202(100,"1;4;5",,3020101.08,3020101.1,.SDRESULT)
>ZW SDRESULT
SDRESULT=4

>ZW ^TMP($J,"SDAMA202","GETPLIST")

^TMP(1000,"SDAMA202","GETPLIST",1,1)=3020101.08
^TMP(1000,"SDAMA202","GETPLIST",1,4)=4564^JONES,CANDACE
^TMP(1000,"SDAMA202","GETPLIST",1,5)=60
^TMP(1000,"SDAMA202","GETPLIST",2,1)=3020101.09
^TMP(1000,"SDAMA202","GETPLIST",2,4)=9007^HEADRICK,ANITA
^TMP(1000,"SDAMA202","GETPLIST",2,5)=30
^TMP(1000,"SDAMA202","GETPLIST",3,1)=3020101.093
^TMP(1000,"SDAMA202","GETPLIST",3,4)=24389^SIMPSON,LEANORA
^TMP(1000,"SDAMA202","GETPLIST",3,5)=30
^TMP(1000,"SDAMA202","GETPLIST",4,1)=3020101.1
^TMP(1000,"SDAMA202","GETPLIST",4,4)=40374^SMITH,SAMUEL
^TMP(1000,"SDAMA202","GETPLIST",4,5)=30
```

Application Programmer Interface - PATAPPT

Name: PATAPPT ; Check for existence of any appointment for a patient

Declaration: PATAPPT^SDAMA204(SDDFN)

Description: Returns 1, 0, -1 according to the existence of appointment(s) for a patient ID. To use this API, please subscribe to Integration Agreement #4216.

Argument: SDDFN Patient IEN (required)

Return Values:

Patient scheduling record(s)	Value Returned
Appointment(s) on file	1
No Appointment(s) on file	0
Error	-1

Depending on the existence of appointment(s) for a specific patient ID, an extrinsic value will be returned according to the Return Values table listed above.

If an error occurs, a –1 will be returned, and a node with error information will be created. The format will be:

W $$PATAPPT^SDAMA204(0)
-1

The error information will reside in the following node:

ZW ^TMP(634,"SDAMA204","PATAPPT","ERROR")

^TMP(634,"SDAMA204","PATAPPT","ERROR",114)="INVALID PATIENT ID"

See “Error Codes” for a list of error codes and messages.

This function does not remove the ^TMP node created when an error occurs. It is the calling program’s responsibility to delete the node.

PATAPPT Examples

The following examples show the initialization of variable X with the value from the function $$PATAPPT^SDAMA204(SDDFN):

1) Patient Appointments Exists

```
Cache>S X=$$PATAPPT^SDAMA204(123)
Cache>W X
1
```

2) No Patient Appointments Exists

```
Cache>S X=$$PATAPPT^SDAMA204(11)
Cache>W X
0
```

3) Invalid Patient ID

```
Cache>S X=$$PATAPPT^SDAMA204(0)
Cache>W X
-1

Cache>ZW ^TMP($J,"SDAMA204","PATAPPT","ERROR")
^TMP(659,"SDAMA204","PATAPPT","ERROR",114)="INVALID PATIENT ID"
```

Error Codes

Error Codes and Associated Messages

101	DATABASE IS UNAVAILABLE
102	PATIENT ID IS REQUIRED
103	INVALID FIELD LIST
104	CLINIC ID IS REQUIRED
105	INVALID START DATE
106	INVALID END DATE
108	FACILITY ID IS REQUIRED
109	INVALID APPOINTMENT STATUS FILTER
110	ID MUST BE NUMERIC
111	START DATE CAN'T BE AFTER END DATE
112	INVALID PATIENT STATUS FILTER
113	APPT STATUS AND PATIENT STATUS FILTER COMBINATION UNSUPPORTED IN VISTA
114	INVALID PATIENT ID

Data Fields

Available Data Fields

ID	FIELD NAME	DATA TYPE	Format or Valid Values	Description	Examples of Returned Data
1	APPOINTMENT DATE/TIME	DATE/TIME	YYYMMDD@HHMM	The scheduled Appointment Date/Time	3021215@113 3021201@0815
2	CLINIC ID and NAME	POINTER and TEXT	ID^name	Clinic ID and name	150^CARDIOLOGY 32^TOM'S CLINIC
3	APPOINTMENT STATUS	ALPHA	**N** (No-Show) **C** (Cancelled) **R** (Scheduled/Kept) **NT** (No Action Taken)	The status of the appointment. N for no-show appointment, C for cancelled appointment (cancelled for ANY reason), NT for no action taken, and R for a future appointment or a past kept appointment	N C R NT
4	PATIENT ID and NAME	POINTER and TEXT	ID^name	Patient ID and name	34877^JONES,BOB 455^SCHILSON,BRIAN
5	LENGTH OF APPOINTMENT	NUMERIC	NNN	The scheduled length of appointment, in minutes	20 60
6	COMMENTS	TEXT	free text	Any comments associated with the appointment	PATIENT NEEDS WHEELCHAIR
7	OVERBOOK	TEXT	**Y** or **N**	"Y" if appointment is an overbook else "N"	Y N
8	ELIGIBILITY OF VISIT ID and NAME	POINTER and TEXT	ID^name	Eligibility code and name associated with the appointment	2^AID & ATTENDANCE 7^ALLIED VETERAN 13^COLLATERAL OF VET.
9	CHECK-IN DATE/TIME	DATE/TIME	YYYMMDD@HHMM	Date/time the patient checked in for the appointment	3021215@113
10	APPOINTMENT TYPE ID and NAME	POINTER and TEXT	ID^name	Type of appointment ID and name	1^COMPENSATION & PENSION 3^ORGAN DONORS 7^COLLATERAL OF VET.
11	CHECK-OUT DATE/TIME	DATE/TIME	YYYMMDD@HHMM	Date/time the patient checked out of the appointment	3021215@113
12	PATIENT STATUS	TEXT	**I** **O** null	For future, scheduled appointments, the current status of the patient. For past, kept appointments, the status at the time of the appointment. For cancelled and no-show appointments, this will be null	I O ""

Filters

Valid Appointment Status Filters

The SDAPSTAT filter parameter can be used if you wish to screen on appointment status. If this parameter contains a value or set of values, then those appointments will be returned in the resulting array set. Request more than 1 value in the filter by separating them with a semi-colon (i.e. SDAPSTAT="R;NT"). A null or undefined value will result in all being returned.

Appt Status Filter value	Appointment Status Value(s) Returned
R	R (scheduled/kept)
N	N (no-show)
C	C (cancelled)
NT	NT (no action taken)
Null (default)	ALL appointment status values will be returned: R (scheduled/kept) N (no-show) C (cancelled) NT (no action taken)

Valid Patient Status Filters

The SDIOSTAT filter parameter can be used if you wish to retrieve only inpatient records or only outpatient records. A null or undefined value will result in both being returned.

Patient Status Filter value	Description
I	Inpatient
O	Outpatient
Null (default)	Both will be returned (inpatient and outpatient)

Valid Patient Status and Appointment Status Filter Combinations

Due to the design of VistA, **the patient status (new field #12) of appointments that are cancelled, no-show, or no action taken, will not be available.** If the patient status field is requested, a null value will be returned in the ^TMP output global for this field. Patient status is determined by analyzing the value of the STATUS field (#3) on the Patient subfile (2.98). Inpatient appointments contain an "I" in this field and are identified only if the field has not been changed (cancelled, etc.). Therefore, if the user wishes to specifically request only inpatient appointments (using the Patient Status filter = "I"), then the Appointment Status filter must be set to "R". Any other value in the Appointment Status filter (including null or undefined) will cause an error (#113) to be generated and returned in the ^TMP global. The same is true when specifically requesting outpatient appointments. To retrieve No-Show, Cancelled, or No Action Taken appointments, the Patient Status filter must be left null or undefined. See table below for results of combinations of these two filters.

Patient Status Filter	Appointment Status Filter	Valid/Invalid	Patient Status value in ^TMP (if requested)
I or O	R	Valid	I for inpatient appointments, O for outpatient appointments
I or O	N	Invalid	N/A
I or O	C	Invalid	N/A
I or O	NT	Invalid	N/A
I or O	Any combination of R, N, C, and NT	Invalid	N/A
I or O	Null/Undefined	Invalid	N/A
Null/Undefined	R	Valid	I for inpatient appointments; O for outpatient appointments
Null/Undefined	N	Valid	Null
Null/Undefined	C	Valid	Null
Null/Undefined	NT	Valid	Null
Null/Undefined	Null/Undefined, or any combination of R, N, C, and NT	Valid	I or O for scheduled/kept inpatient and outpatient appointments; null for cancelled, no-show, and no action taken appointments

Patient Status filter key
I = Inpatient
O = Outpatient

Appointment Status filter key
R = scheduled/kept appointments
N = all no-show appointments
C = all cancelled appointments
NT = no action taken appointments

Application Programmer Interface - SDIMO

Name: SDIMO; Inpatient Medications for Outpatients

Declaration: $$SDIMO^SDAMA203(SDCLIEN,SDDFN)

Description: This API returns encounter date/time for a clinic IEN and patient DFN. If the patient does not have an encounter in the specified clinic today (or yesterday if current time is before 6am), then the patient's scheduled appointment date/time for that clinic, today or in the future (or yesterday if current time is before 6am), is returned. This API should be called using an EXTRINSIC call.

Arguments:

SDCLIEN	Clinic IEN (required)
SDDFN	Patient DFN (required)

Return Values:

1	Patient has at least one encounter today or one scheduled appointment today or in the future in the authorized clinic
0	Patient does not have an encounter today or an appointment today or in the future in the authorized clinic
-1	Clinic is not authorized, clinic is inactive, or clinic IEN is null
-2	Patient DFN is null
-3	Scheduling Database is unavailable
SDIMO(1)	Encounter date/time or appointment date/time

If a 1 is returned, then the variable SDIMO(1) will contain the encounter or appointment date/time. If something other than a 1 is returned, the variable SDIMO(1) will not be created.

Other: When processing has completed, the variable SDIMO(1) needs to be killed.

SDIMO Examples

1) Is patient 123 authorized to receive inpatient medication at clinic 800?

```
I $$SDIMO^SDAMA203(800,123) D
. S APPTDT=$G(SDIMO(1))
. K SDIMO(1)
. ;continue processing as needed
```

2) Example of handling an error:

```
S SDRESULT=$$SDIMO^SDAMA203(800,123)
I SDRESULT<1 D
. I SDRESULT=-1 D
.. ;process clinic error as needed
```

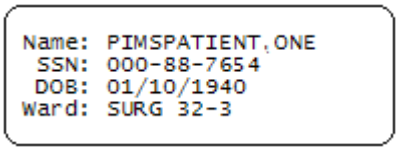
Configuring Bar Code Label Printers

CONFIGURING BAR CODE LABEL PRINTERS FOR PRINT PATIENT LABEL OPTION

1. OVERVIEW

The new Veteran Identification Card (VIC) provided by the VIC Replacement project does not support embossing of protected health information. Instead, a new Print Patient Label [DG PRINT PATIENT LABEL] option will allow labels to be printed with the patient's protected health information. The labels will contain the patient's name, social security number, and date of birth. An optional fourth line contains the patient's inpatient location (ward and room#). The labels may be affixed to medical record forms in lieu of using the current embossed cards to imprint this information.

Example Label



The Print Patient Label [DG PRINT PATIENT LABEL] option was exported with the Veteran ID Card (VIC) Replacement patch (DG*5.3*571). This option was placed on the ADT Outputs Menu [DG OUTPUTS MENU] option. This option supports plain text printing to dot matrix and laser printers by prompting the user for the number of lines that the label stock can contain. In addition, bar code label printers, such as Zebra and Intermec, are supported on systems that have installed the Kernel Support for Bar Code Printers patch (XU*8*205).

2. HARDWARE SETUP

The printer must be physically connected to the network and then defined in the DEVICE (#3.5) and TERMINAL TYPE (#3.2) files.

3. SOFTWARE SETUP

Bar code label printers, such as the Zebra and Intermec printers, require control codes to be defined in the CONTROL CODES subfile (#3.2055) of the TERMINAL TYPE file (#3.2). The patient label print routine (DGPLBL) checks for the existence of the control codes before attempting to execute. Presently, the patient label print routine (DGPLBL) uses eight control codes. DBIA #3435 allows direct MUMPS read access to the CONTROL CODES subfile (#3.2055) of the TERMINAL TYPE file (#3.2). It is not required that all control codes be defined - just build the necessary control codes for the selected printer.

3.1 Control Code Overview

These are the control codes that are currently used by the patient label print routine (DGPLBL). In order for the routine to work correctly, these control codes must be entered through FileMan in the CONTROL CODES subfile (#3.2055) of the TERMINAL TYPE file (#3.2) using the names listed below.

Code	Description
FI	Format Initialization
FE	Format End
SL	Start of Label
EL	End of Label
ST	Start of Text
ET	End of Text
STF	Start of Text Field
ETF	End of Text Field

3.2 Patient Label Print Routine Control Code Use

The following pseudo-code listing shows the flow and the points at which each of the control codes are used. It is not required that all control codes be defined - just build the necessary control codes for the selected printer.

a. Label print routine invoked.
b. Control codes loaded into local array DGIOCC. Variable DGIOCC is defined to indicate whether or not control codes exist.
c. Format Initialization.
d. For each label printed:
   Start of Label
   Start of Text*
   Start of Text Field*
   Text Information*
   End of Text Field*
   End of Text*
   End of Label.
e. Format End.

* indicates items that may be executed repeatedly

3.3 Label Printer Setup Examples

The following are examples of the control codes setup in the CONTROL CODES subfile (#3.2055) of the TERMINAL TYPE file (#3.2) for the Zebra and Intermec label printers. These printers were used during the development process, and the examples are provided to guide the user in the control code setup. The examples provided are based on a 1 ½ by 3 ½ inch label.

3.4 Zebra Label Printer

Example: Control Codes Setup for Horizontal Labels

```
NUMBER: 1
  ABBREVIATION: FI
     FULL NAME: FORMAT INITIALIZATION
  CONTROL CODE: W "^XA",!,"^LH0,0^FS",!
NUMBER: 2
  ABBREVIATION: SL
     FULL NAME: START LABEL
  CONTROL CODE: W "^XA",! S DGY=30,DGX=10
NUMBER: 3
  ABBREVIATION: ST
     FULL NAME: START TEXT
  CONTROL CODE: W "^FO",DGX,",",DGY,"^A0N,30,30" S DGY=DGY+40
NUMBER: 4
  ABBREVIATION: STF
     FULL NAME: START TEXT FIELD
  CONTROL CODE: W "^FD"
NUMBER: 5
  ABBREVIATION: ETF
     FULL NAME: END TEXT FIELD
  CONTROL CODE: W "^FS",!
NUMBER: 6
  ABBREVIATION: EL
     FULL NAME: END LABEL
  CONTROL CODE: W "^XZ",!
```

Example: Control Codes Setup for Vertical Labels

```
NUMBER: 1
  ABBREVIATION: FI
     FULL NAME: FORMAT INITIALIZATION
  CONTROL CODE: W "^XA",!,"^LH0,0^FS",!
NUMBER: 2
  ABBREVIATION: SL
     FULL NAME: START LABEL
  CONTROL CODE: W "^XA",! S DGY=50,DGX=190
NUMBER: 3
  ABBREVIATION: ST
     FULL NAME: START TEXT
  CONTROL CODE: W "^FO",DGX,",",DGY,"^A0R,30,20" S DGX=DGX-40
NUMBER: 4
  ABBREVIATION: STF
     FULL NAME: START TEXT FIELD
  CONTROL CODE: W "^FD"
NUMBER: 5
  ABBREVIATION: ETF
     FULL NAME: END TEXT FIELD
  CONTROL CODE: W "^FS",!
NUMBER: 6
  ABBREVIATION: EL
     FULL NAME: END LABEL
  CONTROL CODE: W "^XZ",!
```

3.5 Intermec Label Printer

Intermec label printers require that a label format be sent to the printer prior to sending any data to print. The label format is defined in an M routine, which is then defined in the OPEN EXECUTE field (#6) of the TERMINAL TYPE file (#3.2). Two sample formats are provided with patch DG*5.3*571 in routine DGPLBL1. The entry point HINTERM^DGPLBL1 creates a horizontal format label and the entry point VINTERM^DGPLBL1 creates a vertical format label. The following setup examples show the OPEN EXECUTE (#6) and CONTROL CODES (#55) field values that were used in the development process and are provided to guide the user in this setup. The examples are based on a 1 ½ by 3 ½ inch label.

Example: Control Codes Setup for Horizontal Labels

```
OPEN EXECUTE: D HINTERM^DGPLBL1

NUMBER: 1
  ABBREVIATION: FI
  FULL NAME: FORMAT INITIALIZATION
  CONTROL CODE: W "<STX>R;<ETX>",!
NUMBER: 2
  ABBREVIATION: SL
  FULL NAME: START LABEL
  CONTROL CODE: W "<STX><ESC>E2<ETX>",!,"<STX><CAN><ETX>",!
NUMBER: 3
  ABBREVIATION: ST
  FULL NAME: START TEXT
  CONTROL CODE: W "<STX>”
NUMBER: 4
  ABBREVIATION: ET
  FULL NAME: END TEXT
  CONTROL CODE: W "<CR><ETX>",!
NUMBER: 5
  ABBREVIATION: EL
  FULL NAME: END LABEL
  CONTROL CODE: W "<STX><ETB><ETX>",!
```

Example: Control Codes Setup for Vertical Labels

```
OPEN EXECUTE: D VINTERM^DGPLBL1

NUMBER: 1
  ABBREVIATION: FI
  FULL NAME: FORMAT INITIALIZATION
  CONTROL CODE: W "<STX>R;<ETX>",!
NUMBER: 2
  ABBREVIATION: SL
  FULL NAME: START LABEL
  CONTROL CODE: W "<STX><ESC>E2<ETX>",!,"<STX><CAN><ETX>",!
NUMBER: 3
  ABBREVIATION: ST
  FULL NAME: START TEXT
  CONTROL CODE: W "<STX>”
NUMBER: 4
  ABBREVIATION: ET
  FULL NAME: END TEXT
  CONTROL CODE: W "<CR><ETX>",!
NUMBER: 5
  ABBREVIATION: EL
  FULL NAME: END LABEL
  CONTROL CODE: W "<STX><ETB><ETX>",!
```

HL7 Interface Specifications

HL7 INTERFACE SPECIFICATION FOR THE TRANSMISSION OF AMBULATORY CARE DATA

1. INTRODUCTION

This interface specification specifies the information needed for Ambulatory Care data reporting. This data exchange will be triggered by specific outpatient events that relate to workload credit in **V*IST*A**. The basic communication protocol will be addressed, as well as the information that will be made available and how it will be obtained.

1.1 General

This application will use the abstract message approach and encoding rules specified by HL7. HL7 is used for communicating data associated with various events which occur in health care environments.

For example, when a check out occurs in **V*IST*A**, the event will trigger an update patient information message. This message is an unsolicited transaction to all external systems interfacing with **V*IST*A**.

The formats of these messages conform to the Version 2.3 HL7 Interface Standards where applicable. HL7 custom message formats ("Z" segments) are used only when necessary.

1.2 Assumptions

Assumptions have been made at the beginning of this project in order to help define the scope and meet the initial needs in interfacing with the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)).

1.2.1 Message Content

The data sent in the HL7 messages will be limited to the information that can be processed by the AITC, with the exception of the PID and ZPD segments, which will be populated using the nationally supported **V*IST*A** call. The data sent will also be limited to what is available in **V*IST*A**.

In order to capture the most information, specific outpatient events will generate messages to the AITC systems. This is not intended to cover all possible outpatient events, only those events which may result in the capture of workload information and data needed to update the National Patient Care Database (NPCDB). The mode for capturing data for outpatient events was chosen to capture as much of the data as possible. (See Data Capture and Transmission (1.2.2) for further information on the mode for capturing the outpatient events.)

1.2.2 Data Capture and Transmission

When AICS, PIMS, and PCE options or calls are used to update specific outpatient encounter data in **V*IST*A**, these events and changes will be captured. Any changes made to the **V*IST*A** database in non-standard ways, such as a direct global set by an application or by MUMPS code, will not be captured.

1.2.3 Background Messages

A nightly background job will be sending HL7 messages for each outpatient encounter event for the day.

1.2.4 Batch Messages

Batch messages will be used to transmit the outpatient encounter events.

1.2.5 Batch Acknowledgments

Each batch message sent will be acknowledged at the application level. The batch acknowledgment will contain acknowledgment messages only for those messages containing errors. Using this mode, it is possible that an empty batch acknowledgment will be sent. This will happen only when all messages in the batch being acknowledged were accepted.

1.2.6 VA MailMan Lower Level Protocol

HL7 V. 1.6 of the VA MailMan lower level protocol (LLP) will be used. This version of the VA MailMan LLP differs from HL7 V. 1.5 in that a blank line is placed between each segment in the message [denoting a carriage return].

2. HL7 CONTROL SEGMENTS

This section defines the HL7 control segments supported by **V*IST*A**. The messages are presented separately and defined by category. Segments are also described. The messages are presented in the following categories:

- Message Control
- Unsolicited Transactions from **V*IST*A** (Section 3)

2.1 Message Definitions

From the **V*IST*A** perspective, all incoming or outgoing messages are handled or generated based on an event.

In this section, and the following sections, these elements will be defined for each message:

- The trigger events
- The message event code
- A list of segments used in the message
- A list of fields for each segment in the message

Each 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 or "Z" segments used for the message.

2.2 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. Each segment is described in the following sections.

2.3 Message Control Segments

This section describes the message control segments which are contained in message types described in this document. These are generic descriptions. Any time any of the segments described in this section are included in a message in this document, the **V*IST*A** descriptions and mappings will be as specified here, unless otherwise specified in that section.

2.3.1 MSH - Message Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	1	ST	R			Field Separator	Recommended value is **^** (caret)
2	4	ST	R			Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat = **|** (bar) Escape = \ (back slash) Subcomponent = **&** (ampersand)
3	15	ST				Sending Application	When originating from facility: **AMBCARE-DH441** When originating from NPCDB: **NPCD-AAC***
4	20	ST				Sending Facility	When originating from facility: Station's facility number When originating from NPCDB: **200**
5	30	ST				Receiving Application	Not used
6	30	ST				Receiving Facility	Not used
7	26	TS				Date/Time Of Message	Date and time message was created
8	40	ST				Security	Not used
9	7	CM	R		0076 0003	Message Type	2 Components: Component 1: *Refer to Table 0076* Component 2: *Refer to Table 0003*
10	20	ST	R			Message Control ID	Automatically generated by **VISTA** HL7 Package
11	1	ID	R		0103	Processing ID	**P** (production)
12	8	ID	R		0104	Version ID	**2.3** (Version 2.3)
13	15	NM				Sequence Number	Not used
14	180	ST				Continuation Pointer	Not used
15	2	ID			0155	Accept Acknowledgment Type	**NE** (never acknowledge)
16	2	ID			0155	Application Acknowledgment Type	**AL** (always acknowledge)
17	2	ID				Country Code	Not used

*AAC stands for Austin Automation Center. The name of that facility has been changed to Austin Information Technology Center.

2.3.2 BHS - Batch Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	1	ST	R			Batch Field Separator	Recommended value is **^** (caret)
2	4	ST	R			Batch Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat = **|** (bar) Escape = \ (back slash) Subcomponent = **&** (ampersand)
3	15	ST				Batch Sending Application	When originating from facility: **AMBCARE-DH142** When originating from NPCDB: **NPCD-AAC***
4	20	ST				Batch Sending Facility	When originating from facility: Station's facility number When originating from NPCDB: **200**
5	15	ST				Batch Receiving Application	When originating from facility: **NPCD-AAC** When originating from NPCDB: **AMBCARE-DH142**
6	20	ST				Batch Receiving Facility	When originating from facility: **200** When originating from NPCDB: Station's facility number
7	26	TS				Batch Creation Date/Time	Date and time batch message was created
8	40	ST				Batch Security	Not used
9	20	ST				Batch Name/ID/Type	4 Components[4]: Component 1: Not used Component 2: **P** Component 3: **ADT|Z00** Component 4: **2.3**
10	80	ST				Batch Comment	2 Components[5]: Component 1: *Refer to Table 0008* Component 2: Text Message
11	20	ST				Batch Control ID	Automatically generated by **V*IST*A** HL7 Package
12	20	ST				Reference Batch Control ID	Batch Control ID of batch message being acknowledged

*AAC stands for Austin Automation Center. The name of that facility has been changed to Austin Information Technology Center.

[4] The **V*IST*A** HL7 package has placed special meaning on this field.

[5] The **V*IST*A** HL7 package has placed special meaning on this field. Note that this field is only used with batch acknowledgments.

2.3.3 BTS - Batch Trailer Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	10	ST			0093	Batch Message Count	Number of messages within batch
2	80	ST			0094	Batch Comment	Not used
3	100	CM		Y	0095	Batch Totals	Not used

2.3.4 MSA - Message Acknowledgment Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	2	ID	R		0008	Acknowledgment Code	*Refer to Table 0008*
2	20	ST	R			Message Control ID	Message Control ID of message being acknowledged
3	80	ST			NPCD 001	Text Message	Repetitive list of error codes denoting why the message was rejected[6]
4	15	NM				Expected Sequence Number	Not used
5	1	ID			0102	Delayed Acknowledgment Type	Not used
6	100	CE				Error Condition	Not used

2.3.5 EVN - Event Type Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	3	ID	R		0003	Event Type Code	*Refer to Table 0003*
2	26	TS	R			Date/Time of Event	Date/Time Event Occurred
3	26	TS				Date/Time Planned Event	Not used
4	3	ID			0062	Event Reason Code	Not used
5	60	CN			0188	Operator ID	Not used

[6] Special meaning placed on this field to support multiple rejection reasons by the National Patient Care Database (NPCDB).

2.3.6 PID - Patient Identification Segment

Please refer to “Section 3.15.PID-Patient Identification Segment” in the “MPI/PD HL7 Interface Specification” manual found on the VistA Documentation Library (VDL) at the following address.

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

2.3.7 PD1 - Patient Additional Demographic Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	2	IS	O	Y	0223	Living Dependency	Not used
2	2	IS	O		0220	Living Arrangement	Not used
3	90	XON	O	Y		Patient Primary Facility[9]	8 Components 1. Facility name 2. Not used 3. Facility Number 4. Not used 5. Not used 6. Not used 7. Not used 8. Not used
4	90	XCN	O	Y		Patient Primary Care Provider Name & ID no.	14 Components 1. 2 Sub-Components 1.1. Pointer to entry in NEW PERSON file (#200) 1.2. Facility Number 2. Not used 3. Not used 4. Not used 5. Not used 6. Not used 7. Not used 8. This will always be **VA200** (NEW PERSON file) 9. Not used 10. Not used 11. Not used 12. Not used 13. Not used 14. Not used
5	2	IS	O		0231	Student Indicator	Not used
6	2	IS	O		0295	Handicap	Not used
7	2	IS	O		0315	Living Will	Not used
8	2	IS	O		0316	Organ Donor	Not used
9	2	ID	O		0136	Separate Bill	Not used
10	2	CX	O	Y		Duplicate Patient	Not used
11	1	CE	O		0125	Publicity Indicator	Not used
12	1	ID	O		01293	Protection Indicator	Not used

[9] This element is only available from CIRN enabled facilities.

2.3.8 PV1 - Patient Visit Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	4	SI				Set ID - Patient Visit	Sequential Number
2	1	ID	R		0004	Patient Class	This will always be **O** (outpatient)
3	12	CM				Assigned Patient Location	Not used
4	4	ID			0007	Admission Type	*Refer to Table SD009 (Purpose of Visit)*
5	20	ST				Preadmit Number	Not used
6	12	CM				Prior Patient Location	Not used
7	60	CN			0010	Attending Doctor	Not used
8	60	CN			0010	Referring Doctor	Not used
9	60	CN		Y	0010	Consulting Doctor	Not used
10	3	ID			0069	Hospital Service	Not used
11	12	CM				Temporary Location	Not used
12	2	ID			0087	Preadmit Test Indicator	Not used
13	2	ID			0092	Readmission Indicator	Not used
14	3	ID			0023	Admit Source	*Refer to Table 0023 (Location of Visit)*
15	2	ID		Y	0009	Ambulatory Status	Not used
16	2	ID			0099	VIP Indicator	Not used
17	60	CN			0010	Admitting Doctor	Not used
18	2	ID			0018	Patient Type	Not used
19	15	NM				Visit Number	Pointer to entry in OUTPATIENT ENCOUNTER file (#409.68)
20	50	CM		Y	0064	Financial Class	Not used
21	2	ID			0032	Charge Price Indicator	Not used
22	2	ID			0045	Courtesy Code	Not used
23	2	ID			0046	Credit Rating	Not used
24	2	ID		Y	0044	Contract Code	Not used
25	8	DT		Y		Contract Effective Date	Not used
26	12	NM		Y		Contract Amount	Not used
27	3	NM		Y		Contract Period	Not used
28	2	ID			0073	Interest Code	Not used
29	1	ID			0110	Transfer to Bad Debt Code	Not used
30	8	DT				Transfer to Bad Debt Date	Not used
31	10	ID			0021	Bad Debt Agency Code	Not used
32	12	NM				Bad Debt Transfer Amount	Not used
33	12	NM				Bad Debt Recovery Amount	Not used
34	1	ID			0111	Delete Account Indicator	Not used
35	8	DT				Delete Account Date	Not used
36	3	ID			0112	Discharge Disposition	Not used
37	25	CM			0113	Discharged to Location	Not used
38	2	ID			0114	Diet Type	Not used
39	7[10]	ID			0115	Servicing Facility	Facility number and suffix
40	1	ID			0116	Bed Status	Not used
41	2	ID			0117	Account Status	Not used
42	12	CM				Pending Location	Not used
43	12	CM				Prior Temporary Location	Not used
44	26	TS				Admit Date/Time	Date/time of encounter
45	26	TS				Discharge Date/Time	Not used
46	12	NM				Current Patient Balance	Not used
47	12	NM				Total Charges	Not used
48	12	NM				Total Adjustments	Not used
49	12	NM				Total Payments	Not used
50	20	CM				Alternate Visit ID	Unique Identifier (PCE)

[10] According to the HL7 standard, the maximum length of this element is 2.

2.3.9 PV2 - Patient Visit - Additional Information Segment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME	VISTA DESCRIPTION
1	80	PL	C			00181	Prior Pending Location	Not used
2	250	CE	O		0129	00182	Accommodation Code	Not used
3	250	CE	O			00183	Admit Reason	Not used
4	250	CE	O			00184	Transfer Reason	Not used
5	25	ST	O	Y		00185	Patient Valuables	Not used
6	25	ST	O			00186	Patient Valuables Location	Not used
7	2	IS	O	Y	0130	00187	Visit User Code	Not used
8	26	TS	O			00188	Expected Admit Date/Time	Not used
9	26	TS	O			00189	Expected Discharge Date/Time	Not used
10	3	NM	O			00711	Estimated Length of Inpatient Stay	Not used
11	3	NM	O			00712	Actual Length of Inpatient Stay	Not used
12	50	ST	O			00713	Visit Description	Not used
13	250	XCN	O	Y		00714	Referral Source Code	Not used
14	8	DT	O			00715	Previous Service Date	Not used
15	1	ID	O		0136	00716	Employment Illness Related Indicator	Not used
16	1	IS	O		0213	00717	Purge Status Code	Not used
17	8	DT	O			00718	Purge Status Date	Not used
18	2	IS	O		0214	00719	Special Program Code	Not used
19	1	ID	O		0136	00720	Retention Indicator	Not used
20	1	NM	O			00721	Expected Number of Insurance Plans	Not used
21	1	IS	O		0215	00722	Visit Publicity Code	Not used
22	1	ID	O	Y	0136	00723	Visit Protection Indicator	Visit Protection Indicator
23	250	XON	O			00724	Clinic Organization Name	Not used
24	2	IS	O		0216	00725	Patient Status Code	Not used
25	1	IS	O		0217	00726	Visit Priority Code	Not used
26	8	DT	O			00727	Previous Treatment Date	Not used
27	2	IS	O		0112	00728	Expected Discharge Disposition	Not used
28	8	DT	O			00729	Signature on File Date	Not used
29	8	DT	O			00730	First Similar Illness Date	Not used
30	250	CE	O		0218	00731	Patient Charge Adjustment Code	Not used
31	2	IS	O		0219	00732	Recurring Service Code	Not used
32	1	ID	O		0136	00733	Billing Media Code	Not used
33	26	TS	O			00734	Expected Surgery Date and Time	Not used
34	1	ID	O		0136	00735	Military Partnership Code	Not used
35	1	ID	O		0136	00736	Military Non-Availability Code	Not used
36	1	ID	O		0136	00737	Newborn Baby Indicator	Not used
37	1	ID	O		0136	00738	Baby Detained Indicator	Not used
38	250	CE	O		0430	01543	Mode of Arrival Code	Not used
39	250	CE	O	Y	0431	01544	Recreational Drug Use Code	Not used
40	250	CE	O		0432	01545	Admission Level of Care Code	Not used
41	250	CE	O	Y	0433	01546	Precaution Code	Not used
42	250	CE	O		0434	01547	Patient Condition Code	Not used
43	2	IS	O		0315	00759	Living Will Code	Not used
44	2	IS	O		0316	00760	Organ Donor Code	Not used
45	250	CE	O	Y	0435	01548	Advance Directive Code	Not used
46	8	DT	O			01549	Patient Status Effective Date	Not used
47	26	TS	C			01550	Expected LOA Return Date/Time	Not used
48	26	TS	O			01841	Expected Pre-admission Testing Date/Time	Not used

2.3.10 DG1 - Diagnosis Information Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	4	SI	R			Set ID - Diagnosis	Sequential Number
2	2	ID	R		0053	Diagnosis Coding Method	This will always be **I9** (ICD9-CM)
3	8	ID			0051	Diagnosis Code	Diagnosis code from OUTPATIENT DIAGNOSIS (#409.43) and ICD DIAGNOSIS (#80) files *Refer to Table 0051 for sample listing of possible values*
4	40	ST				Diagnosis Description	Corresponding diagnosis description from ICD DIAGNOSIS (#80) file *Refer to Table 0051 for sample listing of possible values*
5	26	TS				Diagnosis Date/Time	Date/time of encounter
6	2	ID			0052	Diagnosis Type	Not used
7	60	CE			0118	Major Diagnostic Category	Not used
8	4	ID			0055	Diagnostic Related Group	Not used
9	2	ID				DRG Approval Indicator	Not used
10	2	ID			0056	DRG Grouper Review Code	Not used
11	60	CE			0083	Outlier Type	Not used
12	3	NM				Outlier Days	Not used
13	12	NM				Outlier Cost	Not used
14	4	ST				Grouper Version And Type	Not used
15	2	NM				Diagnosis Priority	Will contain 1 if this is the primary diagnosis for the episode
16	60	CN				Diagnosing Clinician	Not used

2.3.11 PR1 - Procedure Information Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*ISTA* DESCRIPTION
1	4	SI	R			Set ID - Procedure	Sequential Number
2	2	ID	R		0089	Procedure Coding Method	Not used
3	80	CE	R		0088	Procedure Code	3 Components: 1. Procedure Code 2. Corresponding procedure description from CPT file (#81) 3. Coding Method (this will always be **C4**) *Refer to Table 0088 for sample listing of possible procedure codes and descriptions*
4	40	ST				Procedure Description	Not used
5	26	TS				Procedure Date/Time	Not used
6	2	ID			0090	Procedure Type	Not used
7	4	NM				Procedure Minutes	Not used
8	60	CN				Anesthesiologist	Not used
9	2	ID			0019	Anesthesia Code	Not used
10	4	NM				Anesthesia Minutes	Not used
11	60	CN				Surgeon	Not used
12	60	CM		Y		Procedure Practitioner	Not used
13	2	ID			0059	Consent Code	Not used
14	2	NM				Procedure Priority	Not used
15	80	CD				Associated Diagnosis Code	Not used
16	80	CE		Y	0340	Procedure Code Modifier	3 Components: 1. Modifier Code 2. Corresponding modifier description from CPT MODIFIER file (#81.3) 3. Coding Method **C**=CPT **H**=HCPCS *Refer to Table 0340 for sample listing of possible modifier codes and descriptions*

2.3.12 ROL - Role Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	60	EI	R			Role Instance ID	4 Components 1. Entity Identifier[11] [12] 2. Not used 3. Not used 4. Not used
2	2	ID	R		0287	Action Code	This will always be **CO** (correct)
3	80	CE	R			Role	6 Components 1. Provider Type Code 2. Not used 3. This will always be **VA8932.1** (PERSON CLASS file) 4. Primary Encounter Provider Designation 5. Not used 6. This will always be **VA01**

[11] This element will be 1-15 characters/digits followed by a hyphon (-) followed by 3 characters/digits followed by a hyphon (-) followed by 1-15 digits followed by an asterisk (*) followed by 1-4 digits. (Ex: 123AZ-ALB-1934*1)

[12] The trailing set of digits (i.e., everything to the right of the asterisk) are an appended Set ID and should be treated as such.

2.3.12 ROL - Role Segment, cont.

4	80	XCN	R	Y/2		Role Person	14 Components **Repetition 1** 1. 2 Sub-Components 1.1. Pointer to entry in NEW PERSON file (#200) 1.2. Facility Number 2. Not used 3. Not used 4. Not used 5. Not used 6. Not used 7. Not used 8. This will always be **VA200** (NEW PERSON file) 9. Not used 10. Not used 11. Not used 12. Not used 13. Not used 14. Not used **Repetition 2** 1. SSN 2. Not used 3. Not used 4. Not used 5. Not used 6. Not used 7. Not used 8. This will always be **SSA** (Social Security Administration) 9. Not used 10. Not used 11. Not used 12. Not used 13. Not used 14. Not used
5	26	TS	O			Role Begin Date/Time	Not used
6	26	TS	O			Role End Date/Time	Not used
7	80	CE	O			Role Duration	Not used
8	80	CE	O			Role Action Reason	Not used

2.3.13 ZPD - VA-Specific Patient Information Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	*VISTA* ELEMENT NAME
1	4	SI	R			SET ID - PATIENT ID
2	60	ST				REMARKS
3	20	ST				PLACE OF BIRTH CITY
4	2	ST				PLACE OF BIRTH STATE
5	2	ID			VA02	CURRENT MEANS TEST STATUS
6	35	ST				FATHER'S NAME
7	35	ST				MOTHER'S NAME
8	1	ID			VA01	RATED INCOMPETENT
9	19	TS				DATE OF DEATH
10	48	PN				COLLATERAL SPONSOR
11	1	ID			VA01	ACTIVE HEALTH INSURANCE?
12	1	ID			VA01	COVERED BY MEDICAID?
13	19	TS				DATE MEDICAID LAST ASKED
14	1	ID			VA07	RACE[13]
15	3	ID			VA08	RELIGION[14]
16	1	ID			VA01	HOMELESS INDICATOR
17	1	ID				POW STATUS INDICATED?
18	2	ID			VA12	TYPE OF INSURANCE
19	1	ID			VA14	MEDICATION COPAYMENT EXEMPTION STATUS
20	1	ID			VA0023	PRISONER OF WAR LOCATION CODE
21	30	ST				PRIMARY CARE TEAM

[13] This element is also found in the Patient Identification (PID) segment.
[14] This element is also found in the Patient Identification (PID) segment.

2.3.14 ZEL - VA-Specific Patient Eligibility Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	VISTA ELEMENT NAME
1	4	SI	R			SET ID
2	2	ID			VA04	ELIGIBILITY CODE
3	16	CK				LONG ID
4	12	ST				SHORT ID
5	1	ID			VA05	DISABILITY RETIREMENT FROM MIL.
6	8	NM				CLAIM FOLDER NUMBER
7	40	ST				CLAIM FOLDER LOCATION
8	1	ID			VA01	VETERAN?
9	30	ST				TYPE OF PATIENT
10	1	ID			VA06	ELIGIBILITY STATUS
11	8	DT				ELIGIBILITY STATUS DATE
12	8	DT				ELIGIBILITY INTERIM RESPONSE
13	50	ST				ELIGIBILITY VERIFICATION METHOD
14	1	ID			VA01	RECEIVING A&A BENEFITS?
15	1	ID			VA01	RECEIVING HOUSEBOUND BENEFITS?
16	1	ID			VA01	RECEIVING A VA PENSION?
17	1	ID			VA01	RECEIVING A VA DISABILITY?
18	1	ID			VA01	EXPOSED TO AGENT ORANGE
19	1	ID			VA01	RADIATION EXPOSURE INDICATED?
20	1	ID			VA01	SW ASIA CONDITIONS?
21	5	NM				TOTAL ANNUAL VA CHECK AMOUNT
22	1	ID			VA0022	RADIATION EXPOSURE METHOD CODE
23	1	ID			VA0036	MILITARY SEXUAL TRAUMA STATUS
24	8	DT				DATE MILITARY SEXUAL TRAUMA STATUS CHANGED
25	7	ID			VA0115	SITE DETERMINING MST STATUS
26	8	DT				AGENT ORANGE REGISTRATION DATE
27	8	DT				AGENT ORANGE EXAM DATE
28	6	NM				AGENT ORANGE REGISTRATION #
29	1	ID			VA0046	AGENT ORANGE EXPOSURE LOCATION
30	8	DT				RADIATION REGISTRATION DATE
31	8	DT				SW ASIA COND EXAM DATE
32	8	DT				SW ASIA COND REGISTRATION DATE
33	8	DT				MONETARY BEN. VERIFY DATE
34	8	DT				USER ENROLLEE VALID THROUGH
35						USER ENROLLEE SITE
36						ELIGIBILITY VERIFICATION SOURCE AND SITE
37	1	ID			VA01	COMBAT VETERAN
38	8	DT				COMBAT VETERAN STATUS END DATE
39	1	ID			VA01	DISCHARGE DUE TO DISABILITY?
40	1	ID			VA01	PROJECT 112/SHAD?

2.3.15 ZIR - VA-Specific Income Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	VISTA ELEMENT NAME
1	4	SI	R			SET ID
2	1	ID			VA01	MARRIED LAST CALENDAR YEAR
3	1	ID			VA01	LIVED WITH PATIENT
4	8	NM				AMOUNT CONTRIBUTED TO SPOUSE
5	1	ID			VA01	DEPENDENT CHILDREN
6	1	ID			VA01	INCAPABLE OF SELF-SUPPORT
7	1	ID			VA01	CONTRIBUTED TO SUPPORT
8	1	ID			VA01	CHILD HAD INCOME
9	1	ID			VA01	INCOME AVAILABLE TO YOU
10	2	NM				NUMBER OF DEPENDENT CHILDREN
11	2	ST				NUMBER OF DEPENDENTS
12	10	NM				PATIENT INCOME
13	2	ID			VA10	MEANS TEST INDICATOR

2.3.16 ZCL - VA-Specific Outpatient Classification Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	*VISTA* ELEMENT NAME
1	4	SI	R			SET ID
2	2	ID	R		SD008	OUTPATIENT CLASSIFICATION TYPE
3	50	ST				VALUE

2.3.17 ZSC - VA-Specific Stop Code Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	*VISTA* ELEMENT NAME
1	4	SI	R			SEQUENTIAL NUMBER
2	4	ID	R		SD001	STOP CODE
3	30	ST			SD001	NAME
4	1	NM				COST DISTRIBUTION CENTER
5	1	ID				CURRENT EXEMPT. FR CLASSIFICATION

2.3.18 ZSP - VA-Specific Service Period Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	*VISTA* ELEMENT NAME
1	4	SI	R			SET ID
2	1	ID	R		VA01	SERVICE CONNECTED?
3	3	NM				SERVICE CONNECTED PERCENTAGE
4	2	ID			VA11	PERIOD OF SERVICE
5	1	ST				VIETNAM SERVICE INDICATED?
6	1	ID			VA01	P&T
7	1	ID			VA01	UNEMPLOYABLE
8	19	TS				SC AWARD DATE

2.3.19 ZEN - VA-Specific Enrollment Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	*VISTA* ELEMENT NAME
1	4	SI	R			SET ID
2	8	DT				ENROLLMENT DATE
3	1	ID			VA0024	SOURCE OF ENROLLMENT
4	1	ID			VA0015	ENROLLMENT STATUS
5	1	ID			VA0016	REASON CANCELED/DECLINED
6	60	TX				CANCELED/DECLINED REMARKS
7	7	ID			VA0115	FACILITY RECEIVED
8	7	ID			VA0115	PRIMARY FACILITY
9	1	ID			VA0021	ENROLLMENT PRIORITY
10	8	DT				EFFECTIVE DATE

3. PURPOSE

This section defines the HL7 message transactions that are necessary to support the outpatient database interface for the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)). These messages will use the generic HL7 format, so that they can be expanded later to support new interfaces at other facilities.

3.1 Trigger Events and Message Definitions

Each triggering event is listed below, along with the applicable form of the message to be exchanged. The notation used to describe the sequence, optionally, and repetition of segments is described in the HL7 Final Standard Manual, Chapter 2, Section 2.4.8, Chapter Formats for Defining Abstract Messages, and in summary form, in Section 2.1 of this document.

3.1.1 Update Patient Information (A08)

The Outpatient Event Driver will be triggered under the following circumstances:

- When an outpatient appointment is checked out
- When a checked out outpatient appointment is edited
- When stop codes for an outpatient appointment are added or edited
- When a check out creates an occasion of service

Taking advantage of the outpatient event driver, this will trigger an A08 message to be sent. The receiving system will replace any data that exists with the "new" data that is transmitted with this message.

ADT	ADT Message	Section Number
MSH	Message Header	2.3.1
EVN	Event Type	2.3.5
PID	Patient Identification	2.3.6
PD1	Patient Additional Demographic	2.3.7
PV1	Patient Visit	2.3.8
PV2	Patient Visit Additional Information	2.3.9
[{ DG1 }]	Diagnosis Information	2.3.10
{ PR1 }	Procedure Information	2.3.11
{ROL}	Role	2.3.12
ZPD	VA-Specific Patient Information	2.3.13
ZEL	VA-Specific Patient Eligibility Information	2.3.14
ZIR	VA-Specific Income	2.3.15
{ZCL}	VA-Specific Outpatient Classification	2.3.16
{ZSC}	VA-Specific Stop Code	2.3.17
ZSP	VA-Specific Service Period	2.3.18
ZEN	VA Specific Enrollment	2.3.19

ACK	General Acknowledgment Message	Section Number
MSH	Message Header	2.3.1
MSA	Message Acknowledgment	2.3.4

3.1.2 Delete a Patient Record (A23)

When a check out is deleted, this message instructs the receiver to delete the information for this patient's visit.

ADT	ADT Message	Section Number
MSH	Message Header	2.3.1
EVN	Event Type	2.3.5
PID	Patient Identification	2.3.6
PD1	Patient Additional Demographic	2.3.7
PV1	Patient Visit	2.3.8
ZPD	VA-Specific Patient Information	2.3.13

ACK	General Acknowledgment Message	Section Number
MSH	Message Header	2.3.1
MSA	Message Acknowledgment	2.3.4

4. SUPPORTED AND USER-DEFINED HL7 TABLES

Table 0001 - Sex

VALUE	DESCRIPTION
F	FEMALE
M	MALE
O	OTHER
U	UNKNOWN

Table 0002 - Marital Status

VALUE	DESCRIPTION
A	SEPARATED
D	DIVORCED
M	MARRIED
S	SINGLE
W	WIDOWED

Table 0003 - Event Type Code

VALUE	DESCRIPTION
A08	UPDATE PATIENT INFORMATION
A23	DELETE PATIENT RECORD

Table 0008 - Acknowledgment Code

VALUE	DESCRIPTION
AA	APPLICATION ACKNOWLEDGMENT: ACCEPT
AE	APPLICATION ACKNOWLEDGMENT: ERROR
AR	APPLICATION ACKNOWLEDGMENT: REJECT
CA	ACCEPT ACKNOWLEDGMENT: COMMIT ACCEPT
CE	ACCEPT ACKNOWLEDGMENT: COMMIT ERROR
CR	ACCEPT ACKNOWLEDGMENT: COMMIT REJECT

Table 0023 - Admit Source (user defined)

Used for Location of Visit. Sample listing of possible values.

VALUE	DESCRIPTION
1	THIS FACILITY
6	OTHER FACILITY

Table 0051 - Diagnosis Code (user defined)
Use ICD DIAGNOSIS (#80) file, Code Number (.01) for value and Diagnosis (3) for Description. Sample listing of possible values.

VALUE	DESCRIPTION
253.2	PANHYPOPITUITARISM
253.3	PITUITARY DWARFISM
253.4	ANTER PITUITARY DIS NEC
253.5	DIABETES INSIPIDUS
253.6	NEUROHYPOPHYSIS DIS NEC
253.7	IATROGENIC PITUITARY DIS
253.8	DISEASES OF THYMUS NEC
253.9	PITUITARY DISORDER NOS
254.1	ABSCESS OF THYMUS
254.8	DISEASES OF THYMUS NEC
254.9	DISEASE OF THYMUS NOS
255.1	HYPERALDOSTERONISM
255.2	ADRENOGENITAL DISORDERS

Table 0069 - Hospital Service (user defined)
Use SPECIALTY file (#42.4), PTF Code (.001). Sample listing of possible values.

VALUE	DESCRIPTION
2	CARDIOLOGY
6	DERMATOLOGY
7	ENDOCRINOLOGY
8	GEM ACUTE MEDICINE
12	CORONARY CARE UNIT
12	EMERGENCY MEDICINE
15	GENERAL MEDICINE
21	BLIND REHAB
31	GEM INTERMEDIAT E CARE
55	EVAL/BRF TRMT PTSD
72	ALCOHOL
85	DOM
88	DOMICILIARY PTSD
91	GASTROENTEROLOGY
92	GEN INTERMEDIATE PSYCH

Table 0076 - Message Type

VALUE	DESCRIPTION
ADT	ADT MESSAGE
ACK	GENERAL ACKNOWLEDGMENT

Table 0088 - Procedure Code (user defined)
Sample listing of possible values.

VALUE	DESCRIPTION
10141	INCISION AND DRAINAGE OF HEMATOMA; COMPLICATED

Table 0115 - Servicing Facility (user defined)
Sample listing of possible values.

VALUE	DESCRIPTION
512 9AC	Perry Point (Nursing Home)

Table 0133 - Procedure Practitioner Type (user defined)
Sample listing of possible values.

VALUE	OCCUPATION	SPECIALTY	SUBSPECIALTY
V110000	Physicians (M.D.) and Osteopaths (D.O.)		
V110100	Physicians (M.D.) and Osteopaths (D.O.)	Addiction Medicine	
V110300	Physicians (M.D.) and Osteopaths (D.O.)	Allergy and Immunology	
V110301	Physicians (M.D.) and Osteopaths (D.O.)	Allergy and Immunology	Clinical and Laboratory
V110200	Physicians (M.D.) and Osteopaths (D.O.)	Allergy	
V110400	Physicians (M.D.) and Osteopaths (D.O.)	Anesthesiology	
V110401	Physicians (M.D.) and Osteopaths (D.O.)	Anesthesiology	Critical Care
V110402	Physicians (M.D.) and Osteopaths (D.O.)	Anesthesiology	Pain Management

Table 0136 - Yes/No Indicator

VALUE	DESCRIPTION
Y	YES
N	NO

Table SD001 - Service Indicator (Stop Code)
Sample listing of possible values.

VALUE	DESCRIPTION
104	PULMONARY FUNCTION
105	X-RAY
106	EEG
107	EKG
108	LABORATORY
109	NUCLEAR MEDICINE
110	CARDIOVASCULAR NUCLEAR MED
111	ONCOLOGICAL NUCLEAR MED
112	INFECTIOUS DISEASE NUCLEAR MED
113	RADIONUCLIDE TREATMENT
114	SING PHOTON EMISS TOMOGRAPHY
115	ULTRASOUND
117	NURSING
118	HOME TREATMENT SERVICES
119	COMM NURSING HOME FOLLOW-UP

Table SD008 - Outpatient Classification Type

VALUE	DESCRIPTION
1	AGENT ORANGE
2	IONIZING RADIATION
3	SERVICE CONNECTED
4	SW ASIA CONDITIONS
5	MILITARY SEXUAL TRAUMA
6	HEAD AND/OR NECK CANCER
7	COMBAT VETERAN
8	PROJECT 112/SHAD

Table SD009 - Purpose of Visit

Value denotes a combination of Purpose of Visit & Appointment Type.

VALUE	PURPOSE OF VISIT	APPOINTMENT TYPE
0101	C&P	COMPENSATION & PENSION
0102	C&P	CLASS II DENTAL
0103	C&P	ORGAN DONORS
0104	C&P	EMPLOYEE
0105	C&P	PRIMA FACIA
0106	C&P	RESEARCH
0107	C&P	COLLATERAL OF VET.
0108	C&P	SHARING AGREEMENT
0109	C&P	REGULAR
0111	C&P	SERVICE CONNECTED
0201	10-10	COMPENSATION & PENSION
0202	10-10	CLASS II DENTAL
0203	10-10	ORGAN DONORS
0204	10-10	EMPLOYEE
0205	10-10	PRIMA FACIA
0206	10-10	RESEARCH
0207	10-10	COLLATERAL OF VET.
0208	10-10	SHARING AGREEMENT
0209	10-10	REGULAR
0211	10-10	SERVICE CONNECTED
0301	SCHEDULED VISIT	COMPENSATION & PENSION
0302	SCHEDULED VISIT	CLASS II DENTAL
0303	SCHEDULED VISIT	ORGAN DONORS
0304	SCHEDULED VISIT	EMPLOYEE
0305	SCHEDULED VISIT	PRIMA FACIA
0306	SCHEDULED VISIT	RESEARCH
0307	SCHEDULED VISIT	COLLATERAL OF VET.
0308	SCHEDULED VISIT	SHARING AGREEMENT
0309	SCHEDULED VISIT	REGULAR
0311	SCHEDULED VISIT	SERVICE CONNECTED
0401	UNSCHED. VISIT	COMPENSATION & PENSION
0402	UNSCHED. VISIT	CLASS II DENTAL
0403	UNSCHED. VISIT	ORGAN DONORS
0404	UNSCHED. VISIT	EMPLOYEE
0405	UNSCHED. VISIT	PRIMA FACIA
0406	UNSCHED. VISIT	RESEARCH
0407	UNSCHED. VISIT	COLLATERAL OF VET.
0408	UNSCHED. VISIT	SHARING AGREEMENT
0409	UNSCHED. VISIT	REGULAR
0411	UNSCHED. VISIT	SERVICE CONNECTED

Table VA01 - Yes/No

VALUE	DESCRIPTION
0	NO
1	YES
N	NO
Y	YES
U	UNKNOWN

Table VA02 - Current Means Test Status

Type of Care (#.03) field of MEANS TEST STATUS (#408.32) file.

VALUE	DESCRIPTION
D	DISCRETIONARY
M	MANDATORY
N	NOT APPLICABLE

Table VA04 - Eligibility

Name (#.01) field of MAS ELIGIBILITY CODE (#8.1) file.

VALUE	DESCRIPTION
1	SERVICE CONNECTED 50% to 100%
2	AID & ATTENDANCE
3	SC LESS THAN 50%
4	NSC - VA PENSION
5	NSC
6	OTHER FEDERAL AGENCY
7	ALLIED VETERAN
8	HUMANITARIAN EMERGENCY
9	SHARING AGREEMENT
10	REIMBURSABLE INSURANCE
12	CHAMPVA
13	COLLATERAL OF VET.
14	EMPLOYEE
15	HOUSEBOUND
16	MEXICAN BORDER WAR
17	WORLD WAR I
18	PRISONER OF WAR
19	TRICARE/CHAMPUS
21	CATASTROPHIC DISABILITY
22	PURPLE HEART RECIPIENT

Table VA05 - Disability Retirement From Military

Disability Ret. From Military? (#.362) field of PATIENT (#2) file.

VALUE	DESCRIPTION
0	NO
1	YES, RECEIVING MILITARY RETIREMENT
2	YES, RECEIVING MILITARY RETIREMENT IN LIEU OF VA COMPENSATION
3	UNKNOWN

Table VA06 - Eligibility Status
Eligibility Status (#.3611) field of PATIENT (#2) file.

VALUE	DESCRIPTION
P	PENDING VERIFICATION
R	PENDING RE-VERIFICATION
V	VERIFIED

Table VA07 - Race
Abbreviation (#2) field of RACE (#10) file.

VALUE	DESCRIPTION
1	HISPANIC, WHITE
2	HISPANIC, BLACK
3	AMERICAN INDIAN OR ALASKA NATIVE
4	BLACK, NOT OF HISPANIC ORIGIN
5	ASIAN OR PACIFIC ISLANDER
6	WHITE, NOT OF HISPANIC ORIGIN
7	UNKNOWN

Table VA08 - Religion
Code (#3) field of RELIGION (#13) file.

VALUE	DESCRIPTION
0	ROMAN CATHOLIC CHURCH
1	JUDAISM
2	EASTERN ORTHODOX
3	BAPTIST
4	METHODIST
5	LUTHERAN
6	PRESBYTERIAN
7	UNITED CHURCH OF CHRIST
8	EPISCOPALIAN
9	ADVENTIST
10	ASSEMBLY OF GOD
11	BRETHREN
12	CHRISTIAN SCIENTIST
13	CHURCH OF CHRIST
14	CHURCH OF GOD
15	DISCIPLES OF CHRIST
16	EVANGELICAL COVENANT
17	FRIENDS
18	JEHOVAH'S WITNESSES
19	LATTER DAY SAINTS
20	ISLAM
21	NAZARENE
22	OTHER
23	PENTECOSTAL
24	PROTESTANT
25	PROTESTANT, NO DENOMINATION
26	REFORMED
27	SALVATION ARMY
28	UNITARIAN-UNIVERSALISM
29	UNKNOWN/NO PREFERENCE
30	NATIVE AMERICAN
31	ZEN BUDDHISM

Table VA08 – Religion (cont.)
Code (#3) field of RELIGION (#13) file.

VALUE	DESCRIPTION
32	AFRICAN RELIGIONS
33	AFRO-CARIBBEAN RELIGIONS
34	AGNOSTICISM
35	ANGLICAN
36	ANIMISM
37	ATHEISM
38	BABI & BAHA'I FAITHS
39	BON
40	CAO DAI
41	CELTICISM
42	CHRISTIAN (NON-SPECIFIC)
43	CONFUCIANISM
44	CONGREGATIONAL
45	CYBERCULTURE RELIGIONS
46	DIVINATION
47	FOURTH WAY
48	FREE DAISM
49	FULL GOSPEL
50	GNOSIS
51	HINDUISM
52	HUMANISM
53	INDEPENDENT
54	JAINISM
55	MAHAYANA
56	MEDITATION
57	MESSIANIC JUDAISM
58	MITRAISM
59	NEW AGE
60	NON-ROMAN CATHOLIC
61	OCCULT
62	ORTHODOX
63	PAGANISM
64	PROCESS, THE
65	REFORMED/PRESBYTERIAN
66	SATANISM
67	SCIENTOLOGY
68	SHAMANISM
69	SHIITE (ISLAM)
70	SHINTO
71	SIKISM
72	SPIRITUALISM
73	SUNNI (ISLAM)
74	TAOISM
75	THERAVADA
76	UNIVERSAL LIFE CHURCH
77	VAJRAYANA (TIBETAN)
78	VEDA
79	VOODOO
80	WICCA
81	YAOHUSHUA
82	ZOROASTRIANISM
83	ASKED BUT DECLINED TO ANSWER

Table VA10 - Means Test Indicator

VALUE	DESCRIPTION
AS	This Means Test category includes all compensable service-connected (0-100%) veterans and special category veterans. Special category veterans include: Mexican Border War and World War I veterans; former Prisoners of War; and patients receiving care for conditions potentially related to exposure to either Agent Orange (Herbicides), Ionizing Radiation or SW Asia Conditions. This category also includes 0% non-compensable service-connected veterans when they are treated for a service-connected condition.
AN	This Means Test category includes NSC veterans who are required to complete VA Form 10-10F (Financial Worksheet) and those NSC veterans in receipt of VA pension, aid and attendance, housebound allowance, or entitled to State Medicaid. This category may also include 0% non-compensable service-connected veterans when they are not treated for a service-connected condition and are placed in this category based on completion of a Means Test.
C	This Means Test category includes those veterans who, based on income and/or net worth, are required to reimburse VA for care rendered. This category also includes those pending adjudication. This category may also include 0% non-compensable service-connected veterans when they are not treated for a service-connected condition and are placed in this category based on completion of a Means Test.
G	This Means Test category includes veterans whose income is less than or equal to the MT threshold and whose estate value is greater than or equal to the net worth threshold, or such veterans whose income is greater than the MT threshold, but less than or equal to the GMT threshold, and whose estate value is less than the net worth threshold.
N	This Means Test category includes only non-veterans receiving treatment at VA facilities.
X	This Means Test category includes treatment of patients who are not required to complete the Means Test for the care being provided. If the veteran was admitted prior to July 1, 1986 with no change in the level of care being received, (i.e., if the patient was in the Nursing Home Care Unit (NHCU) on June 30, 1986 and has remained in the NHCU since that date with no transfer to the hospital for treatment), the "X" Means Test indicator will be accepted. This category also includes patients admitted to the domiciliary, patients seen for completion of a compensation and pension examination, and Class II dental treatment.
U	This Means Test category includes only those patients who require a Means Test, and the Means Test has not been done/completed. The National Patient Care Database will not accept the transaction unless the Means Test has been completed.

Table VA11 - Period of Service

VALUE	DESCRIPTION
0	KOREAN
1	WORLD WAR I
2	WORLD WAR II
3	SPANISH AMERICAN
4	PRE-KOREAN
5	POST-KOREAN
6	OPERATION DESERT SHIELD
7	VIETNAM ERA
8	POST-VIETNAM
9	OTHER OR NONE
A	ARMY - ACTIVE DUTY
B	NAVY, MARINE - ACTIVE DUTY
C	AIR FORCE - ACTIVE DUTY
D	COAST GUARD - ACTIVE DUTY
E	RETIRED, UNIFORMED FORCES
F	MEDICAL REMEDIAL ENLIST
G	MERCHANT SEAMEN - USPHS
H	OTHER USPHS BENEFICIARIES
I	OBSERVATION/EXAMINATION
J	OFFICE OF WORKERS COMP
K	JOB CORPS/PEACE CORPS
L	RAILROAD RETIREMENT
M	BENEFICIARIES-FOREIGN GOV
N	HUMANITARIAN (NON-VET)
O	CHAMPUS RESTORE
P	OTHER REIMBURS. (NON-VET)
Q	OTHER FEDERAL - DEPENDENT
R	DONORS (NON-VET)
S	SPECIAL STUDIES (NON-VET)
T	OTHER NON-VETERANS
U	CHAMPVA - SPOUSE, CHILD
V	CHAMPUS
W	CZECHOSLOVAKIA/POLAND SVC
X	PERSIAN GULF WAR
Y	CAV/NPS
Z	MERCHANT MARINE

Table VA12 - Type of Insurance

VALUE	DESCRIPTION
0	NO INSURANCE
1	MAJOR MEDICAL
2	DENTAL
3	HMO
4	PPO
5	MEDICARE
6	MEDICAID
7	CHAMPUS
8	WORKMAN COMP
9	INDEMNITY
10	PRESCRIPTION
11	MEDICARE SUPPLEMENTAL
12	ALL OTHER

Table VA0015 - Enrollment Status

VALUE	DESCRIPTION
1	UNVERIFIED
2	VERIFIED
3	INACTIVE
4	REJECTED
5	SUSPENDED
6	TERMINATED
7	CANCELED/DECLINED
8	EXPIRED
9	PENDING

Table VA0016 - Reason Canceled/Declined

VALUE	DESCRIPTION
1	DISSATISFIED WITH CARE
2	GEOGRAPHIC ACCESS
3	OTHER INSURANCE
4	OTHER

Table VA0021 - Enrollment Priority

VALUE	DESCRIPTION
1	PRIORITY 1
2	PRIORITY 2
3	PRIORITY 3
4	PRIORITY 4
5	PRIORITY 5
6	PRIORITY 6
7	PRIORITY 7
8	PRIORITY 8

Table VA0022 - Radiation Exposure Method

VALUE	DESCRIPTION
2	NAGASAKI - HIROSHIMA
3	NUCLEAR TESTING
4	BOTH

Table VA0023 - Prisoner of War Location

VALUE	DESCRIPTION
4	WORLD WAR I
5	WORLD WAR II - EUROPE
6	WORLD WAR II - PACIFIC
7	KOREAN
8	VIETNAM
9	OTHER
A	PERSIAN GULF WAR
B	YUGOSLAVIA AS A COMBAT ZONE

Table VA0024 - Source of Enrollment

VALUE	DESCRIPTION
1	VAMC
2	HEC
3	OTHER VAMC

Table VA0046 - Agent Orange Exposure Location

VALUE	DESCRIPTION
K	KOREAN DMZ
V	VIETNAM
O	OTHER

Table NPCD 001 - National Patient Care Database Error Codes

Sample listing of possible values.

VALUE	DESCRIPTION
100	EVENT TYPE SEGMENT
200	PATIENT NAME
205	DATE OF BIRTH
210	SEX
215	RACE

HL7 INTERFACE SPECIFICATION FOR THE TRANSMISSION OF PCMM PRIMARY CARE DATA

1 INTRODUCTION

This interface specification specifies the information needed for PCMM Primary Care data reporting. This data exchange will be triggered by specific events in the PCMM package. The basic communication protocol will be addressed, as well as the information that will be made available and how it will be obtained.

1.1 General

This application will use the abstract message approach and encoding rules specified by HL7. HL7 is used for communicating data associated with various events that occur in health care environments.

For example, when a patient is assigned to a primary care team in PCMM, the event will trigger a PCMM primary care update message. This message is an unsolicited transaction to all external systems interfacing with **V*IST*A**.

The formats of these messages conform to the Version 2.3 HL7 Interface Standards where applicable. HL7 custom message formats ("Z" segments) are used only when necessary.

1.2 Assumptions

Assumptions have been made at the beginning of this project in order to help define the scope and meet the initial needs in interfacing with the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)).

1.2.1 Message Content

The data sent in the HL7 messages will be limited to the information that can be processed by the AITC, with the exception of the PID segment, which will be populated using the nationally supported **V*IST*A** call. The data being sent will also be limited to what is available in **V*IST*A**.

In order to capture the most information, specific PCMM events will generate messages to the AITC systems. This is not intended to cover all possible PCMM events; only those which may result in the capture of primary care data needed to update the National Patient Care Database (NPCD). The mode for capturing data for PCMM events was chosen to capture as much of the data as possible. (See Data Capture and Transmission (1.2.2) for further information on the mode for capturing the PCMM events.)

Per the HL7 standards, Primary Care data fields that are transmitted as null ("") will delete data from the NPCD. A field that is transmitted as blank does not delete data; it simply means take no action on the field. In the ZPC segment, if field **Provider Assignment ID** has a value and all remaining fields are nulls, Austin should do the following.

If this record exists, **delete** it from the database.
If this record does not exist, **ignore** this segment.

1.2.2 Data Capture and Transmission

When PCMM options or calls are used to update specific primary care data in **V*IST*A**, these events and changes will be captured. Any changes made to the **V*IST*A** database in non-standard ways, such as a direct global set by an application or by MUMPS code, will not be captured.

1.2.3 Background Messages

A nightly background job will be sending HL7 messages for the appropriate PCMM primary care event for the day.

1.2.4 VA MailMan Lower Level Protocol

HL7 V. 1.6 of the VA MailMan lower level protocol (LLP) will be used. This version of the VA MailMan LLP differs from HL7 V. 1.5 in that a blank line is placed between each segment in the message [denoting a carriage return].

2 HL7 CONTROL SEGMENTS

This section defines the HL7 control segments supported by **V*IST*A**. The messages are presented separately and defined by category. Segments are also described. The messages are presented in the following categories:

Message Control
Unsolicited Transactions from **V*IST*A** (Section 3)

2.1 Message Definitions

From the **V*IST*A** perspective, all incoming or outgoing messages are handled or generated based on an event.

In this section, and the following sections, these elements will be defined for each message:

- The trigger events
- The message event code
- A list of segments used in the message
- A list of fields for each segment in the message

Each 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 or "Z" segments used for the message.

2.2 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. Each segment is described in the following sections.

2.3 Message Control Segments

This section describes the message control segments that are contained in message types described in this document. These are generic descriptions. Any time any of the segments described in this section are included in a message in this document, the **V*IST*A** descriptions and mappings will be as specified here, unless otherwise specified in that section.

2.3.1 MSH - Message Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	1	ST	R			Field Separator	Recommended value is **^** (caret)
2	4	ST	R			Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat = **|** (bar) Escape = \ (back slash) Sub-component = **&** (ampersand)
3	15	ST				Sending Application	PCMM-212
4	20	ST				Sending Facility	Station's facility number
5	30	ST				Receiving Application	NPCD-PCMM
6	30	ST				Receiving Facility	Facility=200
7	26	TS				Date/Time Of Message	Date and time message was created
8	40	ST				Security	Not used
9	7	CM	R		0076 0003	Message Type	2 Components 1. *Refer to Table 0076* *2. Refer to Table 0003*
10	20	ST	R			Message Control ID	Automatically generated by **V*IST*A** HL7 Package
11	1	ID	R		0103	Processing ID	**P** (production)
12	8	ID	R		0104	Version ID	**2.3** (Version 2.3)
13	15	NM				Sequence Number	Not used
14	180	ST				Continuation Pointer	Not used
15	2	ID			0155	Accept Acknowledgment Type	**NE** (never acknowledge)
16	2	ID			0155	Application Acknowledgment Type	**AL** (always acknowledge)
17	2	ID				Country Code	Not used

2.3.2 EVN - Event Type Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	3	ID	R		0003	Event Type Code	*Refer to Table 0003*
2	26	TS	R			Date/Time of Event	Date/Time Event Occurred
3	26	TS				Date/Time Planned Event	Not used
4	3	ID			0062	Event Reason Code	Not used
5	60	CN			0188	Operator ID	Not used

2.3.3 PID - Patient Identification Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	4	SI				Set ID - Patient ID	Always 1
2	20	CK				Patient ID (External ID)	Integration Control Number (ICN)
3	20	CM	R	Y		Patient ID (Internal ID)	Pointer to entry in PATIENT file
4	12	ST				Alternate Patient ID	Primary Short ID
5	48	PN	R			Patient Name	Name
6	30	ST				Mother's Maiden Name	Mother's maiden name
7	26	TS				Date of Birth	Date of birth
8	1	ID			0001	Sex	*Refer to Table 0001*
9	48	PN		Y		Patient Alias	Alias
10	1	ID			0005	Race	Race
11	106	AD		Y		Patient Address	Address
12	4	ID				County Code	VA County Code
13	40	TN		Y		Phone Number - Home	Phone number (residence)
14	40	TN		Y		Phone Number - Business	Phone number (work)
15	25	ST				Language - Patient	Not used
16	1	ID			0002	Marital Status	*Refer to Table 0002*
17	3	ID			0006	Religion	Religion
18	20	CK				Patient Account Number	Not used
19	16	ST				SSN Number - Patient	Social security number and pseudo indicator
20	25	CM				Driver's Lic Num - Patient	Not used
21	20	CK				Mother's Identifier	Not used
22	1	ID			0189	Ethnic Group	Not used
23	25	ST				Birth Place	Not used
24	2	ID				Multiple Birth Indicator	Not used
25	2	NM				Birth Order	Not used
26	3	ID		Y	0171	Citizenship	Not used
27	60	CE			0172	Veterans Military Status	Not used

2.3.4 ZPC – VA Specific Primary Care Information Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	20	ST	R			Provider Assignment ID	Facility – number Example: 500-234 Where: 500 = Facility number 234 = Pointer to full ID in PCMM HL7 ID file (404.49).
2	90	XCN	R			Provider ID	14 Components 1. 2 Sub-Components 1.1. Pointer to entry in NEW PERSON file (#200) 1.2. Facility Number 2. <family name (ST) > & < last_name_prefix (ST)> 3. <given name (ST)> 4. <middle initial or name (ST)> 5. <suffix (e.g., JR or III) (ST)> 6. <prefix (e.g., DR) (ST)> 7. <degree (e.g., MD) (IS)> 8. This will always be **VA200** (NEW PERSON file) 9. Not used 10. Not used 11. Not used 12. Not used 13. Not used 14. Assigning Facility (HD) - This will be the facility number
3	26	TS	R			Date Provider Assigned	File POSITION ASSIGNMENT HISTORY (404.52), field **.02** –or- PRECEPTOR ASSIGNMENT HISTORY (404.53), field **.02**.
4	26	TS	O			Date Provider Unassigned	Date is derived from STATUS field (**.04**) in both POSITION ASSIGNMENT HISTORY (**404.52**), and PRECEPTOR ASSIGNMENT HISTORY (**404.53**)..
5	3	ID	R			Provider Type Code	PCP = Primary Care Provider AP = Associate Provider
6	20	CE	O			Provider Person Class	3 Components 1. Provider Type Code 2. Not used 3. This will always be **VA8932.1** (PERSON CLASS file)
7	4	SI	R			Set ID	This field is used to sequentially number multiple Primary Care (ZPC) segments.
8	9	ST	O			Provide Social Security Number	SSN (#9) field of the NEW PERSON (#200) file.

3 PURPOSE

This section defines the HL7 message transactions that are necessary to support the primary care data in the NPCD for the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)). These messages will use the generic HL7 format, so that they can be expanded later to support new interfaces at other facilities.

3.1 Trigger Events and Message Definitions

Each triggering event is listed below, along with the applicable form of the message to be exchanged. The notation used to describe the sequence, option, and repetition of segments is described in the HL7 Final Standard Manual, Chapter 2, Section 2.4.8, Chapter Formats for Defining Abstract Messages, and in summary form, in Section 2.1 of this document.

3.1.1 Update Patient Information (A08)

PCMM Primary Care trigger events will create an entry into the PCMM HL7 EVENT file (#404.48) under the following circumstances.

- When a patient is assigned/unassigned to a position
- When an existing patient assignment is edited
- When an existing patient assignment is deleted
- When a provider is assigned/unassigned to a position
- When an existing provider assignment is edited
- When an existing provider assignment is deleted

A recurring job will process the PCMM HL7 EVENT file and trigger an A08 message to be sent for each patient marked for transmission. The receiving system will replace any data that exists with the "new" data that is transmitted with this message based on the **Provider Assignment ID** field.

Business Rules

When an entry is deleted, a ZPC segment will be sent showing the Provider Assignment ID and the remaining fields as null (""). This will delete the current record.

ADT	ADT Message	Section
MSH	Message Header	0
EVN	Event Type	0
PID	Patient Identification	0
{ZPC}	PCMM Primary Care Data	2.3.4

4 SUPPORTED AND USER-DEFINED HL7 TABLES

4.1 Table 0001 - Sex

VALUE	DESCRIPTION
F	FEMALE
M	MALE
O	OTHER
U	UNKNOWN

4.2 Table 0002 - Marital Status

VALUE	DESCRIPTION
A	SEPARATED
D	DIVORCED
M	MARRIED
S	SINGLE
W	WIDOWED

4.3 Table 0003 - Event Type Code

VALUE	DESCRIPTION
A08	UPDATE PATIENT INFORMATION

4.4 Table 0005 - Race

VALUE	DESCRIPTION
1	HISPANIC, WHITE
2	HISPANIC, BLACK
3	AMERICAN INDIAN OR ALASKA NATIVE
4	BLACK, NOT OF HISPANIC ORIGIN
5	ASIAN OR PACIFIC ISLANDER
6	WHITE, NOT OF HISPANIC ORIGIN
7	UNKNOWN

4.5 Table 0006 - Religion

VALUE	DESCRIPTION
0	ROMAN CATHOLIC CHURCH
1	JUDAISM
2	EASTERN ORTHODOX
3	BAPTIST
4	METHODIST
5	LUTHERAN
6	PRESBYTERIAN
7	UNITED CHURCH OF CHRIST
8	EPISCOPALIAN
9	ADVENTIST
10	ASSEMBLY OF GOD
11	BRETHREN
12	CHRISTIAN SCIENTIST
13	CHURCH OF CHRIST
14	CHURCH OF GOD
15	DISCIPLES OF CHRIST
16	EVANGELICAL COVENANT
17	FRIENDS
18	JEHOVAH'S WITNESSES
19	LATTER DAY SAINTS
20	ISLAM
21	NAZARENE
22	OTHER
23	PENTECOSTAL
24	PROTESTANT
25	PROTESTANT, NO DENOMINATION
26	REFORMED
27	SALVATION ARMY
28	UNITARIAN-UNIVERSALISM
29	UNKNOWN/NO PREFERENCE
30	NATIVE AMERICAN
31	ZEN BUDDHISM
32	AFRICAN RELIGIONS
33	AFRO-CARIBBEAN RELIGIONS
34	AGNOSTICISM
35	ANGLICAN
36	ANIMISM
37	ATHEISM
38	BABI & BAHA'I FAITHS
39	BON
40	CAO DAI
41	CELTICISM
42	CHRISTIAN (NON-SPECIFIC)
43	CONFUCIANISM
44	CONGREGATIONAL
45	CYBERCULTURE RELIGIONS
46	DIVINATION
47	FOURTH WAY
48	FREE DAISM
49	FULL GOSPEL

4.5 Table 0006 – Religion (cont.)

VALUE	DESCRIPTION
50	GNOSIS
51	HINDUISM
52	HUMANISM
53	INDEPENDENT
54	JAINISM
55	MAHAYANA
56	MEDITATION
57	MESSIANIC JUDAISM
58	MITRAISM
59	NEW AGE
60	NON-ROMAN CATHOLIC
61	OCCULT
62	ORTHODOX
63	PAGANISM
64	PROCESS, THE
65	REFORMED/PRESBYTERIAN
66	SATANISM
67	SCIENTOLOGY
68	SHAMANISM
69	SHIITE (ISLAM)
70	SHINTO
71	SIKISM
72	SPIRITUALISM
73	SUNNI (ISLAM)
74	TAOISM
75	THERAVADA
76	UNIVERSAL LIFE CHURCH
77	VAJRAYANA (TIBETAN)
78	VEDA
79	VOODOO
80	WICCA
81	YAOHUSHUA
82	ZOROASTRIANISM
83	ASKED BUT DECLINED TO ANSWER

4.6 Table 0076 - Message Type

VALUE	DESCRIPTION
ADT	ADT MESSAGE

HL7 INTERFACE SPECIFICATION FOR PCMM PRIMARY CARE ACKNOWLEDGEMENT PROCESSING

1 AUSTIN INFORMATION TECHNOLOGY CENTER (AITC) (formerly Austin Automation Center (AAC)) ERROR PROCESSING

This section describes the process by which acknowledgment (ACK) messages are generated by the AITC back to the **V*IST*A** originating site, advising them of a successful or failed (error) HL7 message transmission.

Section 1.1 provides a general description of the validation process that occurs at the AITC. Section 1.2 describes the message control segments contained in the acknowledgment message. Section 1.3 provides examples of specific transactions that will occur between **V*IST*A** and the AITC.
Section 1.4 describes the HL7 supported and user defined tables.

1.1 Austin Information Technology Center (AITC) (formerly Austin Automation Center (AAC)) Validation Process

After PCMM HL7 (ADT~A08) messages are sent from **V*IST*A**, the AITC will do the following.

- Accept the message.
  At this stage the message may reject for reasons unrelated to its content or format (system down, missing MSH segment, etc). Austin will not generate an ACK message. The sending application will be responsible for retransmitting messages that are not acknowledged.

- Pass it on to the receiving application, which performs one of the following functions.

  - Processes the message successfully, generating a response message with a value of **AA** in *MSA-1-acknowledgment code*.
  - **–OR–** sends an error response, providing error information in segments in the response message (see 1.2) with a value of **AE** in *MSA-1-acknowledgment code*.

- Pass the response message back to the **V*IST*A** originating site.

1.2 Message Control Segments

This section describes the message control segments that are contained in the general acknowledgement response message.

ACK	General Acknowledgment	Section
MSH	Message Header	1.2.1
MSA	Message Acknowledgment	1.2.2
[ERR]	Error	1.2.3

- When a PCMM HL7 (ADT~A08) message is successfully accepted by the receiving system, the optional Error (ERR) segment will not be returned to the sending system in the general acknowledgement message.

- When a PCMM HL7 (ADT~A08) message is rejected by the receiving system, the Error (ERR) segment is a repeating field and will contain the error and location of each error identified. Each repeating field will be in the following format.

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

  The 1st component identifies the segment ID.
  The 2nd component is an index if there is more than one segment of type <segment ID>.
  The 3rd component is the error's field position within the segment.
  The 4th component is the error code from the user-defined PCMM Error Code table.

1.2.1 MSH - Message Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	*VISTA* DESCRIPTION
1	1	ST	R			Field Separator	Recommended value is **^** (caret)
2	4	ST	R			Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat = **|** (bar) Escape = \ (back slash) Sub-component = **&** (ampersand)
3	15	ST				Sending Application	NPCD-AAC*
4	20	ST				Sending Facility	Facility=200
5	30	ST				Receiving Application	PCMM-212
6	30	ST				Receiving Facility	Station's facility number
7	26	TS				Date/Time Of Message	Date and time message was created
8	40	ST				Security	Not used
9	7	CM	R		0076 0003	Message Type	2 Components 1. *Refer to Table 0076* *2. Refer to Table 0003*
10	20	ST	R			Message Control ID	Automatically generated by **V*IST*A** HL7 Package
11	1	ID	R		0103	Processing ID	**P** (production)
12	8	ID	R		0104	Version ID	**2.2** (Version 2.2)
13	15	NM				Sequence Number	Not used
14	180	ST				Continuation Pointer	Not used
15	2	ID			0155	Accept Acknowledgment Type	**NE** (never acknowledge)
16	2	ID			0155	Application Acknowledgment Type	**AL** (always acknowledge)
17	2	ID				Country Code	Not used

*AAC stands for Austin Automation Center. The name of that facility has been changed to Austin Information Technology Center.

1.2.2 MSA Message Acknowledgment Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	2	ID	R		0008	Acknowledgment Code	Refer to Table 008
2	20	ST	R			Message Control ID	Message Control ID of the message being acknowledged.
3	80	ST	R			Text Message	Not used
4	15	NM				Expected Sequence Number	Not used
5	1	ID			0102	Delayed Acknowledgment Type	Not used
6	100	CE				Error Condition	Not used

1.2.3 ERR Error Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VISTA DESCRIPTION
1	80	CM	R	Y		Error Code and Location	Segment ID (ST) Sequence (NM) 4 numbers long. Strip off leading zeros on **V*ISTA*** side. Field position (NM) Code identifying error (CE) (See PCMM Error Code Table (section 1.4.2))

1.2.4 ZPC VA Specific - Primary Care Information Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	V*IST*A DESCRIPTION
1	20	ST	R			Provider Assignment ID	Facility – number Example: 500-234 Where: 500 = Facility number 234 = Pointer to full ID in PCMM HL7 ID file (404.49).
2	90	XCN	R			Provider ID	14 Components 1. 2 Sub-Components 1.1. Pointer to entry in NEW PERSON file (#200) 1.2. Facility Number 2. Not used 3. Not used 4. Not used 5. Not used 6. Not used 7. Not used 8. This will always be **VA200** (NEW PERSON file) 9. Not used 10. Not used 11. Not used 12. Not used 13. Not used 14. Not used
3	26	TS	R			Date Provider Assigned	File POSITION ASSIGNMENT HISTORY (404.52), field **.02** –or- PRECEPTOR ASSIGNMENT HISTORY (404.53), field **.02**.
4	26	TS	O			Date Provider Unassigned	Date is derived from STATUS field (**.04**) in both POSITION ASSIGNMENT HISTORY (**404.52**), and PRECEPTOR ASSIGNMENT HISTORY (**404.53**).
5	3	ID	R			Provider Type Code	PCP = Primary Care Provider AP = Associate Provider
6	20	CE	O			Provider Person Class	3 Components 1. Provider Type Code 2. Not used 3. This will always be **VA8932.1** (PERSON CLASS file)
7	4	SI	R			Set ID*****	This field is used to sequentially number multiple Primary Care (ZPC) segments.

***** = New field added

1.3 Specific Transaction Examples

The following section describes specific HL7 transactions that will occur between PCMM (**V*IST*A**) and the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)).

1.3.1 General Acknowledgment (ACK) message advising of a successful PCMM HL7 (ADT~A08) transmission at the Application Level.

PCMM HL7 (ADT~A08) message is sent from **V*IST*A** to the AITC.

```
MSH^~|\&^PCMM-210^500^NPCD-AAC^200^20000307150556^^ADT~A08^02651^P^2.2^^^NE^AL^USA

EVN^A08^20000307

PID^1^"""^7168987~1~M10^6221^TEST~PATIENT^"""^19330303^U^^7^""~""~""~""~""~~~""~""^^"""^
""""^^U^29^^443366221^^^^^^^^^^

ZPC^500-509^70&500~~~~~~~VA200~~~~~~^19961203^19961203^PCP^"""^1

ZPC^500-510^123456852&500~~~~~~~VA200~~~~~~^19961204^19961211^PCP^"""^2

ZPC^500-511^170&500~~~~~~~VA200~~~~~~^19970317^19970318^PCP^"""^3
```

AITC then sends a General Acknowledgment (ACK) message back to **V*IST*A** advising of a successful PCMM HL7 (ADT~A08) transmission.

```
MSH^~|\&^NPCD-AAC^200^PCMM-210^500^20000229^^ACK~A08^50002175^P^2.2^^^NE^AL

MSA^AA^02651
```

1.3.2 General Acknowledgment (ACK) message advising of a failed PCMM HL7 (ADT~A08) transmission at the Application Level.

PCMM HL7 (ADT~A08) message is sent from **V*IST*A** to the Austin Information Technology Center (AITC), (formerly the Austin Automation Center (AAC)), with *ZPC~3~date provider assigned* invalid in both the 2nd and 3rd ZPC segments.

```
MSH^~|\&^PCMM-210^500^NPCD-AAC^200^20000307150556^^ADT~A08^02651^P^2.2^^^NE^AL^USA

EVN^A08^20000307

PID^1^"""^7168987~1~M10^6221^TEST~PATIENT^"""^19330303^U^^7^""~""~""~""~""~~~""~""^^"""^
""^^U^29^^443366221^^^^^^^^^^

ZPC^500-509^70&500~~~~~~~VA200~~~~~~^19961203^19961203^PCP^"""^1

ZPC^500-510^123456852&500~~~~~~~VA200~~~~~~^##19961204^19961211^PCP^"""^2

ZPC^500-511^170&500~~~~~~~VA200~~~~~~^9970317^19970318^PCP^"""^3
```

AITC then sends a General Acknowledgment (ACK) message back to **V*IST*A** advising of a failed PCMM HL7 (ADT~A08) transmission.

```
MSH^~|\&^NPCD-AAC^200^PCMM-210^500^20000229^^ACK~A08^50002175^P^2.2^^^NE^AL

MSA^AE^02651

ERR^ZPC~0002~3~320M|ZPC~0003~3~320M
```

1.4 Supported and User Defined Tables

1.4.1 Table 008 Acknowledgement Code

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

1.4.2 PCMM Error Code Table

Error Number	Field Number	Edit Description
000 Series		
Miscellaneous		
0000		
001M	Segment Name	EVN Segment missing
002M	Segment Name	PID Segment missing
003M	Segment Name	ZPC Segment missing
005M	Segment Name	Invalid Segment name
100 Series		
EVN Segment		
104M	Event Date	Required. Must be a valid date. Must be less than or equal to processing date.
106M	Event Time	If present time must be numeric. Must be a valid time.
110M	MSH Message Control ID	Required
113M	Event Type Segment	Required. Must be 'A08'.
200 Series		
PID Segment		
200M	Patient Name	Required. Must be alphanumeric. Must not be all numeric. Must not be all blanks.
210M	Patient ID (Internal)	Required. Must be numeric.
220M	Date of Birth	Required
221M	Date of Birth	Required. Century/Year must be numeric and less than the processing Century/Year.
223M	Date of Birth	Required. Must be a valid date.
224M	Date of Birth	Required. Must be less than the processing date.
230M	Sex	Must be blank or match table. (Refer to table T0001).
240M	Race	Must be a valid code. (Refer to table VA07) or null.
250M	Marital Status	Must be a valid code. (Refer to table T0002).
260M	State	Must be a valid state code. (Refer to table AA015).
261M	County	Must be blank or when combined with numeric state code must be a valid code. (Refer to table AA015).

1.4.2 PCMM Error Code Table, cont.

Error Number	Field Name	Edit Description
262M	Address Line 1	Must not be all numerics
263M	Address Line 2	Must not be all numerics
264M	Address - City	Must be alphanumeric. Must not be all numeric.
270M	Religion	Must be blank or a valid code. (Refer to table VA08).
280M	Address - Zip Code	Must be numeric. First five digits must not be all zeros. If last four digits exist, them must be numeric.
290M	Social Security Number	Required. Must be numeric. Must be greater than zeros.
291M	Social Security Number	Required. Last byte must be 'P' or blank.
300 Series		
ZPC Segment		
Updates		
300M	Provider Assignment ID	Required. Must be a valid station number followed by a dash then all numerics.
310M	Provider ID	Required. Must be numeric ID followed by a valid facility number.
320M	Date Provider Assigned	Required. Must be a valid date and can be a future date.
330M	Date Provider Unassigned	Optional
340M	Provider Type Code	Required. Must be 'PCP' or 'AP'.
350M	Provider Person Class (seq 6 comp1)	Optional. If present the Provider Type Code must be a valid Practitioner Type Code (table T0133).
360M	Provider Person Class (seq 6 comp 2)	Required. Must be VA8932.1
370M	Provider SSN	Required. SSN not numeric or all zeros.

1.4.2 PCMM Error Code Table, cont.

Error Number	Field Number	Edit Description
ZPC Segment		
Deletes		
300M	Provider Assignment ID	Required. Must be a valid station number followed by a dash then all numerics.
	Provider ID	Will be null
3	Date Provider Assigned	Will be null
3	Date Provider Unassigned	Will be null
3	Provider Type Code	Will be null
3	Provider Person Class (seq 6 comp1)	Will be null
360M	Provider Person Class (seq 6 comp 2)	Will be null

HL7 INTERFACE SPECIFICATION FOR VIC CARD VISTA TO NCMD

1. INTRODUCTION

When a Veteran's ID Card (VIC) Image Capture workstation retrieves demographic data from VistA, a record will be created in a VistA file to indicate that a VIC request is pending under the following exception conditions.

- The patient does not have a National Integrated Control Number (ICN).
- The eligibility/enrollment information needed to determine the patient's eligibility for a VIC is incomplete.
- The current status of the veteran's claim for Purple Heart eligibility is either pending or in-process.

A Health Level 7 (HL7) message will be used to notify the National Card Management Directory (NCMD) when these exceptions have been resolved.

1.1 Purpose

This document specifies the information needed to either release the previous hold or cancel a pending VIC order request and communicate the order action to the NCMD. The data exchange will be triggered when the daily VistA re-evaluation of the pending VIC order request finds that a National ICN exists and the VIC eligibility can be determined. The basic communication protocol will be addressed, as well as the information that will be made available and how it will be obtained.

1.2 General

This application will use the abstract message approach and encoding rules specified by HL7. HL7 is used for communicating data associated with various events which occur in health care environments.

The formats of these messages conform to the Version 2.4 HL7 Interface Standards where applicable.

1.3 Assumptions

The transmission of VIC requests from VistA to the NCMD assumes the following.

- All VistA sites will have installed VistA HL7 software and it is operational.
- The veteran's demographics and digital photograph have been previously loaded into the NCMD.

1.4 Message Content

The data sent in the HL7 messages will be limited to the information that is required to uniquely identify the patient and request the VIC card. The data transmitted will be limited to available VistA data.

1.5 Data Capture and Transmission

The following event trigger will generate a General Order Message (ORM~O01).

- VistA re-evaluates a pending VIC card request and the associated patient has a nationally assigned ICN and the necessary eligibility/enrollment information needed to determine the patient's VIC eligibility.

Note: Any modification made to the VistA database in non-standard ways, such as a direct global set by an application or by MUMPS code, will not be captured.

1.6 VA TCP/IP Lower Level Protocol

The HL7 V. 1.6 TCP/IP lower level protocol (LLP) will be used which implements the HL7 Minimal Lower Layer Protocol (MLLP) referenced in section C.4 of Appendix C of the Health Level 7 Implementation Guide (v2.3).

2. HL7 CONTROL SEGMENTS

This section defines the HL7 control segments supported by VistA. The messages are presented separately and defined by category. Segments are also described. The messages are presented in the Message Control category.

2.1 Message Definitions

From the VistA perspective, all incoming or outgoing messages are handled or generated based on an event.

In this section and the following sections, the following elements will be defined for each message.

- Trigger events
- Message event code
- List of segments used in the message
- List of fields for each segment in the message

Each 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 used for the message.

2.2 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 VistA description. Each segment is described in the following sections.

2.3 Message Control Segments

This section describes the message control segments that are contained in message types described in this document. These are generic descriptions. Any time any of the segments described in this section are included in a message in this document, the VistA descriptions and mappings will be as specified here unless otherwise specified in that section.

2.3.1 MSH - Message Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	1	ST	R			Field Separator	Recommended value is ^ (caret)
2	4	ST	R			Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat = | (bar) Escape = \ (back slash) Sub-component = & (ampersand)
3	15	ST				Sending Application	Name field of HL7 Application Parameter file.
4	20	ST				Sending Facility	Sending station's facility number from Institution field of HL7 Communication Parameters file.
5	30	ST				Receiving Application	Name field of HL7 Application Parameter file.
6	30	ST				Receiving Facility	Receiving station's facility number from Institution field of HL Logical Link file.
7	26	TS				Date/Time Of Message	Date and time message was created.
8	40	ST				Security	Not used
9	7	CM	R		0076 0003	Message Type	2 Components Refer to Table 0076 Refer to Table 0003
10	20	ST	R			Message Control ID	Automatically generated by VISTA HL7 Package.
11	1	ID	R		0103	Processing ID	P (production)
12	8	ID	R		0104	Version ID	Version ID field of event protocol in Protocol file.
13	15	NM				Sequence Number	Not used
14	180	ST				Continuation Pointer	Not used
15	2	ID			0155	Accept Acknowledgment Type	NE (never acknowledge)
16	2	ID			0155	Application Acknowledgment Type	AL (always acknowledge)
17	2	ID				Country Code	USA
18	6	ID		Y/3	0211	Character Set	Not used
19	60	CE				Principal Language of Message	Not used

2.3.2 MSA – Message Acknowledgment Segment

2.3.1	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	2	ID	R		0008	Acknowledgment Code	Refer to HL7 table 0008
2	20	ST	R			Message Control ID	Message Control ID of the message being acknowledged.
3	80	ST	O			Text Message	Free text error message
4	15	NM	O			Expected Sequence Number	Not used
5	1	ID	B		0102	Delayed Acknowledgment Type	Not used
6	100	CE	O			Error Condition	Not used

2.3.3 PID - Patient Identification Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	4	SI				Set ID - Patient ID	Always set to '1'
2	20	CK				Patient ID (External ID)	Social Security Number field of Patient file.
3	20	CM	R	Y		Patient ID (Internal ID)	Integrated Control Number (ICN) field of Patient file. Component 1: ICN w/checksum Component 2: Null Component 3: Null Component 4: Assigning authority (subcomponent 1: 'USVHA', subcomponent 3: 'L' Component 5: Type 'NI'
4	12	ST				Alternate Patient ID	Not used
5	48	PN	R			Patient Name	Name
6	30	ST				Mother's Maiden Name	Not used
7	26	TS				Date of Birth	Date of birth
8	1	ID			0001	Sex	Not used
9	48	PN		Y		Patient Alias	Not used
10	1	ID			0005	Race	Not used
11	106	AD		Y		Patient Address	Not used
12	4	ID				County Code	Not used
13	40	TN		Y		Phone Number – Home	Not used
14	40	TN		Y		Phone Number – Business	Not used
15	25	ST				Language – Patient	Not used
16	1	ID			0002	Marital Status	Not used
17	3	ID			0006	Religion	Not used
18	20	CK				Patient Account Number	Not used
19	16	ST				SSN Number – Patient	Social security number and pseudo indicator.
20	25	CM				Driver's Lic Num – Patient	Not used
21	20	CK				Mother's Identifier	Not used
22	1	ID			0189	Ethnic Group	Not used
23	25	ST				Birth Place	Not used
24	2	ID				Multiple Birth Indicator	Not used
25	2	NM				Birth Order	Not used
26	3	ID		Y	0171	Citizenship	Not used
27	60	CE			0172	Veterans Military Status	Not used

2.3.4 ORC-Common Order Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	2	ID	R		0119	Order Control	Refer to Table 0119
2	22	EI	C			Placer Order Number	Not used
3	22	EI	C			Filler Order Number	Not used
4	22	EI				Placer Group Number	Not used
5	2	ID			0038	Order Status	Not used
6	1	ID			0121	Response Flag	Not used
7	200	TQ				Quantity/timing	Not used
8	200	CM				Parent	Not used
9	26	TS				Date/Time of Transaction	Not used
10	120	XCN				Entered By	Not used
11	120	XCN				Verified By	Not used
12	120	XCN				Ordering Provider	Not used
13	80	PL				Enterer's Location	Not used
14	40	XTN		Y/2		Call Back Phone Number	Not used
15	26	TS				Order Effective Date/Time	Not used
16	200	CE				Order Control Code Reason	Not used
17	60	CE				Entering Organization	Not used
18	60	CE				Entering Device	Not used
19	120	XCN				Action By	Not used

2.3.5 RQD-Requisition Detail Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	4	SI				Requisition Line Number	Always set to "1"
2	60	CE	C			Item Code – Internal	Not used
3	60	CE	C			Item Code – External	NCMD Card ID (.01) field from VIC REQUEST (#39.6) file.
4	60	CE	C			Hospital Item Code	Not used
5	6	NM				Requisition Quantity	Not used
6	60	CE				Requisition Unit of Measure	Not used
7	30	IS			0319	Dept. Cost Center	Not used
8	30	IS			0320	Item Natural Account Code	Not used
9	60	CE				Deliver to ID	Not used
10	8	DT				Date Needed	Not used

2.3.6 NTE – Notes and Comments

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	4	SI	O			Set ID	Not used
2	8	ID	O		105	Source of Comment	Not used
3	65536	FT	O	Y		Comment	1st repetition: String "POW:" followed by single character Prisoner Of War indicator calculated from the PATIENT ELIGIBILITIES (#361) field of the PATIENT (#2) file and the current enrollment status derived from the supported call $$STATUS^DGENA. Example: **POW:Y** 2nd repetition: String "PH:" followed by single character Purple Heart indicator calculated from CURRENT PH INDICATOR (#.531) and CURRENT PURPLE HEART STATUS (#.532) fields of the PATIENT (#2) file. Example: **PH:N**
4	250	CE	O		364	Comment Type	Not used

2.4 Trigger Events and Message Definitions

Each triggering event is listed below along with the applicable form of the message to be exchanged. The notation used to describe the sequence, option, and repetition of segments is described in the HL7 V. 2.4 Standard Specification Manual, Chapter 2, and in summary form, in Section 2.1 of this document.

2..4.1 ORM - General Order Message (event O01)

ORM~O01 message to be sent to the NCMD

ORM	Order Message	Section
MSH	Message Header	2.3.1
PID	Patient Identification	2.3.3
ORC	Common Order	2.3.4
RQD	Requisition Detail	2.3.5
NTE	Notes and Comments	2.3.6

Sample Message

```
MSH^~|\&^VIC NCMD SEND^500~FO-ALBANY.MED.VA.GOV~DNS^VIC NCMD RECV^NCMD^20031008144616-
0400^^ORM~O01^50018835^P^2.4^^^NE^AL^USA

PID^1^222-33-4444~~^1001178082V735077~~~USVHA&&L~NI^^DOE~JOHN^^
19500404^^^^^^^^^^^222334444

ORC^RL

RQD^1^^22233444-DOE-1

NTE^^^POW:N|PH:Y
```

2.4.2 ORR – General Order Response Message response to any ORM (event O02)

Upon receipt of a VIC Card request order message, the NCMD will respond with an ORR~O02 message.

ORR	Order Response Message	Section
MSH	Message Header	2.3.1
MSA	Message Acknowledgment	2.3.2

Sample Messages

General Order Response (ORR~O02) message when the General Order Message (ORM~O01) is successful.

```
MSH^~|\&^VIC NCMD RECV^NCMD^VIC NCMD SEND^500~FO-ALBANY.MED.VA.GOV~DNS^20031008144616-
0400^^ORR~O02^782218835^P^2.4^^^NE^AL^USA

MSA^AA^50018835
```

General Order Response (ORR~O02) message when the General Order Message (ORM~O01) fails.

```
MSH^~|\&^VIC NCMD RECV^NCMD^VIC NCMD SEND^500~FO-ALBANY.MED.VA.GOV~DNS^20031008144616-
0400^^ORR~O02^782218835^P^2.4^^^NE^AL^USA

MSA^AE^50018835^CardID not on file
```

3. Supported and User Defined HL7 Tables

3.1 Table 0003 - Event Type Code

VALUE	DESCRIPTION
O01	ORM – Order Message
O02	ORR – Order Response

3.2 Table 0008 – Acknowledgment Code

VALUE	DESCRIPTION
AA	Original mode: Application Accept Enhanced mode: Application acknowledgment: Accept
AE	Original mode: Application Error Enhanced mode: Application acknowledgment: Error
AR	Original mode: Application Reject Enhanced mode: Application acknowledgment: Reject
CA	Enhanced mode: Accept acknowledgment: Commit Accept
CE	Enhanced mode: Accept acknowledgment: Commit Error
CR	Enhanced mode: Accept acknowledgment: Commit Reject

3.3 Table 0076 - Message Type

VALUE	DESCRIPTION
ORM	Order Message
ORR	Order Acknowledgment Message

3.4 Table 0119 – Order Control Codes

VALUE	DESCRIPTION
RL	Release Previous Hold
CA	Cancel Order Request

HL7 GENERIC PID, EVN, PV1 SEGMENT BUILDER ESTABLISHED BY MPI

1. INTRODUCTION

This section describes functionality that can be used by other applications to dynamically build fully populated PID, EVN, and PV1 segments for use in communicating to and from VistA and/or HeV VistA.

1.1 Purpose

This document specifies the information needed by applications to utilize the generic HL7 v2.4 segment builders. In order for applications to utilize this functionality they must first subscribe to the Integration Agreement #3630 described below.

For more information about the specific data elements included in these segments, see the MPI HL7 Interface Specification on the VDL at the following address:

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

Integration Agreement (IA) #3630

This Integration Agreement consists of three Health Level 7 (HL7), Version 2.4 segment builders in the form of the following APIs:

- BLDEVN^VAFCQRY
- BLDPD1^VAFCQRY
- BLDPID^VAFCQRY

These generic segment builders can be used to build Version 2.4 HL7 PID, EVN and PD1 segments.

Custodial Package:

REGISTRATION

Subscribing Packages

MASTER PATIENT INDEX VISTA
CLINICAL INFO RESOURCE NETWORK
OUTPATIENT PHARMACY
CLINICAL PROCEDURES
PHARMACY BENEFITS MANAGEMENT
RADIOLOGY/NUCLEAR MEDICINE
GEN. MED. REC. - VITALS
ADVERSE REACTION TRACKING
LAB SERVICE
CLINICAL CASE REGISTRIES

API: BLDEVN^VAFCQRY

Description:

The entry point builds the EVN segment via version 2.4 including the Treating Facility last treatment date and event reason.

Format

BLDEVN^VAFCQRY

Input Variables

DFN: Internal Entry Number of the patient in the PATIENT file (#2).
SEQ: Variable consisting of sequence numbers delimited by commas that will be used to build the message.
EVN: (Passed by reference). This is the array location to place EVN segment result. The array can have existing values when passed.
HL: Array that contains the necessary HL variables (init^hlsub).
EVR: Event reason that triggered this message.
ERR: Array used to return an error.

API: BLDPD1^VAFCQRY

Description:

This entry point will build the version 2.4 PD1 segment.

Format

BLDPD1^VAFCQRY

Input Variables

DFN: Internal Entry Number of the patient in the PATIENT file (#2).
SEQ: Variable consisting of sequence numbers delimited by commas that will be used to build the message.
PD1: (Passed by reference). Array location to place PD1 segment result. The array can have existing values when passed.
HL: Array that contains the necessary HL variables (init^hlsub).
ERR: Array used to return an error.

API: BLDPID^VAFCQRY

Description:

This entry point will build the version 2.4 PID segment.

Format

BLDPID^VAFCQRY

Input Variables

DFN: Internal Entry Number of the patient in the PATIENT file (#2).
CNT: The value to be place in PID seq#1 (SET ID).
SEQ: Variable consisting of sequence numbers delimited by commas that will be used to build the message.
"ALL" can be passed to get all available fields in the PID Segment that are available. This is the default.
PID: (Passed by reference). The array location to place PID segment result, the array can have existing values when passed.
HL: Array that contains the necessary HL variables (init^hlsub).
ERR: Array used to return an error.

HL7 INTERFACE SPECIFICATION FOR HOME TELEHEALTH (HTH)

1. Introduction

The Home Telehealth application is in support of the Care Coordination Program that involves the use of Home Telehealth technologies. Home Telehealth helps the Veterans Health Administration (VHA) by creating a framework for optimizing the overall development and implementation of Telemedicine in VHA.

1.1 Purpose

This document specifies the information needed for activation and inactivation of Home Telehealth patients with their perspective HTH vendors.

1.2 General

This application will use the abstract message approach and encoding rules specified by HL7. HL7 is used for communicating data associated with various events which occur in health care environments.

The formats of these messages conform to the Version 2.4 HL7 Interface Standards.

1.3 Assumptions

The transmission of HTH registration/inactivation requests from VistA to the HTH vendors assumes the following.

- All VistA sites will have installed VistA HL7 software and it is operational.
- The associated VistA Consult Patch GMRC*3*42 has been installed and HTH consults activated.

1.4 Message Content

The data sent in the HL7 messages will be limited to the information that is required to uniquely identify the patient and requested by the HTH vendors. The data transmitted will be recorded and available in VistA.

1.5 Data Capture and Transmission

The following event trigger will generate a Register a Patient (Event A04).

- Provider evaluates patient and refers patient for HTH care by submitting a consult request. A pending consult request goes to the HTH Care Coordinator and verifies eligibility. A registration request is submitted to HTH vendor by using Patient Sign-Up/Activation [DGHT PATIENT SIGNUP] menu option.
- The protocol DG HOME TELEHEALTH ADT-A04 CLIENT in PROTOCOL file (#101) is used for the Patient Sign-Up/Activation process.
- The entry DG HOME TELEHEALTH in the HL7 APPLICATION PARAMETER file (#771) is used for processing outgoing HL7 messages from the Home Telehealth vendors.
- The entry HTAPPL in the HL7 APPLICATION PARAMETER file (#771) is used for processing incoming HL7 messages from the Home Telehealth vendors.
- The following entries in the HL LOGICAL LINK file (#870) facilitate the transmission of Home Telehealth patient data to Home Telehealth vendor server system via the Austin Interface.

  DG HT AMD
  DG HT ATI
  DG HT HH
  DG HT VIT
  DG HT VN
  DG HTH

- The mail group DGHTERR generates mail messages for any transmission rejects received from the vendor server.

The following event trigger will generate an inactivation of a Patient (Event A03).

- HTH Care Coordinator determines patient care is now complete. An inactivation request is submitted to HTH vendor Patient Inactivation [DGHT PATIENT INACTIVATION] menu option.
- The protocol DG HOME TELEHEALTH ADT-A03 CLIENT in the PROTOCOL file (#101) is used for the Patient Inactivation process.
- The entry DG HOME TELEHEALTH in the HL7 APPLICATION PARAMETER file (#771) is used for processing outgoing HL7 messages from the Home Telehealth vendors.
- The entry HTAPPL in the HL7 APPLICATION PARAMETER file (#771) is used for processing incoming HL7 messages from the Home Telehealth vendors.
- The following entries in the HL LOGICAL LINK file (#870) facilitate the transmission of Home Telehealth patient data to Home Telehealth vendor server system via the Austin Interface.

  DG HT AMD
  DG HT ATI
  DG HT HH
  DG HT VIT
  DG HT VN
  DG HTH

- The mail group DGHTERR generates mail messages for any transmission rejects received from the vendor server.

Note: Any modification made to the VistA database in non-standard ways, such as a direct global set by an application or by MUMPS code, will not be processed appropriately.

1.6 VA TCP/IP Lower Level Protocol

The HL7 V. 1.6 TCP/IP lower level protocol (LLP) will be used which implements the HL7 Minimal Lower Layer Protocol (MLLP) referenced in section C.4 of Appendix C of the Health Level 7 Implementation Guide (v2.4).

2. HL7 CONTROL SEGMENTS

This section defines the HL7 control segments supported by VistA. The messages are presented separately and defined by category. Segments are also described. The messages are presented in the Message Control category.

2.1 Message Definitions

From the VistA perspective, all incoming or outgoing messages are handled or generated based on an event.

In this section and the following sections, the following elements will be defined for each message.

- Trigger events
- Message event code
- List of segments used in the message
- List of fields for each segment in the message

Each 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 used for the message.

2.2 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 VistA description. Each segment is described in the following sections.

2.3 Message Control Segments

This section describes the message control segments that are contained in message types described in this document. These are generic descriptions. Any time any of the segments described in this section are included in a message in this document, the VistA descriptions and mappings will be as specified here unless otherwise specified in that section.

2.3.1 MSH - Message Header Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	1	ST	R			Field Separator	Recommended value is ^ (caret)
2	4	ST	R			Encoding Characters	Recommended delimiter values: Component = ~ (tilde) Repeat = | (bar) Escape = \ (back slash) Sub-component = & (ampersand)
3	15	ST				Sending Application	Name field of HL7 Application Parameter file.
4	20	ST				Sending Facility	Sending station's facility number from Institution field of HL7 Communication Parameters file.
5	30	ST				Receiving Application	Name field of HL7 Application Parameter file.
6	30	ST				Receiving Facility	Receiving station's facility number from Institution field of HL Logical Link file.
7	26	TS				Date/Time Of Message	Date and time message was created.
8	40	ST				Security	Not used
9	7	CM	R		0076 0003	Message Type	2 Components Refer to Table 0076 Refer to Table 0003
10	20	ST	R			Message Control ID	Automatically generated by VISTA HL7 Package.
11	1	ID	R		0103	Processing ID	P (production)
12	8	ID	R		0104	Version ID	Version ID field of event protocol in Protocol file.
13	15	NM				Sequence Number	Not used
14	180	ST				Continuation Pointer	Not used
15	2	ID			0155	Accept Acknowledgment Type	NE (never acknowledge)
16	2	ID			0155	Application Acknowledgment Type	AL (always acknowledge)
17	2	ID				Country Code	USA
18	6	ID		Y/3	0211	Character Set	Not used
19	60	CE				Principal Language of Message	Not used

2.3.2 EVN – Event Type Segment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	3	ID	B		0003	00099	Event Type Code
2	26	TS	R			00100	Recorded Date/Time
3	26	TS	O			00101	Date/Time Planned Event
4	3	IS	O		0062	00102	Event Reason Code
5	250	XCN	O	Y	0188	00103	Operator ID
6	26	TS	O			01278	Event Occurred
7	241	HD	O			01534	Event Facility

2.3.3 PID - Patient Identification Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	4	SI				Set ID - Patient ID	Always set to '1'
2	20	CK				Patient ID (External ID)	Social Security Number field of Patient file.
3	20	CM	R	Y		Patient ID (Internal ID)	Integrated Control Number (ICN) field of Patient file. Component 1: ICN w/checksum Component 2: DFN Component 3: Null Component 4: Assigning authority (subcomponent 1: 'USVHA', subcomponent 3: 'L' Component 5: Type 'NI'
4	12	ST				Alternate Patient ID	Not used
5	48	PN	R			Patient Name	Name
6	30	ST				Mother's Maiden Name	Not used
7	26	TS				Date of Birth	Date of birth
8	1	ID			0001	Sex	Not used
9	48	PN		Y		Patient Alias	Not used
10	1	ID			0005	Race	Not used
11	106	AD		Y		Patient Address	Home Address
12	4	ID				County Code	Not used
13	40	TN		Y		Phone Number – Home	Home Phone Validated
14	40	TN		Y		Phone Number – Business	Not used
15	25	ST				Language – Patient	Not used
16	1	ID			0002	Marital Status	Not used
17	3	ID			0006	Religion	Not used
18	20	CK				Patient Account Number	Not used
19	16	ST				SSN Number – Patient	Social security number and pseudo indicator.
20	25	CM				Driver's Lic Num – Patient	Not used
21	20	CK				Mother's Identifier	Not used
22	1	ID			0189	Ethnic Group	Not used
23	25	ST				Birth Place	Not used
24	2	ID				Multiple Birth Indicator	Not used
25	2	NM				Birth Order	Not used
26	3	ID		Y	0171	Citizenship	Not used
27	60	CE			0172	Veterans Military Status	Not used

2.3.4 PD1 - Patient Additional Demographic Segment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	2	IS	O	Y	0223	00755	Living Dependency
2	2	IS	O		0220	00742	Living Arrangement
3	250	XON	O	Y		00756	Patient Primary Facility
4	250	XCN	B	Y		00757	Patient Primary Care Provider Name & ID No.
5	2	IS	O		0231	00745	Student Indicator
6	2	IS	O		0295	00753	Handicap
7	2	IS	O		0315	00759	Living Will Code
8	2	IS	O		0316	00760	Organ Donor Code
9	1	ID	O		0136	00761	Separate Bill
10	250	CX	O	Y		00762	Duplicate Patient
11	250	CE	O		0215	00743	Publicity Code
12	1	ID	O		0136	00744	Protection Indicator
13	8	DT	O			01566	Protection Indicator Effective Date
14	250	XON	O	Y		01567	Place of Worship
15	250	CE	O	Y	0435	01568	Advance Directive Code
16	1	IS	O		0441	01569	Immunization Registry Status
17	8	DT	O			01570	Immunization Registry Status Effective Date
18	8	DT	O			01571	Publicity Code Effective Date
19	5	IS	O		0140	01572	Military Branch
20	2	IS	O		0141	00486	Military Rank/Grade
21	3	IS	O		0142	01573	Military Status

2.3.5 PV1 - Patient Visit Segment

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM#	ELEMENT NAME
1	4	SI	O			00131	Set ID - PV1
2	1	IS	R		0004	00132	Patient Class
3	80	PL	O			00133	Assigned Patient Location
4	2	IS	O		0007	00134	Admission Type
5	250	CX	O			00135	Preadmit Number
6	80	PL	O			00136	Prior Patient Location
7	250	XCN	O	Y	0010	00137	Attending Doctor
8	250	XCN	O	Y	0010	00138	• Referring Doctor
9	250	XCN	B	Y	0010	00139	Consulting Doctor
10	3	IS	O		0069	00140	Hospital Service
11	80	PL	O			00141	Temporary Location
12	2	IS	O		0087	00142	Preadmit Test Indicator
13	2	IS	O		0092	00143	Re-admission Indicator
14	6	IS	O		0023	00144	Admit Source
15	2	IS	O	Y	0009	00145	Ambulatory Status
16	2	IS	O		0099	00146	VIP Indicator
17	250	XCN	O	Y	0010	00147	Admitting Doctor
18	2	IS	O		0018	00148	Patient Type
19	250	CX	O			00149	Visit Number
20	50	FC	O	Y	0064	00150	Financial Class
21	2	IS	O		0032	00151	Charge Price Indicator
22	2	IS	O		0045	00152	Courtesy Code
23	2	IS	O		0046	00153	Credit Rating
24	2	IS	O	Y	0044	00154	Contract Code
25	8	DT	O	Y		00155	Contract Effective Date
26	12	NM	O	Y		00156	Contract Amount
27	3	NM	O	Y		00157	Contract Period
28	2	IS	O		0073	00158	Interest Code
29	4	IS	O		0110	00159	Transfer to Bad Debt Code
30	8	DT	O			00160	Transfer to Bad Debt Date
31	10	IS	O		0021	00161	Bad Debt Agency Code
32	12	NM	O			00162	Bad Debt Transfer Amount
33	12	NM	O			00163	Bad Debt Recovery Amount
34	1	IS	O		0111	00164	Delete Account Indicator
35	8	DT	O			00165	Delete Account Date
36	3	IS	O		0112	00166	Discharge Disposition
37	47	DLD	O		0113	00167	Discharged to Location
38	250	CE	O		0114	00168	Diet Type
39	2	IS	O		0115	00169	Servicing Facility
40	1	IS	B		0116	00170	Bed Status
41	2	IS	O		0117	00171	Account Status
42	80	PL	O			00172	Pending Location
43	80	PL	O			00173	Prior Temporary Location
44	26	TS	O			00174	Admit Date/Time
45	26	TS	O	Y		00175	Discharge Date/Time
46	12	NM	O			00176	Current Patient Balance
47	12	NM	O			00177	Total Charges
48	12	NM	O			00178	Total Adjustments
49	12	NM	O			00179	Total Payments
50	250	CX	O		0203	00180	Alternate Visit ID
51	1	IS	O		0326	01226	Visit Indicator
52	250	XCN	B	Y	0010	01274	Other Healthcare Provider

2.365 MSA – Message Acknowledgment Segment

SEQ	LEN	DT	R/O	RP/#	TBL#	ELEMENT NAME	VistA DESCRIPTION
1	2	ID	R		0008	Acknowledgment Code	Refer to HL7 table 0008
2	20	ST	R			Message Control ID	Message Control ID of the message being acknowledged.
3	80	ST	O			Text Message	Free text error message
4	15	NM	O			Expected Sequence Number	Not used
5	1	ID	B		0102	Delayed Acknowledgment Type	Not used
6	100	CE	O			Error Condition	Not used

Glossary

ALOS	Average Length of Stay
AMIS	Automated Management Information System
DRG	Diagnostic Related Group
HL7	Health Level Seven
IRT	Incomplete Records Tracking
MEANS TEST	A financial report upon which certain patients' eligibility for care is based
OPC	Outpatient Clinic
PAI	Patient Assessment Instrument
PAF	Patient Assessment File; where PAI information is stored until transmission to Austin.
PTF	Patient Treatment File
PULL LIST	A list of patients whose radiology/PIMS records should be "pulled" from the file room for scheduled clinic visits
RUG	Resource Utilization Group
SPECIAL SURVEY	An ongoing survey of care given to patients alleging Agent Orange or Ionizing Radiation exposure. Each visit by such patients must receive "special survey dispositioning" which records whether treatment provided was related to their exposure. This data is used for Congressional reporting purposes.
THIRD PARTY BILLINGS	Billings where a party other than the patient is billed
TSR	Treating Specialty Report