

## Low-Level Security Requirements in WorldVisitA

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### 2.1.Accounts Receivable

Version: 4.5

Namespace: PRCA

**Brief Description:** The Accounts Receivable (AR) package is a system of accounting and receivables management. The AR package automates the debt collection process and a billing module is available to create statements for non-medical care debts. Functionality is available to establish, follow-up on, collect against and track all medical facility debts.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Financial Management

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA CBO Revenue Operations

**VASI ID:** 1777

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123314/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=55>

**Full Description and Features:** Some of the debts owed to a VA facility may include patient care covered by health insurance companies, veteran co-payments, pharmacy prescription co-payments, employee salary overpayments, lost or damaged property, vendor collectibles, benefit overpayments, and services provided under a sharing agreement with another institution.

- Provides a generic billing system used to generate standardized bills
- Receives patient and third party billing information passed automatically from the Integrated Billing (IB) package
- Sends electronic transmissions to the Consolidated Copayment Processing Center (CCPC) in Austin, TX to generate patient statements
- Automatically processes first party payments received from the Lockbox Bank
- Calculates interest and administrative charges
- Records, processes, and tracks payment information from patients, vendors, insurance companies, employees, and institutions
- Records and tracks credit balances if debtors have overpaid their accounts, and processes refunds as appropriate

- Updates Financial Management System (FMS) with Accounts Receivable data
- Tracks and forwards eligible delinquent patient, vendor, and employee debts to the Treasury Program for offset
- Tracks delinquent debts for Regional Counsel and Department of Justice for enforced collection
- Provides the ability to set up repayment plans
- Provides reports and inquiries for the follow-up and maintenance of outstanding receivables
- Provides for transmission of certain AR bills over 90 days old to be referred to the Debt Management Center (DMC) for collection action
- Automatically processes electronic payments and explanation of benefits documents received from third party insurance carriers through the Electronic Data Interchange (EDI) Lockbox bank
- Allows modifications to locate 3rd Party claims with Electronic Explanation of Benefit (EEOB's)
- Provides corrections to the printed EDI Lockbox reports
- Provides corrections to the Daily Activity Report and the Claims Matching report
- Allows VistA to receive, process and display data from Financial Service Center (FSC) in HIPAA 5010 compatible format
- Provides a change in revenue reconciliation from deposits to comply with the Treasury mandate to accept new deposit numbers from the Treasury contracted bank
- Provides modification to the Third Party Joint Inquiry option to allow up to 10 characters of an inactive claim number to display
- Modifies the Full Account Profile option to allow up to 10 characters of an inactive claim number to display
- Creates the processes to support the receipt, storage and display of Medical deductible information from Trailblazer Health Care Enterprise
- Creates a new option called Medicare Deductible Alert Worklist from which users can view Medicare deductible information
- Provides modifications to AR routines to accommodate a longer 12 digit Electronic Claims Management Engine (ECME) number
- Provides modifications to the EDI Lockbox menu to allow VistA to receive, process and display ERA, Electronic Fund Transfer (EFT) and EEOB data from FSC in HIPAA 5010 compatible format
- Provides automation of the current ePayments processes to improve productivity of Accounts Receivable staff and increase accuracy of the revenue operation with these changes including Auto-Posting
- Modifies the EDI Lockbox Parameters option to allow maintenance of new parameter values for the new automatic processing and posting prevention functionality
- Creates a new option called EDI Lockbox Parameter Report which displays the parameter settings
- Creates a new option called EDI Lockbox Exclusion Audit Report which reports changes made to the excluded payer parameters
- Creates a new option called EDI Lockbox Parameters Audit Report which reports changes made to other parameters.
- Modifies the EDI Lockbox Reports Menu to include new ad-hoc reports of Auto-posting and Auto-decrease activit

- Modifies the EDI Lockbox menu to include a new Auto-posting Awaiting Resolution option which allows for claim lines rejected by the nightly Auto-posting process to be reviewed and resubmitted for Auto-posting
- Creates a new option called Unposted EFT Override which allows user with the new RCDPE AGED PMT security key to override posting prevention in the ERA Worklist.
- Modification to the 90-day DMC debt referral process
- TOPS modification exclude first party bills from the TOP process unless the date the bill became active is prior to the Activation Date. Do not exclude bills from the TOP process that are identified as referred to TOP
- Monthly Patient Statements - Bills Referred to Cross-Servicing will exclude the value of bills that have been referred to Cross-Servicing from the 'Previous Balance' and 'Balance' block on the monthly patient statement
- Monthly Patient Statements- Bills Not Referred to Cross-Servicing will include the value of bills in the 'Previous Balance' and 'Balance' block on the monthly patient statement when a bill is no longer referred to Cross-Servicing
- Bulletin will be generated by VistA when there is eligible debt for Cross-Servicing and a third collection letter has not been sent. The bulletin will contain the debtor's name and bill number(s)
- Updates estimated copayment amount displayed within AR's Payment Processing to reflect correct amount
- Ensures Tier Rate decreases do not flag non Tier Rate charges as duplicate
- Modifies purging criteria for the weekly TCSP batch run
- Modifies purging criteria for the weekly TOP batch run
- Modifies TOP bills foreign address handling
- Updated the Revenue Source Code Report option (PRCA FMS RSC REPORT) to properly display the new revenue
- Updates to the Deposit Reconciliation Report option (PRCA DEPOSIT RECON REPORT) to include the new fund
- Updates to the Bad Debt Report option (PRCA NR BAD DEBT ACCR REPORT) to include the new fund
- Modified the display to correct reject descriptions on Bill Profile screens
- Updates to the Calculate Revenue Source Code For a Bill option (PRCA FMS RSC CALCULATE) to include the new source codes
- Corrects the Write-Off/Contract Adjustment (WR) document data when being sent to Financial Management Systems (FMS)
- A new option, TCSP Flag Control [RCDP TCSP FLAG CONTROL], was created to correct debtor/bill for Treasury
- Cross Service as seen when viewing the same debtor/bill on the Treasury System or from the monthly TCSP reconciliation report
- A new security key, RCDP TCSP FLAG, was created to allow users to edit the TCSP flag on Debtor and/or Bill. This Security Key, RCDP TCSP FLAG, should ONLY be allocated by CPAC IT and given ONLY to Veteran Services Supervisors and/or Veteran Services Leads (One, Two or Three)
- Modifications made to the TCSP weekly batch run to bypass any debtors that are not defined correctly in the AR DEBTOR (#340) file

- Modifications made to remove the inactive email address 'OGCNASRI@MAIL.VA.GOV'^OGCRegion8DeathNotification@mail.va.gov' from the routines
- Modifications made to the TCSP weekly batch run to ensure that the correct country, state and zip code are set when a veteran address is outside the United States
- A new report option ARDC Monthly Reconciliation [PRCA ARDC MONTHLY REPORT] was added to both the AR - Accounts Receivable Menu [PRCAT USER] and the Reconciliation Reports [PRCAD RECONCILE MENU] menus
- The collection of historical ARDC data will be retained for the current month and two prior months only. Then it will be automatically purged once the next AR accounting month starts processing
- Improves revenue operation functionality related to repayment plans, late charge capture, bill suspension reasons, the billing of deactivated providers, and the display of appeal rights and responsibilities on the Veterans Beneficiary Travel Bill of Collections form
- Repaired the Excel output of the Claims Matching Report and fixed device handling issues.
- Provides the infrastructure foundation for electronic exchange of claim payment information and promotes an interoperable system
- Reduces the time elapsed between receipt of the EDI 835 Electronic Remittance Advice Transaction and receipt of the Cash Concentration or Disbursement transactions
- Ensures that trace numbers between payments and remittances can be used by VA, reducing the level of open accounts receivable, allow claim denials to be more quickly addressed, and standardizes Electronic Funds Transfer (EFT) & ERA enrollment to reduce workload burden on VA staff
- Increases timely and accurate processing of payments for electronic claims in compliance with Health Insurance Portability and Accountability Act
- Repairs made to the 5B record in the Cross-Servicing file that reports veteran debt to the Treasury Cross Servicing Program
- Repairs made to the Reconciliation Report - Cross-Servicing [RCTCSP RECONCIL REPORT] and to the Enter/Edit Re-payment Plan option [PRCAC ENTER EDIT REPAYMENT]
- Corrects some reported out-of-balance discrepancy issues
- The old columns "AMOUNT PAID" and AMOUNT OF FEES" on the Reconciliation Re-port - Cross-Servicing [RCTCSP RECONCIL RE-PORT] were inaccurate
- The header modified for the Recall Date in the Microsoft Excel output of the Reconciliation Report
- The heading was changed from SSN to PT ID. Leading zeroes of the SSN were lost in the Excel output of the Reconciliation Report. Corrects the handler control variable IOP was being misused in the Reconciliation Report
- Corrects the Enter/Edit Repayment Plan [PRCAC ENTER EDIT REPAYMENT]
- New Cross-Servicing transaction types were also added into the monthly AR Data Collection (ARDC) and FMS transmission processes so that the new transaction types which have dollar amounts are included
- Adds notifications for changes to auto-post, auto-decrease, payer, and CARC site parameters
- Adds the ability to see who manually marked an ERA for auto-post in the Auto-Posted Receipt Report, Receipt Profile, List of Receipts Report, and Transaction Profile
- Adds 'matched date' to the ERA Worklist and Daily Activity Report
- Adds a unique EFT identifier to the following reports: Daily Activity Report, EFT Unmatched Report, Unapplied EFT Report, EFT Audit Report, and Manual Match Report

- Adds display of 'Percent Collected on Claims' to the 'Claim Level Pay Status' section of the EP Report (ERA/835 Action)
- Updates display language in the Link Payment Report and adds ability to filter by receipt number on Link Payment Report
- Allows user to generate Auto-Post Report by payer TIN
- Restricts unbalanced ERAs to be auto-post candidates
- Renames the Payer Exclusion Report to the Payer Implementation Report
- Modified the 'Distribute Adj Amts' action on the ERA Worklist to allow for negative distributions to claim lines which do not have a valid claim
- Adds FMS Document Status to bill/claim profile screens and reports
- Provides fix to Pharmacy Data Exception Filter on the 3rd Party Exceptions Worklist Scratch Pad
- Provides fix to error in the ERA Worklist Manual Match Action
- Adds an ERA Partial Post Indicator
- Rewrites auto-posting logic to determine if the ERA is actually matched to an EFT
- Changes prompt wording of Worklist Delete
- Removes auto-decrease limit and adds new maximum parameter
- Adds the ability to auto-decrease zero or no-pays
- Adds the ability to view all ERA verify lines information on EEOBs
- Adds the capability to filter all 3rd Party EDI Lockbox reports and options by Tricare/ChampVA
- Adds fee claims to Auto-Audit (5287.13) Rate type = Fee
- Allows AM Clerk access to the Admin Cost Adjustment option
- Fixes duplicate EFT deposits in the Audit Report
- Adds Administrative Cost Adjustment option to allow adjustment to balance and for it to be recognized

## **2.2.Admission, Discharge, Transfer (ADT)/Registration**

Version: 5.3

Namespace: DG

**Brief Description:** The Admission, Discharge, Transfer (ADT) module provides a comprehensive range of software dedicated to the support of administrative functions related to patient admission, discharge, transfer, and registration. The functions of this package apply throughout a patient's inpatient and/or outpatient stay, from registration, eligibility determination and Means Testing through discharge with on-line transmission of Patient Treatment File (PTF) data to the Austin Information Technology Center (AITC).

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Provide Health Care

**Business Function Framework Function(s):** Provide Member Access, Perform Hospital Administration, Utilize Information Services

VHA Portfolio: Business Informatics

Business Owner: Office of Community Care (OCC) - Member Services

VASI ID: 1778

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123315/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=55>

**Full Description and Features:** The ADT software also aids in recovery of cost of care by supplying comprehensive PTF and Means Test software. The ADT module functions as the focal collection point of patient information, encompassing demographic, employment, insurance, and medical history data. Many other modules, such as Laboratory, Pharmacy, Radiology, Nursing, and Dietetics, utilize information gathered through the various ADT options. Several features have been designed to maximize efficiency and maintain control over user access of specified sensitive patient records. The Patient Sensitivity function allows a level of security to be assigned to certain records within the database (i.e., records of employees, government officials, etc.) in order to maintain control over unauthorized user access. The Patient Lookup function screens user access of these records. It also provides for efficient and faster retrieval of patient records and identified potential duplicate patient entries. The ADT module allows for efficient and accurate collection, maintenance, and output of patient data, thus enhancing a health care facility's ability to provide quality care to its patients. The functions within ADT currently fall into five major categories: Application Processing (registration), Bed Control (inpatient movements), Inpatient Care Grouping (DRG), Data Transmission to National Database (PTF), Supervisor Functions (system setup and maintenance), and Local/National Management Reporting.

- Provides on-line patient registration and disposition of applications for medical care
- Tracks patient movements during inpatient stays
- Provides up-to-date on-line patient information
- Generates numerous managerial and statistical reports
- Performs patient data consistency checks
- Supports the flagging and monitoring of patient/missing patient records deemed to be sensitive
- Enrolls patients in the VA Patient Enrollment System during the registration process.
- Uses industry standard International Classification of Diseases (ICD)/Current Procedural

Terminology (CPT) codes

- Aids in cost recovery of care by supplying comprehensive PTF, Means Test, and pharmacy co-pay software
- Allows support for newborn claims
- Assignment of a patient to Veteran Transportation Services in VistA scheduling service
- Veterans Health Identification Card (VHIC)
- Elimination of the annual financial means test
- ICD-10 code compliant
- Fugitive Felon Program Public Law 107-103 section 505 compliant, which prohibits federal agencies from providing certain benefits to persons who are fugitive felons

- Military Sexual Trauma (MST) compliant with the VHA Directive in providing appropriate care and counseling to veterans determined to have been a victim of sexual trauma while the veteran was serving on active duty

### 2.2.1. Fugitive Felon Program

Version: 1.0

Namespace: DGFFP

Brief Description: The Fugitive Felon functionality in VistA and via the Health Eligibility Center (HEC) is designed to identify veterans who are fugitive felons receiving VA medical care.

Business Function Framework Line(s) of Business: Provide Access to Healthcare, Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Provide Member Access, Perform Hospital Administration, Manage VHA-wide Administration Services

VHA Portfolio: Business Informatics

Business Owner: VHA Chief Business Office

VASI ID: 1291

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122947/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=150>

Full Description and Features: Public Law (PL) 107-103, Section 505, prohibits provision of certain benefits to veterans or their dependents that are classified as fugitive felons. This law requires VA to provide current address information, upon written request, to any Federal, State, or local law enforcement official, if s/he: provides information required to fully identify the person, identifies the person as being a fugitive felon, or certifies that apprehending such person is within the official duties of such official. This project software provides the following functionality for VHA implementation: adds several fields to the VistA Patient File to store the Fugitive Felon Flag and track when the flag was entered and removed, creates a new security key to control access to the Fugitive Felon Flag and the associated menu options, provides menu options that allow users to set and clear the Fugitive Felon Flag, and to print the various reports associated with the new fields, and displays user alert from Scheduling and Registration options.

- VistA Changes
- Security Controls
- Functionality
- Reports

- Issues

### **2.3. Anticoagulation Management Tool**

Version: 1.0

Namespace: OR

**Brief Description:** The Anticoagulation Management Tool (AMT) was developed at the Portland VA Medical Center to help simplify the complex, time consuming processes required to manage patients on anticoagulation medication. The tool enables the user to enter, review, and continuously update all information connected with patient anticoagulation management.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Deliver Health Care

**Business Function Framework Function(s):** Provide Member Access, Provide Medical Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA

**VASI ID:** NA

**VASI ID Link:**

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=188>

**Full Description and Features:** With the Anticoagulation Management Tool (AMT), one can order lab tests, enter outside lab results and graphically review lab data, enter notes, complete encounter data, complete the consults if consults are used to initiate entry into the Anticoagulation clinic, and print a variety of patient letters. Upon exiting, all activities within the program are recorded on an Anticoagulation flow sheet maintained on the Computerized Patient Record System (CPRS) Reports tab. AMT provides clinic staff a mechanism of ensuring continuous patient monitoring with a built-in mechanism that alerts staff when patients have not been monitored in a timely period. A "Lost to Follow-up" list is maintained to ensure that staff knows of patients who need attention.

### **2.4. Automated Information Collection System (AICS)**

Version: 3.0

Namespace: IBD



**Brief Description:** The Automated Information Collection System (AICS) software supports outpatient clinical efforts through the creation and printing of encounter forms that display relevant clinical information, and provides for the entry of clinical encounter data for local and national needs.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Ancillary Services, Manage Health Records

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Public Health

**VASI ID:** 1780

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123317/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=30>

**Full Description and Features:** The AICS encounter forms are used to display relevant patient data for use during the appointment (e.g., demographics, allergies, clinical reminders, and problems) and to collect data about the appointment (e.g., procedures, providers, and diagnoses), thus providing an organized method of data collection through scanning or data entry. Many of the lists that a user sees in Computerized Patient Record System (CPRS) for input of outpatient encounter data are based on lists created when designing encounter forms for clinics. A form generator is included, which allows sites to design forms that meet local medical facility needs. There is enough flexibility in the software so sites can build forms that meet their individual clinical, billing, and resource requirements. The encounter form may be filed in the clinical record. A print manager is included that allows sites to define reports to print in conjunction with the encounter form and any supplemental forms for each appointment. Reports can be defined to print at the division, clinic group, or clinic level. Utilities are available to manage when and where forms may print. Data from encounter forms can be input into VistA in one of two ways. Forms can be scanned on client workstations with the data automatically transmitted to the VistA server, or clerks can key in data from forms.

Provides a form design utility that allows creation of attractive and easy to use forms for each clinic

- Allows forms to be designed to print with patient data displayed, such as patient demographics, insurance information, allergies, and clinical reminders that are due and active problems
- Allows for the creation of forms to collect data such as procedures, diagnoses, problems, providers, progress notes, vital signs, and Patient Care Encounter (PCE)-related data such as exams, health factors, patient education, skin tests, and immunizations
- Provides a print manager that allows all clinic-specific forms to print with the encounter form for an appointment. The print manager also provides a setup system that, once accomplished, no longer requires daily user intervention

- Provides an import/export utility that makes it easier for sites to exchange forms they have already created
- Provides forms tracking to ensure that each form printed is processed or accounted for.
- Manual data entry options are available to allow data to be key entered by a clerk and passed to PCE to be stored
- Updated in June, 2014 to support ICD-10 functionality
- Updated in January 2015. APIs called to retrieve encounter form information for CPRS were optimized and streamlined to improve timely displays and performance
- Updated in December 2015. DD change for Type of Visit File: A request was made to update the SHORT NAME (#.015) field in the TYPE OF VISIT (#357.69) file. This field is computed using a pointer to the SHORT NAME (#2) field in the CPT (#81) file; a field that was removed by patch ICPT\*6.0\*46. This patch redefined the computed expression used in the SHORT NAME (#.015) field to use an API to populate the SHORT NAME data. The value of the SHORT NAME (#.015) computed expression was changed to use the CPT^ICPTCOD API which will populate the correct SHORT NAME data.

## **2.5. Automated Medical Information Exchange (AMIE)**

Version: 2.7

Namespace: DVBA

Brief Description: The Automated Medical Information Exchange (AMIE) module facilitates the electronic interchange of veteran information between Veteran Benefits Administration (VBA) Regional Offices (ROs) and VA medical facilities.

Business Function Framework Line(s) of Business: N/A

Business Function Framework Function(s): N/A

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1031

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122709/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=31>

Full Description and Features: This comprehensive module provides an accurate audit trail to track most requests for information. The module is composed of two components: Facility administrative options

(7131/7132) and VBA Regional Office options (2507 Compensation and Pension). Each area has individual items to maintain daily, and its own reports to print. RO staff access VA medical facility computers through VA national telecommunications network, and exercise their options on each local medical facility's system as necessary.

- Provides access to local databases for identification of a veteran's admission, discharge, outpatient treatment, patient care, and other information that may require adjudicative actions
- Reduces overpayments previously caused by lost, misrouted, or improperly processed admission notifications
- Provides on-line status determinations of pending compensation and pension examinations (requesting, scheduling, tracking, and updating results)
- Provides RO on-line access to the local databases for the confirmation of the propriety of payments based on hospitalization
- Improves timeliness of the RO benefits adjustment processing
- Allows medical centers to electronically access sections of the Physicians Guide for Disability Evaluation Examinations
- Provides tracking of insufficiently completed compensation and pension examinations

## **2.6. Bed Management Solution (BMS)**

Version: 2.3

Namespace: WEBB

**Brief Description:** The Bed Management Solution (BMS) project addresses the Department of Veterans Affairs (VA) need to optimize the flow of patients from admission through discharge, and to improve patients' safety, quality of care, and customer satisfaction. BMS provides the capability to manage bed availability at the facility, VISN and national levels and provides national data for bed availability during a disaster.

**Business Function Framework Line(s) of Business:** Deliver Healthcare, Provide Access to Health Care, Provide Health Care Administration

**Business Function Framework Function(s):** Perform Hospital Administration, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Systems Redesign

**VASI ID:** 1052

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123501/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=205>

Full Description and Features: Bed Management Solution (BMS) provides real-time, user friendly, web-based VistA interface to track patient movements and determine bed availability. It provides performance information that can be used to measure and improve patient flow as it occurs within and between VAMCs. BMS enhances safety, quality of care, patient/staff satisfaction and improves patient flow for process and outcome improvements. BMS, the automated Bed Management Solution, allows administrative and clinical staff to record, manage and report on the planning, patient-movement, patient occupancy, and other activities related to management of beds. All patient admission, discharge, and transfer movements are pulled directly from VistA to BMS resulting in minimal manual data entry.

- Track current and pending bed availability and patient movement through the system
- Plan, prepare, and manage patient flow; identify and anticipate peak demands facilitation of Real-Time Demand and Capacity Management
- Reduce non-VA care ("fee basis") days and associated costs
- Display bed occupancy status for all beds in the facility (VAMC) and/or VISN
- Provide visibility of bed availability within all VAMCs for emergency management purposes
- Automate request and assignment of beds
- Reduce cycle times for bed cleaning and readiness
- Display and facilitate timely discharge appointments; anticipate and track patient discharges
- Provide links for entry and retrieval of Bed Management events
- Provide links for access and updating Bed Management Data, with respect to processes and retrieval of data that is not in any other system
- Store patient, operational, and transaction data, as needed to support and report on bed management, throughput events and cycle time data
- Provide the ability for utilization in a multidivisional, integrated site environment with the ability to produce multi-site reports
- Facilitate efficient flow operations at multiple levels and provides reports on the performance of bed management activities, thus enabling VAMCs and VISNs to track key performance indicators and to impact performance on Deputy Under Secretary for Health (DUSH) monitors and guidelines

## **2.7. Blind Rehabilitation**

Version: 5.1

Namespace: ANRV

Brief Description: The Blind Rehabilitation Service program consists of the following four elements: VA Headquarters, Blind Rehab Centers (BRC), Visual Impairment Service Teams (VIST), and Blind Rehabilitation Outpatient Specialists (BROS).

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Clinical Decision Support, Provide Care Management, Provide Ancillary Services, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: Rehabilitation and Prosthetic Services

VASI ID: 1064

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122723/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=164>

Full Description and Features: The Blind Rehabilitation application provides enhanced tracking and reporting of the blind rehabilitation services provided to veterans by:

- Visual Impairment Service Teams (VIST) Coordinators
- Blind Rehabilitation Centers (BRCs)
- Blind Rehabilitation Outpatient Specialists (BROS)
- Visual Impairment Services Outpatient Rehabilitation (VISOR) Programs
- Visual Impairment Center to Optimize Remaining Sight (VICTORS)

In addition to providing the base functionality of the BR 4.0 system, BR 5.1 provides a web-enabled GUI through which users can access enhanced capabilities intended for VIST Coordinators, new functionality for BROS, BRC personnel and waiting times and waiting list. The Blind Rehabilitation 5.1 application provides entirely new functionality that encompasses and integrates all five segments of the Blind Rehabilitation Services including waiting times and waiting list.

- Complies with VistA Architecture
- Complies with 508 regulations, using W3C standards
- Accessible web based application, via a web browser
- Supports the OI Single Sign-on initiative
- User authentication via role based permissions
- User friendly
- Seamless continuum of care
- Minimum user disruption
- Simplified data entry
- Better identification and treatment of veterans
- Consolidates data
- Enables system driven waiting times and waiting list tracking and reporting capabilities
- Enables users to receive comprehensive views of a patient's BR Services across institutions

- Facilitates data tracking and auditing capabilities
- Improves accountability
- Enhanced reporting features
- Provides Data Standardization which improves and provides consolidated data reporting
- Improved blind services tracking
- Enables Research and Provides Outcomes tracking and reporting capabilities
- Improves VHA organizational communication
- Transmits to the Health Data Repository (HDR)

## **2.8. Clinical Case Registries (CCR)**

Version: 1.5

Namespace: ROR

**Brief Description:** The Clinical Case Registries (CCR) application obtains demographic and clinical data on VHA patients with specific clinical conditions. CCR is designed to search and provide reports on patient data in multiple registries. This aides clinical staff in supporting a variety of clinical conditions or disease states in VHA patients.

**Business Function Framework Line(s) of Business:**

**Business Function Framework Function(s):**

**VHA Portfolio:**

**Business Owner:** VHA Population Health Services

**VASI ID:** 1113

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122821/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=126>

**Full Description and Features:** CCR uses a pre-defined set of selection rules to identify patients with registry-specific conditions, such as a disease-related ICD-9/ICD-10 code or a positive result on an antibody test. The CCR package then adds these patients to the appropriate local registry in a pending state. Pending patients are reviewed by the registry coordinator at the VAMC and if the data confirms the diagnosis, the registry coordinator confirms the patient for that registry.

CCR reporting accesses VistA files that contain clinical data on the registry patient including additional diagnoses, prescriptions, surgical procedures, laboratory tests, radiology exams, patient demographics, hospital admissions, and clinical visits. This access allows identified clinical staff to take advantage of

the wealth of data supported through VistA when managing specific patient populations in a single focused application.

Data from the registries can be used for both clinical and administrative reporting. Each facility can produce local reports containing information related to patients treated in their system.

Two national registries are also included in CCR. They will be discussed separately.

- Automates the development of a local list of patients with a specific condition
- Automatically transmits patient data from the local registry to a national database
- Provides robust reporting functions
- Facilitates the tracking of patient outcomes relative to treatment
- Identifies and tracks important trends in treatment response, adverse events, and time on therapy
- Monitors quality of care using both process and patient outcome measures

### 2.8.1. Hepatitis C (HepC)

Version: 1.5

Namespace: ROR

Brief Description: The Hepatitis C Case Registry contains important demographic and clinical data on VA patients identified with Hepatitis C infection.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner: VHA Population Health Services

VASI ID: 1327

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122886/c/56/nt/-1?id=1578>

VDL Link: [https://www.va.gov/vdl/documents/Clinical/Lab-Emerging\\_Pathogens\\_Initiative/lab\\_epi\\_hepc\\_tech\\_user\\_guide.pdf](https://www.va.gov/vdl/documents/Clinical/Lab-Emerging_Pathogens_Initiative/lab_epi_hepc_tech_user_guide.pdf)

Full Description and Features: This registry is specifically written for patients who have Hepatitis C ICD-9 or ICD-10 codes entered as diagnostic codes in VistA. Patients are also identified by having a positive result to specific Hepatitis C laboratory tests.

The registry extracts VistA data across various applications like pharmacy, laboratory, demographic, radiology, etc.. On a nightly basis the data is extracted and transmitted to a national database in Austin. Data from the Hepatitis C Case Registry is used on a national, regional, and local level to track and optimize clinical care of Hepatitis C infected veterans served by VA. National summary information (without personal identifiers) will be available to VA Central Office for overall program management, as well as to inform Veterans Service Organizations, Congress, and other federal public health and health care agencies.

- Automatically develops a list of patients with Hepatitis C infection
- Provides a Graphical User Interface (GUI) interface that allows select local facility staff to add to and/or edit the list
- Identifies patients who are receiving investigational class drugs for Hepatitis C
- Transmits patient data to a national database, including patient demographic information, the reason(s) patients were added to the registry, pharmacy utilization information, radiology test results, and a limited set of laboratory test results

Generates the following local reports:

- A report that lists the patients currently on the registry. Users can filter this report to display a subset of patients based on the date range they were added to the registry
- A report that lists patients who have received Hepatitis C therapy within a user-selected date range
- A report that displays local software activity and error report information

Technical improvements include:

- Automatic nightly updates to the national registry list
- Use of a uniform M (formerly MUMPS) program backbone that can be used for other disease case registries
- The transformation of VistA data into standard Health Level Seven (HL7) formatted messages for transmission, including limited validation checks, error messaging, etc.

## 2.8.2. Human Immunodeficiency Virus (HIV)

Version: 1.5

Namespace: ROR

Brief Description: The Human Immunodeficiency Virus (HIV) Case Registry contains important demographic and clinical data on VHA patients identified with HIV infection.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:



Business Owner: VHA Population Health Services

VASI ID: NA

VASI ID Link:

VDL Link:

Full Description and Features: Clinical Case Registries-HIV is the second specifically created registry which is designed to search for patients in the VistA database who have had specific diagnostic codes (ICD-9 or ICD-10) entered in the VistA database. In addition to the diagnostic codes, patients can be added to the registry if they have a positive result specific HIV lab tests.

The CCR-HIV application also accesses several other VistA files that contain information regarding diagnoses, prescriptions, surgical procedures, laboratory tests, radiology exams, patient demographics, hospital admissions, and clinical visits. This access allows identified clinical staff to take advantage of the wealth of data supported through VistA.

The key capabilities provided by the CCR:HIV to VA facilities that provide care and treatment to patients with HIV infection include the clinical categorization of patients, generation of the Center for Disease Control (CDC) case report form, clinical reports, and automatic transmission of data to the Corporate Data Center Operations (CDCO). Data from the CCR:HIV are used on the national, regional, and local level to track and optimize clinical care of HIV infected veterans served by VA. The capabilities of the CCR software has been further enhanced by the automation of the data collection system. The current version, referred to as CCR: HIV, is a clinically relevant tool for patient management.

- Improved graphical user interface (GUI)
- Robust reporting capability, using both process and patient outcome measures, that allows for tailored local level reporting and divisional level reporting to help monitor the quality of patient care
- Ability to export report data to spreadsheet applications
- Tracking of patient outcomes related to antiretroviral drug treatment
- Partial automation of HIV case identification
- Identifies and tracks important trends in treatment response, adverse events, and time on therapy
- Matches resources to clinical needs and utilization at local, VISN, and national levels
- Verifies workload for VERA reimbursement
- Automates notification to HIV coordinators that data was sent to and received by the national database
- Automates extraction of data to the national registry

### 2.8.3. Traumatic Brain Injury Registry (TBI)

Version: 2.0

Namespace: TBI

Brief Description: Traumatic Brain Injury (TBI) Registry allows identification and tracking of Veterans who sustained head injuries during active duty.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner: VHA

VASI ID: 1630

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123076/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: The Veterans Health Administration (VHA) is charged with supporting the Presidential Task Force on Returning Global War on Terror Heroes. The Task Force has stated in the Global War on Terror (GWOT) report (recommendation P-7) that the Department of Veterans Affairs (VA) shall “create a ‘Traumatic Brain Injury’ Surveillance Center and Registry to monitor returning service members who have possibly sustained head injury and thus may potentially have a traumatic brain injury in order to provide early medical intervention.”

The Traumatic Brain Injury (TBI) Registry software applications collect data on the population of Veterans who participated in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF). These individuals need to be seen within 30 days for a comprehensive evaluation. Each facility can produce local reports (information related to patients evaluated and treated in their system).

The TBI Instruments are a set of comprehensive evaluation questionnaires (initial and follow up) designed to provide rehabilitation professionals with a vehicle by which they can assess patients and collect patient information. The information collected from these instruments is electronically transferred and stored in the form of a medical progress note in the patient’s electronic record. This progress note can be retrieved through the Computerized Patient Record System (CPRS).

The set of TBI Instruments include the Comprehensive TBI Evaluation, TBI Follow-Up Assessment, The Mayo-Portland Adaptability Inventory (MPAI), and the Rehabilitation and Reintegration Plan.

- Allows capture of injury centric patient information for analysis and targeted treatment.
- Participation assessment with Recombined Tools
- Mayo-Portland Adaptability Inventory
- JFK Coma Recovery Scale

- Oswestry Low Back Pain Disability Questionnaire
- Timed Up and Go
- Generalized Anxiety Disorder Scale
- Post-Traumatic Stress Disorder Checklist
- Patient Health Questionnaire
- Supervision Rating Scale
- Insomnia Severity Index
- Pain Outcomes Questionnaire for Intake, Discharge, and Follow-up
- World Health Organization Disability Assessment Schedule

## **2.9. Clinical Information Support System (CISS)**

Version: 1.0

Namespace: CISS

**Brief Description:** The Clinical Information Support System (CISS) is a web-based portal application that provides a framework of services for the VA enterprise and supplies an integration point for its partner systems. The initial CISS partner system is the Occupational Health Record-keeping System (OHRS), a web-based application that enables occupational health staff to create, maintain, and monitor medical records for VA employees and generate national, VISN, and site-specific reports.

**Business Function Framework Line(s) of Business:**

**Business Function Framework Function(s):**

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA Occupational Health

**VASI ID:** 1904

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123477/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=185>

**Full Description and Features:** The focus of OHRS is to collect clinical data for wellness, medical surveillance, and appropriate treatment of work-based injury or illness. OHRS will capture and store information on patient encounters, such as encounter type, purpose, status, provider, and other pertinent clinical data obtained during the patient visit. Users with appropriate security privileges are allowed to add and sign or co-sign the encounter and if needed, and perform scheduled and unscheduled reporting on items such as vaccination rates, vaccination and immunity statuses.

The OHRS application does not share patient-specific data, but will collect data elements limited to information deemed critical to the Occupational Health delivery of care processes in the OHRS database. Employee data is obtained from the central Personnel and Accounting Integrated Data System (PAID) while volunteer information is obtained from the Voluntary Service System (VSS). Other Non-Paid and non-VSS data is collected by direct data entry into OHRS at the time of the patient encounter.

The CISS Portal hosts one of its premier partner systems, Occupational Health Record-keeping Systems (OHRS), and has been available for use by VHA field clinicians and clinical support staff involved with employee health and safety since September 2009.

Other candidate legacy applications that are planned for modernization to further leverage the CISS portal are:

- Automated Safety Incident Surveillance and Tracking System (ASISTS)
- Workers Compensation/Occupational Safety and Health Management Information System (WC/OSH MIS (WC/OSH-MIS))

## **2.10. Clinical Monitoring System**

Version: 1.0

Namespace: QAM

**Brief Description:** The heart of the Clinical Monitoring System package is in building monitors using conditions and groups for patient auto enrollment. The main function of this software is to capture data for patients meeting specified conditions. All monitors within the framework of this software are ultimately based upon patient data.

**Business Function Framework Line(s) of Business:** Deliver Healthcare, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Clinical Decision Support, Utilize Information Technology Services

**VHA Portfolio:** Business Informatics

Business Owner: VHA CBO

VASI ID: 1785

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123321/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=32>

Full Description and Features: To capture data, monitors are created to run nightly. The monitors capture data elements such as ward, treating specialty, SSN, age, etc. The data elements available for capture vary depending on the conditions selected when building monitors. The conditions are provided within the Clinical Monitoring System package. Some conditions require a group be defined, such as a group of wards, drug classes, MAS movement types, etc. Monitors are easily created through menu options and can be queued to run manually or nightly.

- Provides the user with the ability to design a monitor that will auto enroll cases that meet the user's defined criteria/conditions from VistA
- Allows the user to set time frames for computing percentages and tracking findings between time frames
- Has the ability to alert users when important thresholds or dates are met
- Provides a mechanism to add site-developed conditions and data elements and routines such as site-designed worksheets to the software. MUMPS programming is a required part of site-specific enhancement
- Provides mechanisms for controlling the disk space and CPU time resources used by the Clinical Monitoring System
- Allows the user to manually enter cases

## **2.11. Clinical Procedures**

Version: 1.0

Namespace: MD

Brief Description: Clinical Procedures (CP) passes final patient results, using Health Level 7 (HL7) messaging, between vendor clinical information systems (CIS) and VistA. Patients' test results or reports are displayed through the Computerized Patient Record System (CPRS).

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Provide Medical Services, Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1787

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123323/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=139>

Full Description and Features: Clinical Procedures (CP) passes final patient results, using Health Level 7 (HL7) messaging, between vendor clinical information systems (CIS) and VistA. Patients' test results or reports are displayed through the Computerized Patient Record System (CPRS). The report data is stored on the Imaging Redundant Array of Independent Disks (RAID) and, in some instances; discrete data is stored in the Medicine package generated by medical devices. There are no specific procedures tracked through this application, nor are management workload reports generated. Links to DSS and other databases through PCE are supported through CP works with the Consult/Request Tracking, Text Integration Utility (TIU), CPRS, Patient Care Encounter (PCE), and VistA Imaging packages. In conjunction with CPRS, CP also provides a method for clinicians to document findings and to complete final procedure reports via existing pathways in appropriate VistA applications. The CP functionality is not available in the List Manager (LM) version of CPRS. CP provides features that can be used across clinical specialties such as Medicine, Women's Health, Surgery, Dental, Rehabilitation Medicine, and Neurology. Its functionality supports clinical practice in all patient care settings including clinics, Home Based Primary Care (HBPC), and in-patient units.

- Allows clinicians to enter, review, interpret, and sign CP orders through one application, CPRS
- Accepts a variety of file types for result report files
- Allows images to be acquired, processed, stored, transmitted, and displayed by the VistA Imaging package
- Defines the Hospital Location where the procedure is performed. This location determines which Encounter Form is presented to the end user
- Allows electronic transfer of patient reports from medical devices to VistA
- Provides Bi-directional interface capabilities
- Provides easy to use user interfaces, including CP Console, CP User, CP Hemodialysis, CP Flowsheets and CP Gateway
- Affords improved internal communication between the procedural list and the primary care physician
- Improve patient education through use of reports
- Improves medical record keeping

MD\*1.0\*16 patch release provides:

- Interface for collection of patient observational data from monitoring devices
- Standardized terminology with VA Unique Identifiers (VUIDs)
- GUI, locally-customizable flow sheets to view, enter and edit patient data
- Admission Discharge and Transfer (ADT) Health Level 7 (HL7) message feed

- Publication of data to CPRS (CliO service architecture and Text Integration Utilities notes)
- User-friendly Clinical Procedures Console, configurable by user
- ICD-10 code compliant

## **2.12. Compensation and Pension Record Interchange (CAPRI)**

Version: 2.7

Namespace: DVBA

**Brief Description:** Compensation and Pension Record Interchange (CAPRI) is an information technology initiative to improve service to disabled veterans by promoting efficient communications between the Veterans Health Administration (VHA) and Veterans Benefits Administration (VBA).

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Member Access, Utilize Information Technology Services

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Office of Disability and OIT Medical Assessment and VBA Compensation

**VASI ID:** 1130

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122840/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=133>

**Full Description and Features:** Online access to medical data enhances the timeliness of the benefits determination. The CAPRI software acts as a bridge between the VBA and VHA information systems. It offers VBA Rating Veteran Service Representatives and Decision Review Officers help in building the rating decision documentation through online access to medical data. It offers VHA Compensation & Pension (C&P) staff an easy, standardized way of reporting C&P Examination results.

Using CAPRI, VBA employees have a standardized, user-friendly method to rapidly access veterans' electronic medical records throughout the VA. Initially developed specifically for VBA, the utility of CAPRI has been expanded to other user groups that include VHA, Office of the Medical Inspector, OI, Research, Veteran Service Officers, and others. One of the primary features of CAPRI is the Compensation and Pension Worksheet Module (CPWM) which is used by VHA C&P providers and staff. CPWM provides clinical users access to exam templates and tools that are used to document C&P examinations.

- Demographics
- Ability to save template work in progress and finish later
- Load new patients into VistA system
- View patient demographics
- Report patient address changes to VHA
- C&P Examination Functionality
- Add/Edit C&P exam request
- Create an insufficient exam request
- Individual and cumulative pending exam tracking
- Request VAF 7131 information
- VA Regional Office reports
- Automatic Mailman bulletins to AMIE mail groups
- Automatic sending of completed exam Requests
- Ability for site to review exams before releasing it to VBA
- Multiple templates can be merged into a single a single exam
- Patient Records Navigation
- View health summaries
- View appointment lists
- View progress notes
- View discharge summaries
- View consult requests and results
- View cumulative vital
- View active medications.
- View lab reports
- View imaging
- View procedures
- View FHIE/DoD data, if available

### **2.13. Consolidated Mail Output Pharmacy (CMOP)**

Version: 2.0

Namespace: PSX

**Brief Description:** The Consolidated Mail Outpatient Pharmacy (CMOP) package provides a regional system resource to expedite the distribution of mail-out prescriptions to veteran patients.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Access to Self-Services, Provide Clinical Decision Support, Provide Ancillary Services, Utilize Information Technology Services, Provide Enterprise Reporting



VHA Portfolio: Health Provider Systems

Business Owner: Patient Care Services

VASI ID: 1788

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123324/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=85>

Full Description and Features: CMOP host facilities, regionally located, receive data from medical centers within the area of service. Current CMOPs are designed to handle the dispensing and mailing of between 20,000 and 40,000 prescriptions in an 8-hour workday.

- Patients submit medication requests via telephone, mail, or in person at each medical facility. When necessary, pharmacy personnel enter the orders into the patient database
- Each area CMOP host facility establishes a schedule for the electronic transmission of the prescription data
- Prescriptions are transmitted electronically from the medical facility to the automated prescription dispensing equipment, checked by a pharmacist, mailed to the patient, and information on the prescription filled is returned to update the medical center database
- The process is highly integrated with the Outpatient Pharmacy software and requires no additional processing by pharmacy personnel responsible for entering the prescription
- All prescriptions are automatically screened by the CMOP software and set for transmission if appropriate

## **2.14. Computerized Patient Record System (CPRS)**

### **2.14.1. Adverse Reaction Tracking (ART)**

Version: 4.0

Namespace: GMRA

Brief Description: The Adverse Reaction Tracking (ART) program provides a common and consistent data structure for adverse reaction data. This module has options for data entry and validation, supported references for use by external software modules, and the ability to report adverse drug reaction data to the Food and Drug Administration (FDA).

Business Function Framework Line(s) of Business: Deliver Healthcare, Managing Business Enabling Services

Business Function Framework Function(s): Provide Clinical Decision Support, Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA Pharmacy Benefits Management (PBM)

VASI ID: 1779

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123316/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=57>

Full Description and Features: The Adverse Reaction Tracking (ART) program provides a common and consistent data structure for adverse reaction data. This module has options for data entry and validation, supported references for use by external software modules, and the ability to report adverse drug reaction data to the Food and Drug Administration (FDA).

Combined with Remote Data Interoperability (RDI), it includes remote allergy data when determining drug-allergy order checks.

- Documents patient allergy and adverse drug reaction data
- Provides the functionality for other VistA modules to extract and add patient reaction data
- Provides a reporting mechanism that supports VHA Directive 10-92-070 which specifies reporting of adverse drug reactions to the FDA
- Includes ART event points in an Application Programmers Interface (API) allowing other VistA packages to know when specific ART events take place so package tasks can be performed
- Alerts the Pharmacy and Therapeutics Committee each time the signs/symptoms are modified for a patient reaction
- Generates progress notes. Displays all information at the time of an ART event on the Progress Notes API and allows editing of the note prior to sign off
- Allows the site to track whether the patient has been asked if he/she has allergies
- Electronic health record is automatically updated with allergy or adverse drug reaction as soon as they are entered
- Tracks when the patient ID bands have been marked indicating a particular reaction.
- Differentiates between historical and observed reaction
- Tracks the particular signs/symptoms for a reaction.
- Allows for configuration of allergy files
- Allows for editing and verification of reaction data
- Allows for the addition of comments for each reaction to ensure completeness in reporting
- Contains extensive reporting capabilities
- Contains an online reference guide

2.14.2. Authorization/Subscription (ASU)

Version: 1.0

Namespace: USR

**Brief Description:** The Authorization/Subscription Utility (ASU) provides a method for identifying who is authorized to perform various actions on clinical documents. These actions include signing, co-signing and amending.

**Business Function Framework Line(s) of Business:** Deliver Healthcare, Managing Business Enabling Services

**Business Function Framework Function(s):** Manage Health Records, Utilize Information Technology Services, Conduct Supply Chain Operations, Manage Fixed Assets

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA HIM

**VASI ID:** NA

**VASI ID Link:**

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=58>

**Full Description and Features:** The Authorization/Subscription Utility (ASU) implements a User Class Hierarchy which is useful for identifying the roles that different users fulfill with the hospital. It also provides tools for creating business rules that apply to documents used by members of such groups. ASU provides a method for identifying who is AUTHORIZED to do something (for example, sign, co-sign or amend). ASU originated in response to a long-recognized demand for a means of implementing the "Scope of Practice" model, but the driving force behind its development was the complexity of Text Integration Utilities' (TIUs) document definition needs. Current security key capabilities were unable to efficiently manage the needs of clinical documentation (Discharge Summaries, Progress Notes, Operation Reports, etc.).

- Defines, populates, and retrieves information about user classes. User classes can be defined hospital-wide or more narrowly for a specific service and can be used across Vista to replace and/or complement keys
- Allows linkage of user classes with Document Definitions and document events
- Allows sites to maintain membership of users in User Classes and to distribute such maintenance tasks.
- Membership in classes may be scheduled for automatic transition to other classes.
- Lists class members as active or inactive
- Allows infinite hierarchies of subclasses

### 2.14.3. Clinical Reminders

Version: 2.0

Namespace: PXR

**Brief Description:** Clinical Reminders may be used for both clinical and administrative purposes. However, the primary goal is to provide relevant information to providers at the point of care, for improving care for veterans. The package benefits clinicians by providing pertinent data for clinical decision-making, reducing duplicate documenting activities, assisting in targeting patients with particular diagnoses and procedures or site-defined criteria, and assisting in compliance with VHA performance measures and with Health Promotion and Disease Prevention guidelines.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Clinical Decision Support, Provide Care Management, Provide Medical Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA HI/CMIO

**VASI ID:** 1183

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122774/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=60>

**Full Description and Features:** Version 2 of Clinical Reminders contains many enhancements to improve processing and management of reminders. Performance has been enhanced through the creation of an index of all clinical data used in reminder findings. All enhancements are intended to help the Reminders functionality smoothly transition to CPRS reengineering.

- Inform clinicians when a patient is due to receive clinical activity
- Target the clinicians who can manage and resolve the clinical activity most appropriately
- Identify patients to whom a reminder applies, based on VistA patient data
- Identify the clinical activities that resolve or satisfy reminders
- Summarize pertinent patient information to help clinicians determine appropriate follow-up activities
- Allow clinicians to resolve reminders through CPRS
- Provide aggregate reports that assist clinicians in managing their entire patient caseload
- Support national clinical practice guidelines
- ICD-10 code compliant

#### 2.14.4. Consult/Request Tracking

Version: 3.0

Namespace: GMRC

**Brief Description:** The Consult/Request Tracking package provides an efficient way for clinicians to order consultations and procedures from other providers or services within the VHA system, at their own facility or another facility. It also provides a framework for tracking consults and procedures and reporting the results. It uses a patient's computerized patient record to store information about consult and procedure requests and results.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Clinical Decision Support, Provide Medical Services  
Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA Patient Care Systems

**VASI ID:** 1789

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123325/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=62>

**Full Description and Features:** Consult Request Tracking package interfaces with the Computerized Patient Record System (CPRS) to provide an efficient mechanism for clinicians to order consults and procedure requests. It provides the consulting services with the ability to update and track the progress of a consult/procedure request from the point of receipt through its final resolution. It also provides results reporting that include's doctor's progress notes and comments entered during the tracking process.

- Allows direct access to Consults functions through menu options in CPRS
- Uses Consults' own menu options for managing the system, generating reports, tracking consults, or entering results for an existing consult request
- Allows staff to set up consults as CPRS Quick Orders, streamlining the ordering process
- Integrates with Prosthetics to track Home Oxygen, Eyeglasses, Contact Lenses, and other Prosthetic services
- Produces a permanent record of the request and resolution for patient's medical record
- Allows all relevant parties to see the consult report in the context of the patient's record
- Allows use of TIU templates and boilerplates to report findings
- Allows display of Consult reports through TIU and CPRS

- Enables clinicians to order an inter-facility consult to another VA Healthcare System
- ICD-10 code compliant
- Clinically Indicated Date is provided for consults that need to be in the future
- Allows HL7 communication between the consult system and the Healthcare Claims Processing System (HPCS)

#### 2.14.5. Group Notes

Version: 1.0

Namespace: OR

Brief Description: This program was designed to assist providers in documenting group therapy sessions and events such as immunization clinics.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA Patient Care Services

VASI ID: 1306

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122959/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=142>

Full Description and Features: Group Notes allows the easy assembly of patient groups based on Clinics, Specialties, Wards, Teams, or Provider lists. It then allows the note author to specify parts of a note that apply to the entire group and parts that apply to individuals. It does the same with encounter data. After the note and encounter information is complete, it provides for a single signature for the entire group.

#### 2.14.6. Health Summary

Version: 2.7

Namespace: GMTS

Brief Description: A Health Summary is a clinically oriented and structured report that extracts many kinds of data from VistA and displays it in a defined and standard format.

Business Function Framework Line(s) of Business: Deliver Healthcare

Business Function Framework Function(s): Provide Clinical Decision Support, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: VHA Patient Care Services

VASI ID: 1800

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123334/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=63>

Full Description and Features: Health summaries can be printed or displayed for individual patients or for groups of patients. The data displayed covers a wide range of health related information such as demographic data, allergies, current active medical problems, laboratory results, progress notes, clinical reminder data, visits, pharmacy data, radiological data, surgeries and more. Health summaries can be viewed through CPRS GUI or through VistA menu options.

Health Summary integrates data from the following packages:

- Admission Discharge Transfer (ADT)/Registration
- Clinical Procedures/Medicine
- Compensation Pension Records Interchange (CAPRI)/Automated Medical Information Exchange (AMIE)
- Adverse Reaction Tracking (ART)
- Clinical Reminders
- Consults/Request Tracking
- Problem List
- Text Integration Utility (TIU)
- Laboratory
- Mental Health
- Nursing
- Nutrition and Food Service (NFS)
- Patient Care Encounter (PCE)
- Pharmacy: Bar Code Medication Administration (BCMA)
- Pharmacy: Inpatient Medications
- Pharmacy: Outpatient Pharmacy
- Radiology
- Scheduling
- Social Work

- Spinal Cord Dysfunction
- Surgery
- VistA Imaging System
- Allows users to print an Outpatient Pharmacy Action Profile with bar codes in tandem with a health summary
- Exports components that allow staff to view remote patient data through CPRS. Additionally, remote clinical data can be viewed using any Health Summary Type that has an identically named Health Summary Type installed at both the local and remote sites
- Clinical Reminders work with Health Summary to furnish providers with timely information about their patient's health maintenance schedules
- Health Summary components "Progress Notes" and "Selected Progress Notes" will display interdisciplinary progress notes and all of the entries associated with the interdisciplinary notes

#### 2.14.7. Problem List

Version: 2.0

Namespace: GMPL

**Brief Description:** The Problem List application is used to document and track a patient's problems. It provides the clinician with a current and historical view of patient's health care problems, and allows each identified problem to be traced in terms of treatment, test results, and outcome.

**Business Function Framework Line(s) of Business:** Deliver Healthcare

**Business Function Framework Function(s):** Provide Medical Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA Patient Care Systems

**VASI ID:** 1494

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123066/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=64>

**Full Description and Features:** This application supports care givers, such as physicians, nurses, social workers, and others, in inpatient and outpatient settings. It is also designed to be used by medical and coding clerks. A variety of different data entry methods are possible with this application. Use of Problem List varies from site to site, depending on the data entry method a facility has chosen. Sites use Encounter Forms which are generated from patient data in the system and added to or modified by



clinicians. Problem list can be linked to other sections of the medical record, such as CPRS and Health Summary. The application supports import of problem information from other clinical settings outside the immediate medical facility.

- Allows one problem list for a given patient
- Requires minimal data entry
- Linked to other sections of the medical record, such as CPRS and Health Summary
- Supports display of problem information from other clinical settings outside the immediate VAMC, i.e., DOD and Remote Data
- Supports a variety of data entry methods: direct clinician entries, clerk entry, encounter forms
- Uses a common language of terminology, the Lexicon Utility. Each term is well-defined and understandable. A user, site, or application may substitute a preferred synonym
- Allows reformulation of a problem
- Can be interfaced with a customized encounter form
- Accommodates the user of the Systematic Nomenclature of Medicine - Clinical Terms (SNOMED CT) for selection of Patient Problems
- Works with Standard Data Service (SDS) to implement SNOMED CT on both the Enterprise Terminal Server and the Clinical Lexicon, using the New Term Rapid Turnaround (NTRT) strategy for vetting and deployment of novel clinical expressions
- Problem List display and print option render the diagnostic codes as either ICD-9-CM or ICD-10-CM, depending upon the date when the code for the problem was last edited

#### 2.14.8. Text Integration Utilities (TIU)

Version: 1.0

Namespace: TIU

**Brief Description:** Text Integration Utilities (TIU) simplifies the use and management of clinical documents for both clinical and administrative medical facility personnel. Along with Authorization/Subscription Utility (ASU), a facility can set up policies and practices for determining who is responsible or has the privilege for performing various actions on required documents.

**Business Function Framework Line(s) of Business:** Deliver Healthcare, Manage Business Enabling Services

**Business Function Framework Function(s):** Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA Patient Care Systems

**VASI ID:** 1159

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122753/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=65>

Full Description and Features: TIU interfaces with the Computerized Patient Record System (CPRS) and allows the user to utilize the template utilities in the GUI version of CPRS to allow users speedy point-and-click composition of notes, consults, and summaries. Templates can be set up for specific types of documents for specific clinical needs. The application also interfaces with Problem List, Automated Information Capture System (AICS), Patient Care Encounter (PCE), Authorization/Subscription Utility (ASU), Incomplete Record Tracking (IRT), Health Summary (HS), Clinical Procedures (CP), VistA Imaging (MAG), Clinical Reminders and Visit Tracking. TIU uses standardized and common user interface, which allows clinicians and other to retrieve many kinds of documents from a single source.

TIU allows users to link TIU documents to all types of clinical images such as X-rays, MRIs and CAT scans. The package permits document input from a variety of data capture methodologies such as transcription, direct entry through CPRS or the TIU package, voice recognition software, or upload of ASCII formatted documents into VistA.

TIU follows HL7 interface and other communication standards.

- Interfaces with the Computerized Patient Record System (CPRS) template utilities in the GUI version of CPRS allowing speedy point-and-click composition of notes, consults, and summaries
- Templates can be set up for specific types of documents for specific clinical needs.
- Interfaces with Problem List, Automated Information Capture System (AICS), Patient Care Encounter (PCE), Authorization/Subscription Utility (ASU), Incomplete Record Tracking (IRT), Health Summary (HS), VistA Imaging (MAG), Clinical Reminders and Visit Tracking
- Uses a standardized and common user interface, which allows clinicians and other to retrieve many kinds of documents from a single source
- Enables health care practitioners to enter interdisciplinary notes regarding a single episode of care for a patient. This is accomplished through the addition of a level to the tree structure where a note can have children (subordinate entries) and each of the children can have a different author. This provides for more complete patient records and facilitates input from a variety of practitioners regarding a single episode of care
- Interfaces with VistA Imaging which allows users to link TIU documents to all types of clinical images such as X-rays, MRIs and CAT scans
- Uses integrated database, which lets clinicians, quality management staff, researchers, and management search for and retrieve clinical documents more efficiently because documents reside in a single location within the database
- Permits document input from a variety of data capture methodologies such as transcription, direct entry through CPRS or the TIU packages, voice recognition software, or upload of ASCII formatted documents into VistA
- Uses a uniform file structure for storage of documents and management of document types
- Uses a consistent file structure for defining elements and parameters of a document.

- Allows a variety of user actions, such as entry, edit, electronic signature, addenda, deletion/retraction, browse, notifications, etc
- Allows a variety of management functions, including amendment, deletion/retraction, and identification of signature surrogate, re-assignment, and administrative authentication
- Allows for the set up of Crisis, Warning, Allergies, and/or Adverse Reactions, and Advance Directives (CWAD)/Postings Auto-Demotion. CWAD is a section of CPRS used for posting progress notes which are more important than standard level notes. These progress notes are made more easily available throughout CPRS. The postings dialog box can become full of CWAD notes, resulting in important notes from being easily distinguishable from less important notes. Auto-demotion set up allows previously designated notes from the CWAD postings to be changed to a regular note status based on various criteria, such as the passage of time or a new note of a particular title being written which supersedes the existing CWAD note
- Allows the set up of TIU Text alerts which sends a TIU alert to the appropriate service provider(s) immediately after a staff member screens a patient and signs the associated notes. Set up includes defining words or phrases that will be searched for in a TIU document (progress note, consult, etc.). If the words or phrase are found in the TIU document, then an alert is sent to the team(s) specified in the TIU text events file

## **2.15. Cross Application Integration Protocol (CAIP)**

Version:

Namespace:

Brief Description: The CAIP specification introduces a structure for defining, providing, and accessing services as shared resources within the VHA.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio: Common Services

Business Owner:

VASI ID: NA

VASI ID Link:

VDL Link:

Full Description and Features: The CAIP specification introduces a structure for defining, providing, and accessing services as shared resources within the VHA. It is structured around a service-oriented and/or

service-based architectural objective which promotes good software development practices, such as loose coupling between applications, and is centered on the concepts of Services and Capabilities.

The CAIP framework is an implementation of the CAIP Specification.

The framework provides:

- Business Delegate interfaces for use by the Service Provider when developing Business Delegates for their services
- Consumer-Side/Technology Adaptation to the Service Facades of the service
- Implementation of the Business Delegate Factory, which uses the Service Locator to find service information from the Naming and Directory Service

## **2.16. Decision Support System (DSS) Extracts**

Version: 3.0

Namespace: ECX

**Brief Description:** The VistA Decision Support System (DSS) Extracts software provides a means of exporting data from selected VistA software modules and transmitting it to a Decision Support System (DSS) resident at the Austin Information Technology Center (AITC). This transfer is accomplished through a set of extract routines, intermediate files, audit reports, transmission, and purge routines.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Clinical Decision Support, Utilize Information Technology Services

**VHA Portfolio:** Business Informatics

**Business Owner:** Managerial Cost Accounting Office (MCAO)

**VASI ID:** 1214

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122872/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=35>

**Full Description and Features:** Data from VistA packages is stored by the extract routines in the intermediate files, where it is temporarily available for local use and auditing. The data is then transmitted to the AITC where it is formatted and uploaded into commercial software. After the data has been successfully uploaded into the commercial software, it is purged from the intermediate files.

Extracts consist of the following functions: implementation of extract processes; scheduling extracts, verifying extracts against other VistA reports, transmission of extracts to the commercial software, verification of transmission, and purging extracts.

Data is extracted from the following Medical Records Extract Files:

- Admissions (ADM) - 727.802 – ADMISSION EXTRACT (ADM) File Data Definition
- Bar Code Medication Administration (BCMA) - 727.833 – BCMA EXTRACT (BCM) File Data Definition
- Clinic (CLI) - CLINIC EXTRACT (CLI) File Data Definition
- Quality: Audiology and Speech Pathology Audit & Review (QUASAR) (ECQ) - 727.825 – QUASAR EXTRACT (ECQ) File Data Definition
- Event Capture System Local (ECS) - 727.815 – EVENT CAPTURE LOCAL EXTRACT (ECS) File Data Definition
- IV Detail (IVP) - 727.819 – IV DETAIL EXTRACT (IVP) File Data Definition
- Laboratory (LAB) - 727.813 – LABORATORY EXTRACT (LAB) File Data Definition
- Lab Results (LAR) - 727.824 – LAB RESULTS EXTRACT (LAR) File Data Definition
- Lab Blood Bank (LBB) - 727.829 – BLOOD BANK EXTRACT (LBB) File Data Definition
- Physical Movement (MOV) - 727.808 – PHYSICAL MOVEMENT EXTRACT (MOV) File Data Definition
- Prescription (PRE) - 727.81 – PRESCRIPTION EXTRACT (PRE) File Data Definition
- Prosthetics (PRO) - 727.826 – PROSTHETICS EXTRACT (PRO) File Data Definition
- Radiology (RAD) - 727.814 – RADIOLOGY EXTRACT (RAD) File Data Definition
- Surgery (SUR) - 727.811 – SURGERY EXTRACT (SUR) File Data Definition
- Treating Specialty Change (TRT) - 727.817 – TREATING SPECIALTY CHANGE EXTRACT (TRT) File Data Definition
- Unit Dose Local (UDP) - 727.809 – UNIT DOSE LOCAL EXTRACT (UDP) File Data Definition
- Uses a roll-and-scroll format that allows users to perform the various functions by selecting the appropriate menu options
- Uses VA Mailman to transmit data to commercial software resident at the AITC

## **2.17. Diagnostic Related Grouper (DRG)**

Version: 18.0

Namespace: ICD

Brief Description: The Diagnostic Related Grouper (DRG) is based on the Medicare Group requirements as defined by the Centers for Medicaid and Medicare Services (CMS) and as reported in the Federal Register. Each DRG represents a class of patients who are deemed medically comparable and who require approximately equal amounts of health care resources.

Business Function Framework Line(s) of Business: Manage Public Health, Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Conduct Epidemiological Assessments, Manage Health Records, Utilize Information Technology Services, Provide Financial Management

VHA Portfolio: Business Informatics

Business Owner: VHA Office of Informatics and Analytics

VASI ID: 1185

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122775/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=36>

Full Description and Features: The module groups diagnostic and operation/procedure codes into the DRGs based on the combination of codes, age, sex, discharge status, and occurrence of death.

- Provides annual updates that conform to the latest release of the commercial grouper
- Functions within or apart from other modules
- Supplies detailed descriptions of DRGs, diagnostic codes, and operation/procedure codes
- Accepts one primary diagnosis and multiple secondary diagnostic codes and operation/procedure codes. Displays weighted work unit values as well as national and local high and low trim point values for each DRG

## **2.18. Duplicate Record Merge**

Version: 7.3

Namespace: XDR

Brief Description: Duplicate Patient Merge provides an automated method to combine duplicate patient records into a single record within the VistA database. It was released under the Duplicate Resolution System menu as part of the Kernel Toolkit.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=2>

Full Description and Features: The overall process is broken down into these phases:

1. Duplicate patient records are identified by the VAMC staff or by a separate system interfaced with the Master Patient Index
2. VAMC staff review/verify the pairs and approve the pair
3. VAMC IT or expert users schedule and monitor merges of the pairs

Initial search and identification of potential duplicate records is accomplished by performing comparisons on key patient traits in the centralized Person Service Identify Management (PSIM) database. It is the goal of PSIM to provide an authoritative source for persons' identity traits throughout the Veterans Health Administration (VHA).

The review/verification phase of the patient merge process consists of two levels of review before verification. The primary reviewer performs a review of patient demographic information and determines if the pair is a duplicate record, then selects the record that will be merged into the other record, which is known as the merge direction. When data from ancillary services is present, a notification (via Mailman message or alert or both) is sent to the designated ancillary reviewers.

All reviewers determine whether the record pair is a duplicate, not a duplicate, or unable to determine the status. If all reviewers conclude that the pairs are duplicates and need to be merged, the record pair is designated as a verified duplicate available for merge approval. For those pairs determined not to be duplicates, the processing stops and the status indicates they are verified as non-duplicates. If status cannot be determined, the record pair remains in the DUPLICATE RECORD file and processing ends unless the Healthcare Identity Management and Data Quality (HC IdM) team can assist and determine the resolution.

The next phase is the merge of the record pairs. A wait time may be configured between verification and merge. The merge is a non-reversible process. Once the pair of records is merged, there is no automated way of undoing the process. The application has been written to support multiple parallel jobs (threads - as specified by the site) during the merge process, and multiple pairs can be merged in a single process. However, only one merge process should be running at once.

Although the software was designed with potential to merge New Person records, this capability is not included in the released version.

## **2.19. Electronic Claims Management Engine (ECME) (AKA: ePharmacy)**

Version: 1.0

Namespace: BPS

**Brief Description:** The Electronic Claims Management Engine (ECME) package provides the ability to create and distribute electronic Outpatient Pharmacy claims to insurance companies on behalf of VHA Pharmacy prescription beneficiaries in a real-time environment. The application does not impact first party co-payments and minimizes the impact on legacy pharmacy workflow.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Medical Services, Provide Financial Management

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Chief Business Office

**VASI ID:** 1205

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122865/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=141>

**Full Description and Features:** This system meets the Health Insurance Portability and Accountability Act (HIPAA) of 1996 mandate, specific to the Electronic Transactions and Code Sets rule regarding compliance with submitting claims electronically to insurance companies via the National Council for Prescription Drug Programs (NCPDP) standard transmission format. ECME receives a billing determination by Integrated Billing (IB) if an Outpatient Pharmacy order is billable. If so, ECME builds a NCPDP electronic claim transaction using data required by the insurance company for claim adjudication, as defined within the company's individual payer sheet. Claims are submitted during the Outpatient Pharmacy finish process, and again during the Outpatient Pharmacy release process if the claim was initially rejected. If any additional edits or other events occur to the prescription, such as a return to stock, ECME generates additional electronic claims to payers updating them on the prescription billable status and updates IB with any claim specific information.

The ECME application provides the following features:

- Creation of outpatient pharmacy electronic claims for real-time submission to third party insurance companies for adjudication utilizing billing activities within the VHA prescription fill process
- Utilization of information provided by a subscription with a vendor to create electronic claims
- Support and integrated functionality for TRICARE/CHAMPUS, ChampVA, and itemized charging methods for prescription pricing
- Enhancements to VHA revenue cycle management by submitting claims at the point of service while building claim segments using payer-provided transaction formats compliant with the NCPDP standard



- Collection and presentation of DUR information to application users based on information received from payer claim responses
- Reporting and on-line work list presentation formats supporting VHA claims adjudication requirements
- Integration with VistA IB for prescription billing determination and claims tracking
- Integration with VistA Pharmacy applications when creating claims based on Pharmacy workflow
- Communication with the VistA Health Level Seven (HL7) application and messaging software solution to store and forward electronic pharmacy claims for third party insurance adjudication
- Enhanced in February 2014 to support Health Plan Identifier (HPID) that implements a new national standard of having a single identifier to use on electronic transmissions pertaining to health care. All entities that are financially responsible for care are assigned a HPID or Other Entity Identifier (OEID), used for entities that aren't traditional health plans. This new standard increases interoperability by replacing clearinghouse-specific identifiers for health plans
- Enhanced in May 2015 to improve matching the ECME number on incoming pharmacy Electronic Remittance Advice (ERA) claim lines to the claim numbers in VistA
- Enhanced in February 2016 to extend the capabilities of the electronic pharmacy (ePharmacy) billing system to support the ePharmacy NCPDP continuous maintenance standards. This included ePharmacy system modifications to support new data elements for NCPDP versions E.0 through E.6, changes to the Close Claim [CLO] action on the ECME User Screen [BPS USER SCREEN], the Rx Not Processed for Site bulletin was modified to direct the user to the correct ECME option in order to get more information on the reject, the Rx Not Processed for Site bulletin was modified to include the associated ECME number, if it exists, the he Claim Results and Status [BPS MENU RPT CLAIM STATUS] menu was modified to include a new Non-Billable Status Report [BPS RPT NON-BILLABLE REPORT] option, and the if a TRICARE or CHAMPVA inpatient claim is reversed by the inpatient auto reversal process of the BPS NIGHTLY BACKGROUND JOB, the transaction will be filed in the PSO AUDIT LOG (#52.87) file as a bypass prescription so that it will be displayed on the TRICARE-CHAMPVA Bypass/Override Report, which is part of the Outpatient Pharmacy application
- Enhanced in August 2016 to extend the capabilities of the electronic pharmacy (ePharmacy) billing system. This included about 12 changes to the ECME User Screen [BPS USER SCREEN], a new Security Key called BPS SUPERVISOR which is required for anyone accessing the OPECC Productivity Report [BPS OPECC PRODUCTIVITY REPORT], several reports changes to include the Closed Claims Report [BPS RPT CLOSED CLAIMS] which will display the billed amount in the Excel download format, the Potential TRICARE Claims Report [BPS COB RPT TRICARE CLAIMS] will have new functionality and be renamed to Potential Claims Report for Dual Eligible [BPS POTENTIAL CLAIMS RPT DUAL], and a new report called OPECC Productivity Report [BPS OPECC PRODUCTIVITY REPORT]. Also, the system will now support new and modified data elements and fields for NCPDP Telecommunications version E7 according to the October 2015 NCPDP release. Support for new and modified reject codes through this release is also included. Enhancements include HL7 transmissions for ePharmacy plans, processors, and PBMs (PHARMACY BENEFITS MANAGER) from FSC re-directed to use the ePharmacy HL7 link on EPHARM OUT instead of IIV EC, and the Vitria Interface Version was updated to version 5 and a new registration message will be sent to AITC to communicate that updates have occurred

- Enhanced in September 2017 to extend the capabilities of the electronic pharmacy (ePharmacy) billing system to include updating the ECME User Screen [BPS USER SCREEN] and changing the system so it can support new and modified data elements and fields for NCPDP Telecommunications versions published on/after January 2016. It also included "RED" Resubmit Claims w/EDITS hidden action under the ECME User Screen [BPS USER SCREEN] will no longer allow an OPECC to enter or edit a Submission Clarification Code if the reject is pending on the pharmacist's reject worklist or if the most recent transaction is resolved or unresolved for reject codes 79 Refill Too Soon and code 88 Drug Utilization review (DUR), and changing the main screen of the ECME User Screen [BPS USER SCREEN] to display a comment for only the most current transaction. Comments for previous Transaction(s) will continue to be available when accessing the CMT Add/View Comments action from the ECME User Screen (current functionality)
- Enhanced in November 2017 to extend the capabilities of the electronic pharmacy (ePharmacy) billing system to include the new VER (View ePharmacy Rx) option, and to update the CV (Change View) action on the ECME User Screen and the ECME AUTO-REVERSAL PROCESS email bulletin. The system was also updated to support new data elements and fields for NCPDP Telecommunications versions published through October 2016. The Claim Log and the Claim Response Inquiry was updated to include the Facility ID Qualifier and the Reconciliation ID, and Option PHAR (Edit ECME Pharmacy Data) was updated to require entry for the prompt AUTO-REVERSAL PARAMETER. Finally, this release rectified an ongoing problem in which some TRICARE and CHAMPVA prescriptions on the CMOP queue would be left on the queue during CMOP processing because claim responses would not be received by VistA in a timely manner. This release modifies the claim submission process and the CMOP process so that certain checks will no longer be performed prematurely, allowing sufficient time for the claim responses to come back
- Enhanced in August 2018 to extend the capabilities of the electronic pharmacy (ePharmacy) billing system. Several filters on the Change View (CV) action of ECME User Screen are being updated to allow the user to select one, many, or all. The user will also now be able to select a specific date range. The Rejected Claims Report is being modified to include three new filter questions, and several of the existing filter questions are being modified to allow selection of one, many, or all. The excel report is being modified to add new fields, truncate some fields, and delete other fields to prevent wrapping to another line. The Prescriber filter question is being modified to default to "A". The system is being updated to support new and modified External Code Lists (ECLs) for the NCPDP Telecommunications versions published through October 2017. The ePharmacy Medication Profile is being added as an action to VER View ePharmacy Rx. The system is being updated to allow for the new HIPAA regulatory requirements that increase the length of the following fields: Name of Insured, Group Number, Group Name and Subscriber ID. When the system builds an outgoing claim request, it includes on the claim only those fields appearing on the payer sheet provided by the payer. With this enhancement, the user will now be able to send additional fields not on the payer sheet via the RED Action from the ECME User Screen. This enhancement adds logic to transmit the appropriate values on secondary claims when the three fields are included on the payer sheet. Logic added to fields: Other Payer Patient Responsibility Amount, Amount Qualifier, and Amount Count

## **2.20. Electronic Error and Enhancement Reporting (E3R)**

Version: 1.0

Namespace: NTSE

Brief Description: Electronic Error and Enhancement Reporting (E3R) package is designed for storing, reporting, and tracking the requests for changes in VistA applications.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Monitor Clinical Performance, Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: 1210

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122869/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=3>

Full Description and Features: Anyone in VHA may propose an enhancement using E3R. The individual making the proposal specifies which package (module) in VistA he/she believes needs the enhancement. The enhancement request is sent to a user group associated with the package. The members of that mail group exchange messages on their view of the enhancement request. The proposal, along with all of the feedback from the mail group, is sent to the package's development program director for a final decision. E3R tracks and logs the entire discussion process on these enhancement proposals. Provides for submitter to initiate, modify, view or cancel a request. Assigns a suspense date and a status category to all submitted E3Rs. The status category informs all users of the request's current state in the processing cycle. Generates a mail message containing the text of the request whenever an E3R is generated. The message is sent to the submitter, the package developer and members of the mail group associated with the package. Tracks package developer's response to each E3R request. Developer can deny or accept the request, enter comments on it, and refer a request to an arbitrator if he feels the request should not be assigned to a package. Permits an arbitrator to enter comments, to reassign the request to the appropriate package, and, along with the package developer, to accept or deny the request. Produces several reports available to both users and developers.

- Tracking, storing, reporting requests for changes in VistA

## 2.21. Electronic Signature (Esig)

Version: 1.0

Namespace: XOB

Brief Description: The Electronic Signature (ESig) service provides an interim solution for the use of electronic codes during certain VistA security infrastructure and architecture evolutions.

Business Function Framework Line(s) of Business: Manage Business Enabling

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1791

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123327/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=171>

Full Description and Features: The service duplicates for Java applications Java 2 Enterprise Edition (J2EE) or Java 2 Standard Edition (J2SE) the Kernel V.8.0 electronic signature functionality currently used by VistA/M applications. ESig furnishes a standard, consistent set of APIs that VistA developers can use to provide users access to electronic signature data stored on VistA/M systems.

ESig APIs make calls from Java applications to VistA/M systems to retrieve, validate, and store electronic signature codes and signature block information (name, title, office phone, etc.). Additional Java APIs provide encoding/decoding, hash, and checksum calculation utilities, but do not interact with the VistA/M system.

Applications that implement the ESig service must provide a user interface (UI) to prompt users for their secret codes when authorizing orders, prescriptions, financial transactions, or other business processes. Users may also need the UI to create or modify their code or signature block data.

- Provides applications access to Kernel electronic signature APIs
- Supports J2EE and J2SE implementations
- Requires ESIG KIDS build installation on VistA/M server
- VistA application provides any necessary user interfaces
- Distributed with feature-complete sample applications (J2SE and J2EE)
- Sample J2EE application can be deployed to admin/managed servers/clusters

Electronic Signature security features are based on the following requirements:

- VistA Esig applications are required to authorize and authenticate their users
- Infrastructure tools such as Kernel Authentication and Authorization for J2EE (KAAJEE) and FatKAAT (rich-client Kernel Authentication and Authorization) are mandated for use in indicated VistA Web-based and rich-client applications, respectively

## **2.22. Emergency Department Integration Software (EDIS)**

Version: 2.1

Namespace: EDP

Brief Description: Emergency Department Integration Software (EDIS) incorporates several Web-based views that extend the current Computerized Patient Record System (CPRS) to help healthcare professionals track and manage the flow of patient care in the emergency department setting.

Business Function Framework Line(s) of Business: Provide Healthcare Administration, Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Conduct Disaster Preparedness Programs, Provide Nursing, Provide Medical Services, Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Systems Redesign

VASI ID: 1792

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123328/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=179>

Full Description and Features: EDIS views are based on an application originally developed in VISN 2. Most views are site-configurable.

- Addition of emergency department patients to the application's display board
- Viewing of information about patients on the display board
- Editing of Patient Information and configuring the display board
- Removal of patients from the display board/entering of patient dispositions
- Creation of administrative reports
- Provides role-based access to specific functionality sets with views disabled based on these role-based access protocols

## **2.23. Engineering (AEM/MERS)**

Version: 7.0

Namespace: EN

Brief Description: Engineering, also known as Automated Engineering Management System/Medical Equipment Reporting System (AEMS/MERS), facilitates the management of information needed to effectively discharge key operational responsibilities normally assigned to VA engineering organizations, such as Work Orders, Equipment Management, Program Management and Space/Facility Management.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Manage VHA-wide Administrative Services, Conduct Supply Chain Operations, Provide Financial Management

VHA Portfolio: Business Informatics

Business Owner: VHA Procurement and Logistics Office (PLO)

VASI ID: 1996

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123379/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=37>

Full Description and Features: The Engineering package was designed as a resource that can be shared by medical center administrative staff. Safeguards against unauthorized editing of key data elements of non- expendable (NX) equipment records have been designed into the system. Engineering maintains integration agreements with Integrated Funds Distribution, Control Point Activity, Accounting and Procurement (IFCAP) such that the status of work orders is automatically updated on the basis of orders for parts or service. The Engineering package is the VA's official record of inventory for capitalized personal property.

- Manages electronic work orders. Staff throughout a facility can electronically enter work requests. These requests are promptly reviewed by Engineering personnel and assigned to the appropriate maintenance shop
- Tracks and controls work orders, maintaining annotated repair histories for medical and non-medical equipment. There is a separate menu option for display of incomplete work orders
- Uses bar codes for equipment inventory and preventive maintenance. Completed work orders are automatically posted to equipment histories
- The Project Tracking module is used to record significant events during construction and non-recurring maintenance projects when the management of such a project has been delegated to the facility

- The Equipment Management module contains building features (square footage, floor coverings, window types, etc.) and keeps track of locks and keys. Provides capitalized personal property data to the Fixed Assets subsystem (FAP) of the Financial Management System (FMS)

## **2.24. Enrollment Application System**

Version: 1.0

Namespace: EAS

**Brief Description:** The Enrollment Application System (EAS) package supports the mandate for collection of Long Term Care (LTC) copayments, as required by Public Law 106-117. In addition to the LTC functionality, the EAS package provides support for Health Level 7 (HL7) for processing of HL7 messages between VistA, the enterprise Enrollment System (ES) and data matching with the Internal Revenue Service (IRS) / Social Security Administration (SSA).

**Business Function Framework Line(s) of Business:** Provide Access to Health Care

**Business Function Framework Function(s):** Provide Member Access

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Systems Management Chief Business Office

**VASI ID:** 1244

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122798/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=121>

**Full Description and Features:** The 1010EZ functionality was replaced by the Veterans' Online Application (VOA) hosted on vets.gov. These applications have a direct interface with the national Enrollment System (ES). This application originally generated letters notifying veterans subject to means testing of yearly Means Test (MT) expiration, but that feature is obsolete. With patch DG\*5.3\*858 in March 2014, annual MT renewal was discontinued and a Veterans Financial Assessment (VFA) Start Date of 1/1/13 was put into place. A non-exempt veteran is required to have only one MT less than one year old as of 1/1/13, and that MT should remain valid permanently. Now, a non-exempt veteran is required to have only one MT that was less than one year old as of 1/1/13, and that MT should remain valid throughout the future. Local means test reminder letters were discontinued by patch EAS\*1\*106 as part of the DG\*5.3\*858 build.

The Veterans Millennium Health Care and Benefits Act, Public Law 106-117, Sec. 101, mandates the application of copayments for veterans receiving Long Term Care (LTC) services. The LTC Copayment software is designed to work in conjunction with software currently in place for determining veteran

medical and pharmacy copayment obligations and benefit eligibility based on military history, service-connected disabilities, and financial input.

Phase 1 introduced the following LTC Copayment functionality.

- Allows users to enter, edit, store and print financial information given by the veteran on VA Form 10-10EC, Application for Extended Care Services
- Allows users to designate a veteran who is exempt from the LTC copayments and the reason for the exemption
- Using the financial information entered from the VA Form 10-10EC, Application for Extended Care Services, automatically calculates and displays or prints an estimate of the LTC copayments that the veteran will be obligated to pay for the next twelve months
- Provides Integrated Billing with a veteran's copayment amount via an API

Phase 2 added the following functionality.

- Automated eligibility exemptions
- Adds the LTC Copayment Exemption Test submenu and associated user options
- Provides spend-down calculations

Phase 3 added the following new functionality.

- Allows users who have the appropriate security key to delete a LTC Copayment Test (10-10EC)
- Phase 3 added the following enhancements to previously existing functionality.
- Allows users who have the appropriate security key to edit the date of a LTC Copayment Test
- Allows users to add a new LTC Copayment Test for the veteran at any time, including multiple tests within the same year
- Allows users to enter burial and funeral expenses for single veterans
- Allows users to enter expenses greater than total income on the input screen for the LTC Copayment Test (10-10EC)
- Displays the veteran's LTC copayment status and last test date when using the following Registration user options: Load/Edit, Patient Inquiry, and Register a Patient
- If the veteran did not agree to pay the copayments display a message that indicates that the veteran is ineligible for LTC services
- Prevents the entry of a LTC Copayment Test for a patient who is not a veteran
- Corrects the display of the DECLINES TO PROVIDE FINANCIAL INFORMATION field to include both the "YES" and "NO" responses when the LTC Copayment Test is displayed
- Modifies the Calculated LTC Copayments report to correctly display the maximum copayment amounts for veterans who refuse to pay the copayment
- Corrects the determination of the LTC Copayment status when a veteran's income is \$0. The LTC Copayment status will be EXEMPT

Phase 4 adds the following new functionality.

- Adds a new menu option, Expiring or Expired LTC Copayment Tests, to the LTC Copayments menu. It allows users to print a report listing veterans whose LTC Copayment Tests have already expired or are about to expire

Phase 4 adds the following enhancements to previously existing functionality.

- Modifies VA Form 10-10EC, Application for Extended Care



- Adds Item 9 (Current Marital Status) to Page 1, Section III
- Modifies Page 2, Section IV, Fixed Assets, and Section V, Liquid Assets, to provide separate columns for veteran and spouse
- Modifies Page 2, Section V, Liquid Assets to have 2 categories of assets instead of 3
- Modifies Page 2, Section VI, Current Gross Income of Veteran and Spouse, to have 3 categories of income instead of 14
- Modifies Page 2 to include all financial items
- Reserves Page 3 for signatures (consent for assignment of benefits, consent and agreement to make copayments)
- Modifies the financial data screens to reflect the format changes made to the VA Form 10-10EC, Application for Extended Care paper form
- Replaces the ELIGIBILITY STATUS DATA, SCREEN <2> with the INSURANCE DATA, SCREEN <5> from the Registration options
- Modifies the Add a New LTC Copayment Test and Edit an Existing LTC Copayment Test options to enable the user to indicate that the veteran is exempt from LTC copayments (for a reason other than low income) and complete the LTC Copayment Test without having to go through all of the financial screens
- Supports the display and printing of the LTC Copayment Tests in either the old or new 10-10EC format, depending on which one is used to complete the test
- Modifies the MARITAL STATUS/DEPENDENTS, SCREEN <3> to allow users to indicate if a veteran is legally separated; if so, the copayments will be calculated using the rules for an unmarried veteran
- Modifies the FIXED AND LIQUID ASSETS, SCREEN <4> to provide separate columns for veteran and spouse, combine fields in Field 4 (Cash, Stocks, Mutual Funds), and provide modified help text for Field 5 (Other Liquid Assets)
- Modifies the CURRENT CALENDAR YEAR GROSS INCOME, SCREEN <5> by reducing the number of data groups from fourteen (14) to three (3) and provides modified help text for the three new fields
- Modifies the format of the Calculated LTC Copayments report
- Separates out Institutional and Non-institutional
- Modifies Institutional to prompt for a LTC admission date
- Prints 12 months of copayments starting with a user-specified month and year

Allows entry of a future date as the start date to see the spend d

Background functionality:

Health Level 7 (HL7) message processing of Internal Revenue Service (IRS) income verification matching (Z06 messages). This functionality will transition to the enterprise Enrollment System (ES) at some future date.

The EAS package provides all protocols utilized by HL7 for processing of HL7 messages between Vista and the enterprise Enrollment System (ES).

#### 2.24.1. Enrollment System

Version: 5.2.4

Namespace: N/A

**Brief Description:** The Enrollment System is VHA's System of Record (SOR) for managing enrollment and eligibility information. The Enrollment System collects and verifies the enrollment and eligibility information, which is used to determine services a Veteran and other VHA health care beneficiaries are entitled to receive.

**Business Function Framework Line(s) of Business:** Deliver Healthcare, Provide Access to Health Care, Provide Health Care Administration

**Business Function Framework Function(s):** Provide Member Access and Perform Hospital Administration

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Systems Management Chief Business Office

**VASI ID:** 1231

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123188/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=121>

**Full Description and Features:** Enrollment System (ES) 5.2.4 is the replacement system for the decommissioned product known as HEC (Health Eligibility Center, Atlanta) Legacy. It is both a re-host of HEC Legacy and in some instances (use cases/features), a re-engineering. ES allows staff at the HEC to work more efficiently and determine patient eligibility in a timelier manner. Messaging with the VAMC (Department of Veterans Affairs Medical Centers) allows updates to the enterprise enrollment system to be shared with the field in close to real-time. It is one component of the "system of systems" needed to implement the HealtheVet REE (Registration, Eligibility and Enrollment) environment.

The two main functions are:

- **Expert System (Messaging)** The messaging subsystem provides a seamless bi-directional interface with external Veterans Health Administration (VHA) and non-VHA systems for data exchange of Veterans' information. **Work Flow (Case Management)**
- The case management subsystem provides authorized VHA case representatives at the HEC with a web interface to easily track, maintain, and manage cases associated with Veteran benefits. HEC staff utilizes ES to manage these "cases" to completion so that verified E&E can be determined.

**Expert System (Messaging) -** The messaging subsystem provides a seamless bi-directional interface with external Veterans Health Administration (VHA) and non-VHA systems for data exchange of Veterans' information.

Work Flow (Case Management) - The case management subsystem provides authorized VHA case representatives at the HEC with a web interface to easily track, maintain, and manage cases associated with Veteran benefits. HEC staff utilizes ES to manage these "cases" to completion so that verified E&E can be determined.

## **2.25. Enterprise Exception Log Services (EELS)**

Version: 3.0

Namespace: SVE

Brief Description: The Enterprise Exception Log Service (EELS) provides for the consolidation and analysis of exception logs generated by VistA components and services, as well as other logs generated by infrastructure components.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=177>

Full Description and Features: Enterprise Exception Log Service is a web-based application responsible for collecting error logs of applications, databases and systems. It is a suite of software applications that collects and stores exception information generated by client VA software applications. It incorporates exception logging analysis and reporting capabilities into the VistA environment to monitor services and information assets across the enterprise. It provides an enterprise exception logging service and associated infrastructure that enables the retrieval of exception logs from any VistA component in the VistA shared service architecture environment, and their transportation to a central repository, where that

information is available for analysis and reporting purposes. It improves organizational support structures and processes to address the needs of application modernization.

- Collects error log data
- Provides robust capacity to facilitate event information activity from indicated locations
- Organizes the errors from numerous locations into one database
- Provides Analysis and Reporting functionality

## **2.26. Equipment /Turn-In Request**

Version: 1.0

Namespace: PRCN

**Brief Description:** The Equipment/Turn-In Request software provides additional functionality within the Integrated Funds Distribution, Control Point Activity, Accounting and Procurement (IFCAP) package, including the ability to enter an electronic request for new, non-expendable equipment and replacement equipment.

**Business Function Framework Line(s) of Business:** Manage Business Enabling

**Business Function Framework Function(s):** Conduct Supply Chain Operations

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Procurement and Logistics Office (PLO)

**VASI ID:** 1794

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123329/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=113>

**Full Description and Features:** The Equipment/Turn-In Request software adds the functionality for tracking the request through the many stages of review, prior to its approval and becoming a permanent transaction. Users are allowed to turn in old equipment currently tracked in the Equipment Inventory file, generate an Engineering work order, and track its movement to its final disposition and removal from the inventory list. The Equipment/Turn-In Request serves as a records maintenance system, allowing the user to record important events throughout the ordering process. Such records can be printed in report format as supporting documentation about the equipment lifecycle.

- The CMR official is ultimately responsible for new and existing equipment located at the medical facilities
- A requester can enter an electronic request for new or replacement equipment via VistA
- A requester can enter an electronic request to dispose of obsolete equipment
- The CMR official can approve, edit, or cancel an equipment request
- Engineering work orders can be generated for initial, additional, and replacement equipment

The Equipment/Turn-In Request module has several organizational elements that use different components of the software.

Non-expendable equipment must go through several approval steps before it can be ordered:

- Requestor
- Consolidated Memorandum of Receipt (CMR) Official
- Personal Property Manager (PPM)
- Equipment Committee
- Engineering
- Other Concurring Officials

Turning in non-expendable equipment also requires several approval steps:

- Requestor
- Consolidated Memorandum of Receipt (CMR) Official
- Personal Property Manager (PPM)
- Engineering
- Warehouse

## **2.27. Event Capture System**

Version: 2.0

Namespace: EC

**Brief Description:** The Event Capture System (ECS) provides a mechanism to track and account for procedures and delivered services that are not handled in any other VistA package. The procedures and services tracked through Event Capture are associated with (1) the patient to whom they were delivered, (2) the provider requesting the service or procedure and (3) the Decision Support System (DSS) Unit responsible for delivering the service.

Business Function Framework Line(s) of Business: N/A

Business Function Framework Function(s): N/A

VHA Portfolio: Business Informatics

Business Owner: Managerial Cost Accounting Office (MCAO)

VASI ID: 1795

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123330/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=39>

Full Description and Features: The Event Capture software provides a mechanism to track and account for procedures and delivered services that other Veterans Health Information Systems and Technology Architecture (VistA) packages do not handle. The procedures and services tracked through Event Capture are associated with the following:

- The patient to whom they were delivered
- The provider requesting the service or procedure
- The Decision Support System (DSS) Unit responsible for delivering the service

DSS Units typically represent the smallest identifiable work unit in a clinical service at a medical center. Veterans Affairs Medical Centers (VAMCs) define the DSS Units. A DSS Unit can represent any of the following:

- An entire service
- A section of a service
- A small section within a section
- A medical equipment item used in patient procedures
- When creating or editing DSS Units, users choose what (if any) data is sent to Patient Care Encounter (PCE). The advantage of using Event Capture to send data to PCE is that it eliminates the duplicate effort of entering the same workload data in the Scheduling software, then transmitting to PCE
- When creating or editing DSS Units, users choose what (if any) data is sent to Patient Care Encounter (PCE). The advantage of using Event Capture to send data to PCE is that it eliminates the duplicate effort of entering the same workload data in the Scheduling software, then transmitting to PCE
- Allows each VAMC to utilize the software for its own resource/costing needs
- Implements DSS Units
- Assigns user access to all or specific DSS Units
- Sets up Event Code Screens to define relevant procedures for a DSS Unit
- Allows single and batch data entry for patient procedures
- Generates reports for workload and other statistical tracking
- Provides a Graphical User Interface to the ECS application
- Allows user to upload patient encounter data to Event Capture from a spreadsheet
- Files encounter records in PCE for DSS Units defined to send data to PCE
- ICD-10 code compliant

## **2.28. Fat Client Kernel Authentication and Authorization (FatKAAT)**

Version:

Namespace: XU

**Brief Description:** A common service and a project of HealtheVet Security Services, Fat Client Kernel Authentication and Authorization (FatKAAT) provides user authentication and authorization for J2EE applications with a rich client user interface.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 1257

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122913/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=152>

**Full Description and Features:** A common service and a project of HealtheVet Security Services, Fat Client Kernel Authentication and Authorization (FatKAAT) provides user authentication and authorization for J2EE applications with a rich client user interface.

As a HealtheVet Security Service project, FatKAAT provides a framework for information security services that ensures the confidentiality, integrity, and availability of veteran's health information through VHA systems, and provides security services to HealtheVet applications.

- Supports authentication and authorization for a J2EE application with a rich client front end Supports WebLogic v9.2/10.x
- FatKAAT addresses the Authentication and Authorization (AA) needs of HealtheVet-VistA rich client-based applications in the J2EE environment. In particular, it provides an authentication/authorization solution that works in an environment where a single enterprise user repository has not been finalized, by leveraging the aggregate of the individual user repositories on the various VistA/M systems

Ongoing initiatives to provide an enterprise user repository, enterprise single sign on, authentication and authorization using commercial off the shelf products may render FatKAAT unnecessary in the future.

- Kernel (i.e., Kernel Patch XU\*8.0\*376) is the designated custodial software package of FatKAAT; however, FatKAAT comprises multiple patches and software releases from several HealtheVet-VistA applications:
- Programming Language: MUMPS, Java
- Deployment Environment/Application Server Software: BEA WebLogic V.8.1 (SP4 or higher: VistALink V.1.5, FatKAAT: V.1.0.0.110 (J2EE Software Distribution Zip File)
- VistA M Server Test Patches (listed in patch number order): Kernel: XU\*8.0\*265 (RELEASED), Kernel: XU\*8.0\*337 (RELEASED), Kernel: XU\*8.0\*361 (RELEASED), Kernel: XU\*8.0\*376 (TEST), Kernel: XU\*8.0\*395 (RELEASED), RPC Broker: XWB\*1.1\*35 (RELEASED), Client Software: FatKAAT: V.1.0.0.110 (J2EE Software Distribution Zip File)
- Depends On: VistA 1.0 (FileMan, Kernel, Kernel Toolkit, RPC Broker, VistALink)
- The following packages depend on FatKAAT: VistA 1.0 (CPRS: Authorization Subscription Utility (ASU)), VistA 1.5 (My HealtheVet), Department Of Defense (DOD) Information Sharing (Clinical Data Repository / Health Data Repository (CHDR))

## 2.29. Fee Basis

Version: 3.5

Namespace: FB

**Brief Description:** The Fee Basis package supports VHA's Fee for Service program, which is care authorized for veterans who are legally eligible and are in need of care that cannot feasibly be provided by a VA facility.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Financial Management

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Chief Business Office (CBO) - Purchased Care

**VASI ID:** 1796

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123331/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=40>

**Full Description and Features:** A VA facility unable to meet the patient care requirements of a veteran may authorize fee basis services for short-term care, ongoing outpatient care, or home health care from non-VA health care facilities. Bills for service are then submitted to the authorizing VA facility. The bill is reviewed by the facility and certified for payment through VA's payment center in Austin, Texas.



The Fee Basis package provides for more efficient and accurate operation of the fee for service program with reduction of paperwork, savings in staff hours, minimization of errors, and by allowing medical facilities to have greater control over disbursement of fee medical, pharmacy, and travel monies.

- Performs entire fee for service process, both authorized and unauthorized, for Outpatient Medical Fee, Civilian Hospital, Community Nursing Home, and Pharmacy Fee
- Automatically sends vendor updates from the central system to keep all files accurate and up-to-date
- Provides money management for all payments through the interface with the Financial Management System
- Automatically receives payment confirmations from the U.S. Department of the Treasury, populating payment histories with check numbers and payment dates.
- Updated October, 2014 to support ICD-10 functionality
- Per the Newborn Claims Processing Enhancement Project for Public Law 111-163, the Caregiver and Veterans Omnibus Health Services Act of 2010, the VA will provide health care services to a newborn child of a Woman Veteran who is receiving maternity care at the VA for not more than seven days after the birth of the child, and the software will capture information on healthcare services provided to include eligibility determination, enrollment and registration, documentation of referrals and authorization for care, claims processing, and payment. Functionality was added in December 2013
- As part of the VistA Fee Separation of Duties project, software was enhanced in October, 2014 to retain historical data for selected fields in order to maintain complete records on actions for accounting, information integrity and control by documenting date and time of the change, the old value, the new value, and the person that made the change
- Reject flags from old payments, removes old payments with payment confirmation or cancellation data from in-process batches, and enhances the Print Rejected Payment Items report option
- Three new security keys are implemented: FBAA LEVEL 1 AUTH, FBAA LEVEL 1 PMT, FBAA LEVEL 2

#### Outpatient Medical Fee:

- Authorizes Fee Basis treatment
- Enters fee providers and payments
- Creates, closes out, and releases batches of invoices
- Records travel payment

#### Civilian Hospital:

- Provides the ability to perform complete payment process, from entering patient authorizations to transmitting completed batch data (including the calculation of Medicare reimbursement)

#### Community Nursing Home:

- Provides the ability to perform complete payment process

#### Pharmacy Fee:

- Provides the means to administer the Hometown Pharmacy
- Provides payment for medications furnished Veterans on an emergency basis
- Facilitates the quick completion of previously repetitive actions and gives quick, accurate access to patient payment history

#### State Home:

- Provides the ability to track veterans receiving care provided by a state home facility
- Enhanced in December 2014 to support The Intra-governmental Payment and Collection System (IPAC) which provides a standardized inter-agency fund transfer mechanism for Federal Program Agencies (FPA). It facilitates the intra-governmental transfer of funds, with descriptive data, from one FPA to another. Processing payments through IPAC provides the Financial Management Service (FMS) with the ability to meet its statutory requirements for accounting and reporting
- Updated in February 2015 to allow the Diagnosis to be stored when entering payments

### **2.30. FileMan Delphi Components (FDMC)**

Version: 1.0

Namespace: FMDC

Brief Description: VA FileMan is Veterans Health Information Systems and Technology Architecture's (VistA) database management system (DBMS). It runs in any American National Standards Institute (ANSI) environment.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=6>

Full Description and Features: The majority of Veterans Health Administration (VHA) clinical data is stored in VA FileMan files and is retrieved and accessed through VA FileMan Application Program Interfaces (API) and user interfaces.

For Users:

- Standalone user interface for adding, editing, printing, and searching data
- Form-based editing (ScreenMan)
- Easy terminal-based editing of word processing database fields (Screen Editor)
- Flexible, extensive report module

- Scrollable onscreen output of any report (Browser device)
- Data interchange with outside applications such as PC spreadsheets and databases (Import and Export Tools)

For Developers:

- Full support for forms-based interfaces to the database (ScreenMan API, Form Editor)
- Full database access for client-server applications (Database Server API)
- Easy scrolling-mode interfaces to the database (Classic API)
- Full database access in Delphi-based applications via FileMan Delphi Components
- Data archiving and transport tools
- Comprehensive file creation and management utilities
- SQL Interface (SQLI) projects all of the information needed by M-to-SQL vendors to access VA FileMan through M-to-SQL products
- Supports Keys and compound cross-references (Indexes)
- Performance: M and VA FileMan provide fast database performance and high utilization of our computer systems
- Portability - Portable, platform-independent database services provided to applications by VA FileMan, combined with the operating system portability layer of Kernel, allow VHA to upgrade its hospital computing platforms without significant changes to application code
- Openness - VA FileMan is open; it facilitates data access from outside applications. The Database Server (DBS) API enables client/server access to VA FileMan data. The FileMan Delphi Components take advantage of the DBS API to encapsulate the details of retrieving, validating, and updating VA FileMan data

## **2.31. Functional Independence Measures (FIM)**

Version: 1.0

Namespace: RMIM

**Brief Description:** The Functional Independence Measures (FIM) Version 1.0 provides an integration of FIM assessments into the Computerized Patient Record System (CPRS) and into the Functional Status and Outcomes Database (FSOD) at the VA Austin Information Technology Center (AITC). The FIM is an 18-item, 7-level functional assessment designed to evaluate the amount of assistance required by a person with a disability to perform basic life activities safely and effectively.

**Business Function Framework Line(s) of Business:** Manage Public Health, Deliver Health Care

**Business Function Framework Function(s):** Provide Medical Registry Service, Provide Care Management, Provide Medical Services, Provide Ancillary Services

**VHA Portfolio:** Health Provider Systems

Business Owner: VHA

VASI ID: 1292

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122948/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=134>

Full Description and Features: There are five types of FIM assessments: admission, goals, interim, discharge, and follow-up. The FIM assessments are used clinically to monitor the outcomes of rehabilitative care as required by the Joint Commission (TJC) and the Commission on the Accreditation of Rehabilitative Facilities (CARF). According to VHA Directive 2000-16 series, medical centers are mandated to measure and track rehabilitation outcomes on all new stroke, lower-extremity amputees, and traumatic brain injury (TBI) patients using the FIM.

- Functional Independence Measurement (FIM) Graphical User Interface (GUI) front-end programmed in Delphi to allow multiple clinicians to input FIM data for a given patient
- FIM GUI uses Two Factor Authentication (2FA)
- Visibility in CPRS of FIM documentation as a progress note with addendums and/or a completed consults
- Eliminating the need for the clinician search of VistA for the information and re-enter for FIM
- FIM data placement in a VistA FileMan file for Health Level Seven (HL7) transmission to the Functional Status and Outcome Database (FSOD) at Austin Information Technology Center (AITC)

## **2.32. Generic Code Sheet**

Version: 2.0

Namespace: GEC

Brief Description: The Generic Code Sheet module allows code sheet data to be entered and transmitted electronically from the medical facility service level to the national database.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Provide Financial Management

VHA Portfolio: Business Informatics

Business Owner: Chief Business Office (CBO) - Member Services

VASI ID: 1799

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123333/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=7>

Full Description and Features: Security features prohibit unauthorized access to code sheets. Data can easily be entered and edited via VA FileMan. Reports are available which help manage the code sheets from creation through batching and transmission and tools are included within the module to aid in the development of new code sheets at the local or national level.

- Contains approximately 250 automated code sheets
- Allows new code sheets to be automated and included within the module
- Allows easy on-line input of code sheet data from a VA FileMan or word processing format
- Eliminates keypunch and typing errors
- Provides code sheet security at the medical facility service or module level
- Allows code sheets to be batched and transmitted to any domain connected to the VA network
- Allows easy on-line editing and modifications to code sheets and batches
- Provides purge capabilities consistent with current regulations that require code sheet retention for seven years
- Generates reports that detail the status of a code sheet or batch and prints the data contained within a code sheet or batch

### **2.33. Health Data Informatics**

Version: 1.0

Namespace: HDI

Brief Description: The Health Data Informatics (HDI) package provides a basic method for seeding VHA Unique Identifiers (VUIDs) for reference data in existing VistA applications.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: Health Data Governance

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=148>

Full Description and Features: The Health Data Informatics (HDI) package provides a basic method for seeding VHA Unique Identifiers (VUIDs) for reference data in existing VistA applications. A VUID is a meaningless number, which is automatically assigned to concepts, properties, and relationships in a terminology to facilitate their access and manipulation by computers.

The HDI package will be used by each VistA site to seed VUIDs in their existing global files that contain reference data, such as drug names, names of known allergens, and so forth. These files have been grouped into domains, and each domain will be standardized separately. As each domain's files are originally standardized, the HDI package is used to assign a VUID to each term or concept in the file. Subsequent standardization updates and maintenance on these files will be handled separately by the New Term Rapid Turnaround (NTRT) program.

#### **2.34. Health Information Technology Sharing (HITS): Bi-Directional Health Information Exchange (BHIE) and Legacy Viewer Sustainment (LVS)**

Version: 1.0

Namespace:

Brief Description: The ability to share data across agencies and facilities is an important component in providing the complete information necessary for clinical decision-making and high-quality veteran care. BHIE supported data sharing between the VA and DoD and that functionality has now been consumed by LVS.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: VHA

VASI ID: 1899

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123473/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: BHIE was deployed to all VA facilities in October 2004. BHIE expanded on FHIE technology by allowing textual reports to flow from DoD to VA as well as from VA to DoD.

DoD implemented BHIE at 25 host sites that supported 15 medical centers, 18 hospitals and more than 190 clinics, including Europe, Hawaii and Alaska.

Historically, data exchanged through BHIE included Drug and Food Allergies, Admission/Discharge/Transfer (ADT) data, Consults, Inpatient Discharge Summaries and Notes (including Pre/Post Deployment Health Assessments), Medications, Radiology, Laboratory (Orders, Chemistry & Hematology, Cytology, Microbiology, and Surgical Pathology), Outpatient Encounters and the Standard Ambulatory Data Record (SADR).

In September 2016 LVS was deployed and now provides DoD legacy data to VA clinicians via CPRS RDV and VistAWeb utilizing Fast Healthcare Interoperability Resources (FHIR). This allowed for the sunset of BHIE functionality. Remaining features of BHIE functionality still include support for PDHA's utilizing the FHIE repository via the DoD.

### **2.35. Health Information Technology Sharing (HITS): Clinical Health Data Repository (CHDR)**

Version: 1.0

Namespace: CHDR

Brief Description: The ability to share data across agencies and facilities is an important component in providing the complete information necessary for clinical decision-making and high-quality veteran care. CHDR provides a mediation service for the exchange of standardized outpatient prescriptions and allergy information.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: VHA

VASI ID: 1115

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122823/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: Clinical Health Data Repository (CHDR) shares computable health record data elements between DoD's Clinical Data Repository (CDR) and VA's Health Data Repository (HDR). Data are exchanged for patients identified and matched as Active Dual Consumers (ADCs) of both VA

and DoD health care. VA and DoD conducted the first successful test of CHDR in a live patient environment in June 2006, and have since expanded.

One of the key features of CHDR is the exchange of standardized, computable (as opposed to textual) data. This "semantic interoperability" provides data that each agency can use with its own electronic decision support tools. In April 2007, VA released a program called Remote Data Interoperability (RDI), which extended the existing local Drug-Drug, and Drug-Allergy order checks to include data from all VA and DoD facilities at which a patient has been treated. This significantly increases patient safety by ensuring electronic decision support tools are based on all available electronic patient health record information rather than data from just one VistA computer system.

### **2.36. Health Information Technology Sharing (HITS): Federal Health Information Exchange (FHIE)**

Version: 1.0

Namespace: Multiple Namespace

Brief Description: The ability to share data across agencies and facilities is an important component in providing the complete information necessary for clinical decision-making and high-quality veteran care. FHIE enables information on separating service members from DoD to VA on a monthly basis.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: VHA

VASI ID: 1261

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122916/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: The Federal Health Information Exchange (FHIE) Program is an interagency information technology initiative between the Departments of Veterans Affairs (VA) and Defense (DoD) that enables a secure, one-way transmission of protected electronic health information from DoD to VA. FHIE offers authorized VA clinicians, including those involved in claims adjudication, immediate access to DoD clinical data about service members who separate from the Armed Forces.



FHIE supports DoD's and VA's goal of ensuring a smooth transition for Veterans from active military service to civilian life.

FHIE was deployed to all VA facilities in 2002, and supports the uni-directional exchange of health record data from the Department of Defense (DoD) to the Department of Veterans Affairs (VA). The data exchange is in the form of textual reports via a secure shared data repository.

VHA clinicians and VBA claims staff access this data in the repository through Compensation and Pension Records Interchange (CAPRI). Information available through FHIE includes outpatient pharmacy (government and retail), allergy, laboratory (chemistry, hematology, anatomic pathology, surgical pathology, and cytology), radiology reports, consults, admission, discharge, transfer (ADT), and ambulatory coding data. DoD also has made pre-and post-deployment health assessment and post deployment health reassessment data available for viewing by VA through the FHIE framework.

See also Bidirectional Health Information Exchange (BHIE) Initiative.

FHIE supports the one-way transfer of historical data on separated and retired military personnel from DoD's Composite Health Care System to the FHIE Data Repository for use in VA clinical encounters, and potential future use for aggregate analysis. This data includes patient demographics, laboratory results, radiology reports, outpatient government and retail pharmacy information, admission discharge transfer (ADT) data, discharge summaries, consults reports, allergies and data from the DoD Standard Ambulatory Data Record. FHIE also supports the secure transfer of these FHIE data to Veterans Benefits Administration (VBA) claims adjudicators for use in claims processing.

## **2.37. Health Information Technology Sharing (HITS): Global War on Terror**

Version: 1.0

Namespace: Multiple Namespace

Brief Description: The ability to share data across agencies and facilities is an important component in providing the complete information necessary for clinical decision-making and high-quality veteran care. This functionality, referred to as "Big 7" provided information exchange and interoperability across 7 critical parameters.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link:

Full Description and Features: The Global War on Terror (GWOT) led to the develop of the "Big 7" projects to facilitate a smooth transition between DoD and VA for veterans and to expedite transfer and improve the management of high-risk patients such as those with polytrauma and Traumatic Brain Injury (TBI).

The "Big 7" included:

- OIF/OEF Combat Veteran Identifier. Provides visual representation in the Computerized Patient Record System (CPRS) to indicate the patient has served in combat in either Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF)
- Traumatic Brain Injury (TBI) Database. Supports tracking, monitoring of care quality, trend analysis and performance improvement for patients with TBI

Polytrauma Marker:

- Updates the Functional Independence Measure
- Addresses special needs of polytrauma patients
- Provides alerts and reminders and supports consistent management, reporting, and displaying of important patient characteristics
- DoD/VA BHIE-CDR (Theater) Interface
- Provides an interface to OIF/OEF data stored in DoD's Theater Medical Data System (TMDS) using the BHIE framework
- ICD-10 code compliant

Joint Patient Tracking Application (JPTA) / Veterans Tracking Application (VTA):

- Gives VA providers access to critical patient information from the theater of operations in DoD's JPTA system
- Establishes a link to Veterans Tracking Application (VTA) from within CPRS and VA's

VistAWeb

Clinical Transfer Form:

- DoD and VA nurse developed Situation, Background, Assessment, Recommendations (S- BAR) document that is a nursing patient hand-off used when patients are transferred between agencies
- DoD Scanning Interface: provides scanned patient record that is transmitted as a bookmarked file to a Clinical Document Note is created and the scanned file attached. The Clinical Document Note is accessible across the VA

.

## **2.38. Health Information Technology Sharing (HITS): Laboratory Data Sharing and Interoperability (LDSI)**

Version: 5.2

Namespace: LR

Brief Description: The Laboratory Data Sharing Interoperability (LDSI) project supports the electronic order entry and real-time lab results exchange between the Department of Defense (DoD) and the Department of Veterans Affairs (VA).

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: VHA

VASI ID: 1382

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123038/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=75>

Full Description and Features: LDSI provides laboratory order portability between selected DoD/VA sites that have local sharing agreements for laboratory services.

The goals of the project are:

- To share/coordinate resources to reduce costs and redundancies while increasing efficiencies within the two organizations
- Facilitate electronic exchange of patient information between DoD and VA to enhance patient care/delivery

LDSI provides interagency messaging between VA/DoD sites that have a local sharing agreement for laboratory services (with either VA or DoD serving as the performing laboratory). LDSI Phase 1 enabled electronic ordering and results retrieval of chemistry and hematology laboratory tests between VA and DoD. Phase 2 extends the exchange of ordering and results data exchange to include anatomic pathology and microbiology laboratory tests between VA and DoD.

## **2.39. Health Level 7 (HL7) (VistA Messaging)**

Version: 1.6

Namespace: HL

Brief Description: Health Level Seven (HL7) is an American National Standards Institute (ANSI) standard messaging protocol that specifies the set of transactions and encoding rules for electronic data exchange between health care computer systems.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=8>

Full Description and Features: In today's health care environment, computer systems from multiple vendors and at geographically dispersed sites are used in conjunction with core facility computer systems to create integrated delivery of information to the end-user. Linking such systems to exchange data and work together is a non-trivial task, particularly given the complexity of health care data.

Health Level Seven (HL7) is an American National Standards Institute (ANSI) standard messaging protocol that specifies the set of transactions and encoding rules for electronic data exchange between health care computer systems. HL7 provides an open, standards-based framework that computer systems can use to exchange health care data with each other. The HL7 standards development group is directly focused on health care informatics standards, and cooperates closely with developers of other standards.

The Veterans Health Information Systems and Technology Architecture (VistA) HL7 package enables M-based (VistA) applications running on core facility computer systems to exchange health care information with other computer systems. It provides messaging services and a single toolset for M-based VistA applications to create, send, receive, and process HL7 messages.

Many VistA applications use VistA HL7 to exchange data in HL7 format with other facilities and/or applications, including Anesthesiology, Master Veteran Index/Patient Demographics (MVI/PD), Laboratory, Outpatient Pharmacy, Patient Management System (PMS), Radiology, and Veteran ID Card (VIC). The VistA HL7 package is also used to integrate commercial off-the-shelf (COTS) health care applications with M-based core facility computer systems.

- Communication: Facilitates Point-to-Point and Publish-and-Subscribe messaging between two or more applications; and provides the transport mechanism using HL7-supported lower level transmission

protocols (e.g., Hybrid Lower Level Protocol [HLLP], X3.28, or Minimum Lower Level Protocol [MLLP] over Transmission Control Protocol / Internet Protocol [TCP/IP]), which provide error detection and session control; provides dynamic routing of messages

- Processing: Queues incoming and outgoing messages for reliable messaging; validates HL7 Message Header (MSH) information for all incoming messages; and sends HL7 acknowledgment (ACK) messages back to sending applications upon message receipt
- Message Administration: Provides functionality to assist the application developer in setting up HL7 interfaces by hiding the complex lower level communication; monitors message transmissions statuses; and provides reports on pending transmissions and those with errors
- Programming Utilities: Provides the developer with a rich collection of Application Program Interfaces (API) to facilitate the creation, exchange, and transmission of messages; provides a set of predefined variables to use for building HL7 messages/segments; automatically creates all HL7 Message Header (MSH) segments; and invokes the appropriate application routine to process message data when a message is received

## **2.40. Health Level Seven Optimized (HLO) (VistA Messaging)**

Version: 1.6

Namespace: HL

Brief Description: Health Level Seven (HL7) is an American National Standards Institute (ANSI) standard messaging protocol that specifies the set of transactions and encoding rules for electronic data exchange between health care computer systems.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=8>

**Full Description and Features:** The first released version of VistA HL7 was 1.5, which supported simple point-to-point HL7 transactions between VistA and a local commercial off-the-shelf (COTS) system using Hybrid Lower Layer Protocol (HLLP), and to other VA facilities using VA MailMan. The initial release of version 1.6 added the ability to "broadcast" a message to multiple recipients, and provide support for the X3.28 LLP. A continuing increased demand for additional messaging services was addressed through enhancements to HL 1.6, released through patches, which included more complex message routing (dynamic addressing), and messaging using Minimal Lower Layer Protocol (MLLP) over Transmission Control Protocol (TCP).

The current release of HLO is a substantial redesign of HL 1.6, is designed to operate alongside HL 1.6, and provides significantly higher operating efficiency and the ability to operate with a substantially decreased system load. In addition, HLO has some enhancements.

Previous applications supported simple point-to-point HL7 transactions between VistA and a local commercial-off-the-shelf (COTS) system using Hybrid Lower Layer Protocol (HLLP), which then required transmission to other VA facilities using VA Mailman. This release added the ability to "broadcast" a message to multiple recipients, and provide support for the X3.28 LLP, and additional subsequent patches to this release addressed continuing increased demand for additional messaging services through enhancements which included more complex message routing (dynamic addressing), and messaging using Minimal Lower Layer Protocol (MLLP) over Transmission Control Protocol (TCP).

## **2.41. Home Based Primary Care (HBPC)**

Version: 1.0

Namespace: HBH

**Brief Description:** The Home Based Primary Care (HBPC) module is designed to allow for the local entry and verification and data management of HBPC patient-related data. HBPC was previously referred to as Hospital Based Home Care (HBHC).

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care

**Business Function Framework Function(s):** Manage Remote Care Services, Provide Patient Self-Management Services

**VHA Portfolio:** Health Provider Systems

Business Owner: VHA Office of Geriatrics and Extended Care

VASI ID: 1330

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122888/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=68>

Full Description and Features: This local database structure gives the HBPC program greater accountability for the integrity of its data, and eliminates the correction cycle previously required to correct data entry errors at the central database. Each site can now transmit complete records of HBPC patient information monthly to the Austin Information Technology Center (AITC) for processing. The AITC will continue to generate the same quarterly reports - only the source of the data has changed. This system eliminates the paper reporting system between medical centers and the AITC database.

- Provides for the entry and editing of patient evaluations and admission/discharge data
- Provides automatic transmission of data to the central database
- Allows data validation and correction to be completed at the individual medical center prior to transmission to the central database
- Allows for medical center control over the site's HBPC database
- Enables medical facilities to generate a wide variety of reports covering:
  - Visit, admission and discharge data
  - Length of stay
  - Rejections
  - Procedures
  - Census for program, team, case manager, and/or provider
- Enables the HBPC program manager to control and assess the staff workload and organizational characteristics
- ICD-10 code compliant
- An additional feature, Medical Foster Care, has been added to HBPC. Medical Foster Home (MFH) combines adult foster care in a privately owned residence located in the community with Home Based Primary Care (HBPC) or Spinal Cord Injury Home Care (SCI-HC). MFH offers an alternative to nursing home placement, merging personal care in a private home with medical & rehabilitation support from specialized VA home care programs. Veterans placed in MFH meet nursing home admission criteria and are responsible for MFH charges

## **2.42. Home Telehealth/Integrated Home Telehealth (IHTA)**

Version: DG V.5.3, WEBI V.11.5

Namespace: DGHT, WEBI

Brief Description: The goal of the Home Telehealth IT program is to integrate vendor-supported Home Telehealth services into the VistA medical information infrastructure. The Home Telehealth program builds on the excellent existing and evolving VistA system.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Remote Care Services, Provide Patient Self-Management Services, Provide Ancillary Services, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: VHA Telehealth

VASI ID: 1359

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123024/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features:

- The patient screening process starts with a VistA Consult.
- The Consult is completed through the standard VistA Progress Note.
- Patient sign-up is done through a VistA Patient Information Management System (PIMS) interface. The care coordinator selects the patient name, the supporting vendor, the consult type, the care coordinator's name, and then submits the request. VistA extracts all the pertinent patient data and sends a Health Level Seven (HL7) Sign-Up • The Consult is completed through the standard VistA Progress Note.
- Patient sign-up is done through a VistA Patient Information Management System (PIMS) interface. The care coordinator selects the patient name, the supporting vendor, the consult type, the care coordinator's name, and then submits the request. VistA extracts all the pertinent patient data and sends a Health Level Seven (HL7) Sign-Up message to the vendor server.
- The care coordinator then uses the vendor software to associate the home device with the patient record on the vendor system.
- Measurement data gathered by devices in the veteran's home are stored in the vendor server and available for review, and are sent to the VA's Health Data Repository (HDR) using HL7 messages sent through the VistA Interface Engine (VIE) Infrastructure.
- The Home Telehealth data in the HDR along with VistA data from facility VistA systems is viewed using VistAWeb, which is available through the Computerized Patient Records System (CPRS) by using the Remote Data View (RDV) function.
- Monthly, vendor servers send HL7 messages to the Sign-Up VistA facility for the Care Coordinator to review draft progress notes summarizing patient activity from the previous month.



This functionality involves components on the vendor servers as well as several VistA packages including Consults, PIMS for sign up, Progress Notes, TIU, VIE, Master Veteran Index (MVI), HDR, Clinical Data Services (CDS), Clinical Context Object Workgroup (CCOW) for patient context, VistAWeb, and CPRS. Network connectivity must be available to allow these various components to operate and communicate. VistAWeb, MVI, HDR, and CDS reside at the national level. The rest of the components are installed at the facility level.

- Activate patient for HT care
- Reports available in VHA Support Service Center (VSSC)
- Reports available in IHTA website

#### **2.43. Homeless Management Information (HMIS)**

Version: 1.0

Namespace:

Brief Description: Homeless Management Information System (HMIS) collects and stores longitudinal, person-level information about persons who access the Department's homeless service system.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1333

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122890/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: Homeless Management Information System (HMIS) is a software application designed as part of the 13 Major Initiatives to record and store client-level information on the characteristics and service needs of homeless persons. HMIS is a web-based software application that homeless assistance providers use to coordinate care, manage their operations, and better serve their clients.

- HMIS implementation presents communities with an opportunity to re-examine how homeless services are provided in their community, and to make informed decisions, and develop appropriate action steps

- The implementation of HMIS systems varies from community to community, examples of local implementation covering the community planning process, software selection and implementation are available from a variety of communities

## **2.44. Hospital Inquiry (HINQ)**

Version: 4.0

Namespace: DVB

**Brief Description:** The Hospital Inquiry (HINQ) module provides the capability to request and obtain veteran eligibility data via the VA National Telecommunications Network. Individual or group requests are sent from a local computer to a remote Veterans Benefits Administration (VBA) computer where veteran information is stored. The VBA network that supports HINQ is composed of four computer systems located in regional VA payment centers.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care

**Business Function Framework Function(s):** Provide Member Access

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Chief Business Office

**VASI ID:** 1860

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123280/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=41>

**Full Description and Features:** HINQ interfaces with other modules to allow users to make eligibility requests. An on-line suspense file stores requests for later transmission and records HINQ responses, thus creating a log of HINQ activity. The HINQ module provides facilities with the ability to obtain veteran eligibility information quickly, accurately, and efficiently, allowing medical center personnel to act expeditiously on patient requests for medical treatment and other benefits. Additionally, returned HINQ data may be loaded directly into the local Patient file through various screens. The screens display both the data in the HINQ message and what is currently in the Patient file for comparison.

- Sends on-line requests individually and forwards multiple requests in a batch mode

- Tracks and updates various requests from customer
- Establishes 'real-time' links between VHA and VBA computers to service time-of-the-essence requests
- Processes routine requests in background, allowing the requester to perform other tasks
- Alerts the requester when responses are received from VBA computers
- Alerts the requester when there is a discrepancy found between the returned HINQ information and what is in the Patient file
- Provides the capability to update returned HINQ data directly into the Patient file

## **2.45. Identity Management (IdM) Service**

Version: 1.0

Namespace: N/A

**Brief Description:** The Identity Management (IdM) Service Program provides technical support and development for the management of the identity of persons for the Department of Veterans Affairs.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Common Services

**Business Owner:** VHA

**VASI ID:** 1510

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122981/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=181>

**Full Description and Features:** Identity Management Service (IdMS) comprises Organization Service (OS) and Person Service (PS) and its peripheral applications and services, Person Service Identity Management (PSIM), Person Service Demographics (PSD), Person Service Lookup (PSL), and Identity Management Data Quality Toolkit (IMDQ TK). Identity Management provides the ability to effectively maintain and share unique identifiers across the enterprise to improve health care delivery and data, as well as eliminate inappropriate merges of patient data.

Organization Service (OS) is the authoritative source for organizations, location, and medical device information for VistA. Currently, Common Services/Organization Service (CS/OS) v3.0 builds on

CS/OS v1 .0 and v2.0 functionality for the enumeration of medical facilities for Health Insurance Portability and Accountability Act (HIPAA), and development of the following architecturally significant features:

- Enumeration, Relationship, and Point-In-Time Management
- Graphical User Interface
- Common Services/Person Service (CS/PS) provides a consistent interface for accessing and maintenance of crosscutting person administrative information to a trusted set of client applications and services. In doing so, CS/PS is the authoritative source for person identification in the Veterans Health Administration (VHA) domain
- The sub-services of Common Services/Person Service include:
- Person Service Identity Management (PSIM)
- Identity Management Data Quality Toolkit (IMDQ TK)
- PS Demographics (PSD)
- Person Service Construct (PSC)
- Person Service Lookup (PSL)

## **2.46. Income Verification Match (IVM)**

Version: 2.0

Namespace: IVM

**Brief Description:** The Income Verification Match (IVM) module is designed to extract patient-reported data and transmit it to the Enrollment System (ES). IVM allows the Veterans Health Administration (VHA) to accurately assess a patient's eligibility for health care and other benefits to which they are entitled.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care

**Business Function Framework Function(s):** Provide Member Access

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA CBO

**VASI ID:** 1964

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123382/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=44>

Full Description and Features: IVM provides all of the functionality required to complete the eligibility verification process at an enterprise level. The IVM application provides the necessary interface to allow the exchange of data between the VA Medical Centers (VAMCs) in near real-time.

- Transmits data for basic demographics, next-of-kin, income, temporary address, eligibility, guardian, military service, and employer information to the HEC for patients who are entered into the VAMC database
- Automatically transmits an updated message if this information is changed
- Allows the HEC to query the medical facility for the most up-to-date patient information
- Allows a VA Medical Center (VAMC) to query ES for the most up-to-date data
- Allows updated demographic and insurance information from the HEC to be uploaded into the patient's record
- Automatically loads updated income information from the HEC (including IVM Converted financial tests) and updates the veteran's eligibility for health care
- Allows generation of status inquiries, statistical Means Test and data transmission reports

## **2.47. Incomplete Records Tracking (IRT)**

Version: 1.0

Namespace: DGJ

Brief Description: The Incomplete Records Tracking (IRT) package provides the medical center the ability to monitor incomplete records. Interim summaries, discharge summaries, and both inpatient and outpatient operation reports are tracked. Records may be incomplete or deficient for one or more of the following reasons - not dictated, not transcribed, not signed, or not reviewed.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Medical Services, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: Director, HIM

VASI ID: 1804

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123210/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: A list of the deficiencies each site will track is distributed with the software. These deficiency names and categories are highlighted on the screen display and are not

editable. Sites may add new deficiencies. Deficiencies that are entered by the site are not highlighted on the screen display and can be edited.

- Provides the ability to enter a new or edit an existing incomplete record in the IRT tracking system, edit a completed IRT record, and delete an IRT entry
- Allows each site to establish and edit site-specific IRT parameters
- Produces a variety of statistical reports for a specified date range

## **2.48. Intake and Output**

Version: 4.0

Namespace: GMRY

Brief Description: The Intake and Output (I&O) application is designed to store, in the patient's electronic health record, all patient intake and output information associated with a hospital stay or outpatient visit.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Medical Services, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: ONS (Office of Nursing Service)

VASI ID: 1356

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123022/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=70>

Full Description and Features: The Intake and Output (I&O) package is designed to allow entry and storage, in the patient's electronic health record, all patient intake and output information associated with a hospital stay or outpatient visit. This application is not service specific and is currently interfaced with the PIMS, Nursing and Pharmacy applications.

- The I&O package allows users to electronically document patient intake (e.g., oral fluids, tube feedings, intravenous fluids, irrigations, and other types of intake defined by the facility) and patient output (e.g., excreted patient material such as urine, nasogastric secretions, emesis, drainage, liquid feces/stool, and other types of output defined by the facility)

- Intake data can be entered through either a quick or detailed route. The quick route documents the total fluid consumed. Detailed information request the user to enter specific types of fluid intake (e.g., orange juice, water, soup) along with the quantity absorbed

- The Start/Add/DC IV and Maintenance option contains nine protocols associated with intravenous therapy:

1. Start IV - Start a new IV line or heparin/saline lock/port
2. Solution: Replace/DC/Convert/Finish Solution - DC current solution then replace a new solution to the selected IV line or convert the IV according to the user's choice
3. Replace Same Solution - Replace the same solution to a selected IV
4. D/C IV Lock/Port and Site - Remove IV/lock/port from a selected IV site
5. Care/Maintenance/Flush - Check site condition, dressing change, tube change and flush
6. Add Additional Solution(s) - Add additional solution(s) without discontinuing an existing one
7. Restart DC'd IV - Restart an IV with was DC'd due to infiltration or other reasons
8. Adjust Infusion Rate - Adjust infusion rate for a selected IV
9. Flush - Flush all IV line(s) for a selected infusion site

- The software supports documentation of intravenous intake both single and multi-lumen catheters
- The software is interfaced with the IV module of the Pharmacy software
- The following reports are included:

1. Print I/O Summary by Patient (by Shift and Day(s))
2. Print I/O Summary (Midnight to Present)
3. Print I/O Summary (48 Hrs)
4. 24 Hours Itemized Shift Report
5. Intravenous Infusion Flow Sheet

- The last four reports can be printed for all patients on a ward, for patients in selected rooms on a ward, and for an individual patient

- Patient Intake and Output information is printed on the following Nursing application reports:

1. End of Shift Report
2. Vital Signs Record

- This version of Intake and Output is not interfaced with Health Summary or the Order Entry/Results Reporting applications though display of the 24 Hour Summary of both Intake and Output displays on the coversheet of the CPRS GUI in the Vital Signs box

## **2.49. Integrated Billing (IB)**

Version: 2.0

Namespace: IB

Brief Description: The Integrated Billing (IB) software provides all the features necessary to create first party (patient) and third party (insurance carriers/Medicare) bills.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Utilize Information Technology Services

VHA Portfolio: Business Informatics

Business Owner: VHA CBO

VASI ID: 1806

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123212/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=45>

Full Description and Features: IB allows for the capture, maintenance, and storage of insurance data including policy information and related benefits. It provides the ability to electronically transmit bills to payers with the data required by HIPAA. It also provides the ability to receive and store electronic 835 Health Care Claim Payment/Advice. It includes the ability to create printed bills which can then be mailed to payers who are unable to accept an electronic claim. A Claims Tracking feature is available to assist utilization review staff in tracking episodes of care, completing pre-certifications, completing continued stay reviews, and processing appeals and denials.

An Automated Biller module provides a process that automatically creates bills for billable events which can then be finished and authorized by the billing staff. The IB software also provides many reporting features that support the billing staff by providing statistics, tracking and historical information.

This software is highly integrated with other VistA packages. It is dependent on data from Registration, Scheduling, Outpatient Pharmacy, Patient Care Encounter (PCE), and Prosthetics to determine billable events. Bills and charges created in IB are passed to Accounts Receivable for processing.

- Tracks events requiring insurance company reviews from the time of the actual event until final payment is resolved
- Provides the ability to setup insurance companies and insurance plans and to store all Relevant data associated with each of the group or individual plans
- Modifies made to the Third Party Joint Inquiry option which include an Auto-Post Status indicator after the Electronic Remittance Advice (ERA) on the TPJI Bill Charges screen
- Modifies made to the Third Party Joint Inquiry option which include detail of an Electronic Explanation of Benefits (EEOB) Deletion on the Bill Charges and the Comment History



- Newly created Subscriber screen will display a side-by-side comparison of the Insurance Verification Processor buffer information against the patient's Subscriber information found in either the Patient File or the Income Person File depending on what the user selects at the "Patient Relationship to Subscriber" prompt
- Newly created Annual Benefits screen will allow the user to View/Edit/Save the patient annual benefits found within Annual Benefits File
- A newly created Coverage Limitations screen will allow the user to View/Edit/Save the patient coverage limitations data found within Plan Coverage Limitations File
- Modification made to the Type of Plans file to add Master Type of Plan file and Master Type of field. The new MASTER TYPE OF PLAN file contains the Public Health Data Standards Consortium (PHDSC) Source of Payment code. The new MASTER TYPE OF PLAN field provides a method of associating TYPE OF PLAN file entries to the national PHDSC standard code set
- A new Copays on Hold List Manager screen will display the copay that are on hold based on the filters selected by the user. Functionality has also been added to release a copay when the patient does not have billable I insurance as well as a copay on hold when the buffer file entry has been processed
- Medical Care Collections Fund (MCCF) Third Party billing and collections applications in the VistA information system do not segregate the Non-VA care claims from those claims for service rendered at Veterans Health Administration (VHA) healthcare facilities. Transfer of data from VistA Fee to Integrated Billing will improve. It will record Non-VA revenue in a new fund 5287-13 to allow separate tracking of these revenues
- Modification made to the IB package to create proprietary 837 dental claims with the data necessary to send FSC a transaction it can map to a X12N/005010X224 Health Care Claim (837D) when a user authorizes a dental claim. Dental claims will only be Transmitted electronically and cannot be printed at this time. This enhancement touched all aspects of the claims billing process.
- Modifications to prevent Outpatient visit copayment charges from being created/charged for patients with the national HRfS flag active on the date of service.
- Modifications to the menu option IB CANCEL/EDIT/ADD CHARGES to prevent Outpatient visit copayment charges from being added manually for patients with the national HRfS flag active on the date of service.
- Modifications to prorate Rx copay amounts paid by patients with the national HRfS flag active on the date of service if the supply is for less than 30 days.
- Modification to the menu option IB CANCEL/EDIT/ADD CHARGES for the manual process of adding Rx charges to support prorated amounts for Rx

## **2.50. Joint Legacy Viewer (JLV)**

Version: 2.3

Namespace: JLV

**Brief Description:** The Joint Legacy Viewer (JLV) is a graphical user interface (GUI) that links the Veteran Affairs (VA) electronic medical record (EMR) systems with the Department of Defense (DoD) EMR systems.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio: Common Services

Business Owner: Latricia Facundus /Rod Laster

VASI ID: 2057

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/150483/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=224>

Full Description and Features: The Joint Legacy Viewer (JLV) is a graphical user interface (GUI) that links the Veteran Affairs (VA) electronic medical record (EMR) systems with the Department of Defense (DoD) EMR systems. The interface is a front-end web application that provides a common data view of view-only, real-time patient information from separate and distinct EMR Systems.

The common data view combines similar data from each health information system and displays them chronologically on a single screen, eliminating the need for you to access two separate applications to obtain complete patient information. All VA/DoD patient data is collated and combined onto single screens.

As a VA or DoD clinician, you can view patient records through the Joint Legacy Viewer, which provides all authorized DoD Composite Health Care System (CHCS) users and VA VistA users with a combined view of DoD/VA patient record data.

- Customizable User interface
- Date Ranges can be modified and saved by user
- Web based, easy to use interface
- Requires PIV card
- JLV access is reviewed and approved by the JLV coordination team

## **2.51. VistA Infrastructure**

### **2.51.1. Capacity Management Tools**

Version: 3.0

Namespace: KMPD

**Brief Description:** The Capacity Management (CM) Tools software is a fully automated support tool developed by Capacity Planning (CP) Service. CM Tools are designed for Information Resource Management (IRM) and system administrators responsible for the capacity planning functions at their site, as well as (VistA) software developers.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Utilize Information Technology Services

**VHA Portfolio:** Common Services

**Business Owner:** VHA & OIT

**VASI ID:** 1783

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123319/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=129>

**Full Description and Features:** The CM Tools are used to measure system performance, data growth, Computerized Patient Record System (CPRS) coversheet load times, option and protocol execution, and provide various data reports. There are also tools for developers: global lister, error lister, routine search, and evaluate M code. CM Tools entails the capture of all Veterans Health Information Systems and Technology Architecture (VistA) Health Level Seven (HL7) workload specifics from participating sites. This HL7 workload data is then summarized on a weekly basis and is automatically transferred via network mail (i.e., VistA Mailman) to the Capacity Planning (CP) National Database. The Department of Veterans Affairs (VA) developed the Capacity Management Tools software in order to obtain more accurate information regarding the current and future VistA HL7 workload data at VA sites. On a nightly basis, the CM Tools Background Driver option automatically compresses the information contained within the CP TIMING file (#8973.2) into daily statistics. These daily statistics are converted into an electronic mail message that is automatically transferred via network mail (i.e., VistA Mailman) and merged into a Capacity Planning National Database where this data is used for evaluation purposes. IRM staff utilizes the options that are available at the site to manage this software. IRM staff responsible for capacity planning tasks at the site can use these options to review system workload trends. Additionally, the IRM staff can review specific VistA HL7 workload data.

- Provides access to local databases for identification of a veteran's admission, discharge, outpatient treatment, patient care, and other information that may require adjudicative actions
- Reduces overpayments previously caused by lost, misrouted, or improperly processed admission notifications
- Provides on-line status determinations of pending compensation and pension examinations (requesting, scheduling, tracking, and updating results)
- Provides RO on-line access to the local databases for the confirmation of the propriety of payments based on hospitalization

- Improves timeliness of the RO benefits adjustment processing
- Allows medical centers to electronically access sections of the Physicians Guide for Disability Evaluation Examinations. Provides tracking of insufficiently completed compensation and pension examinations

## 2.51.2. Clinical Context Object Workgroup

Version: 4.3

Namespace: XWB

**Brief Description:** The Veterans Health Administration uses CCOW to share patient and user context between applications. Clinical Context Management is a method used to synchronize multiple GUI clinical computer applications to one subject, for example, the same patient.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Utilize Information Technology Services

**VHA Portfolio:** Common Services

**Business Owner:** VHA OHI

**VASI ID:** 1114

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122822/c/56/nt/-1?id=1578>

**VDL Link:** [https://www.va.gov/vdl/documents/Clinical/Pharm-Bar\\_Code\\_Med\\_Admin\\_\(BCMA\)/psb\\_3\\_um\\_appendixc\\_ccow\\_r0806.pdf](https://www.va.gov/vdl/documents/Clinical/Pharm-Bar_Code_Med_Admin_(BCMA)/psb_3_um_appendixc_ccow_r0806.pdf)

**Full Description and Features:** Clinical Content Object Workgroup (CCOW), more commonly known as Clinical Context Management, enables the clinical end-user to experience the simplicity of interacting with one system, when in reality he or she may be using multiple independent applications through varying interfaces.

Clinical Context Management is a method used to synchronize multiple GUI clinical computer applications to one subject, for example, the same patient. Standard subjects include Patient, User, Encounter, Observation, and DICOM (Digital Imaging Communications in Medicine) type. CCOW ensures secure and consistent access to patient data from varied sources. Benefits include applications that are easier to use, utilization of electronically available information, and an increase in patient safety. CCOW support for secure context management provides for HIPAA compliant communications and patient coordination.

## 2.51.3. Kernel

Version: 8.0

Namespace: XU

Brief Description: Kernel provides a portability layer between the underlying operating system and application code.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=10>

Full Description and Features: Kernel provides a portability layer between the underlying operating system and application code. This results in the entire Veterans Health Information Systems and Technology Architecture (VistA) system being portable among different computers, operating systems, and M implementations. This, together with the database portability provided by VA FileMan, eliminates the cost of application conversions each time VHA changes its computing platforms. Kernel also offers shared services for VistA applications, resulting in reduced development costs and a common user interface, and provides system management tools for managing VistA computer systems. Integrated Single Sign-on: The RPC Broker supports a single sign-on point from a client workstation to the server. Users need only sign on once when accessing multiple VistA applications on the same workstation.

- ZOSF/ZOSV Operating System Interface: The core of Kernel's portability layer. Insulates applications from being tied to any particular hardware platform, operating system, or M implementation
- Sign-on and Security Management: Controls user access by device, time, and day of week; controls user access to programs, menus, files, fields, and devices; audits by user, device, program, file, and field; and provides electronic signature capability
- Menu Manager: Manages all application menus to provide a standard user environment; customizes menus for individual users; shares or restricts menus to a user or a set of users; provides secure delegation of menu management authority; and delivers priority system alerts
- Error Processing: Provides a consistent method for recording and processing application errors
- Device Handler: Defines generic terminal types to reuse for similar peripherals; supports host files in layered operating system environments; insulates programmers from device- and operating system-specific coding; and provides standard user device selection across different environments

- Task Manager: Provides flexible background job scheduling; allows users to control their own tasks; and permits specification of device, priority, and time of execution
- Kernel Installation and Distribution System (KIDS, namespace XPD): Provides a mechanism to create a distribution of packages and patches; allows distribution via a Mailman message or a host file; and allows queuing the installation of a distribution for off- hours
- Library Functions: Provides Date, String, Mathematical, Hyperbolic Trigonometric Measurement and Utility functions
- Domain Name Resolution: Provides an Application Program Interface (API) to resolve domain names into an Internet Protocol (IP) address
- Kernel Delphi Components (KDC): Provides developers with the capability to develop VistA client/server software. These Delphi-based components enable client applications to communicate and exchange Kernel-related data with VistA M Servers (e.g. alerts and date/time)

#### 2.51.4. Kernel Authentication & Authorization for Java 2 Enterprise Edition (KAAJEE)

Version: 1.1

Namespace: XU

Brief Description: Kernel Authentication & Authorization for Java 2 Enterprise Edition (KAAJEE) addresses the Authentication and Authorization (AA) needs of VistA Web-based applications in the J2EE environment.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=151>

Full Description and Features: Kernel Authentication & Authorization for Java 2 Enterprise Edition (KAAJEE) for Web-based HealtheVet applications on WebLogic 9.2 and higher, such as Pharmacy Re-Engineering (PRE), provides user authentication to grant access to applications, and retrieves VistA security keys for application authorization. KAAJEE takes advantage of the current user store in VistA to authenticate users in new HealtheVet applications. Considered an interim solution, KAAJEE will be enhanced to provide the connection to the VA Enterprise user authentication (signon) system in the

future. KAAJEE and FatKAAT use VistALink as a connectivity solution from J2EE applications to M/VistA.

Like KAAJEE 1.0, KAAJEE 1.1 provides a custom Authentication Provider "plug-in" for BEA WebLogic J2EE servers, including a set of web forms for web applications that allow web applications to authenticate and authorize an end-user using a Kernel system as the source of authentication and authorization.

#### 2.51.5. Kernel Delphi Components (KDC)

Version: 1.0

Namespace: KDC

Brief Description: This version of the Kernel Delphi Components provides programmers with the capability to develop and deploy new VistA client/server software using the Kernel Delphi Components in the 32-bit environment.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=127>

Full Description and Features: Version 1.0 of the Kernel Delphi Components (KDC) provides programmers with the capability to develop new VistA client/server software using the various Kernel Delphi Components in the 32-bit environment.

- Client-side Delphi Components for Kernel
- Programming Language: MUMPS, Delphi.
- Deployment Infrastructure: Varies by location.
- Depends On: VistA 1.0 (FileMan, FileMan Delphi Components (FMDC), Kernel, Kernel Toolkit, Remote Procedure Call (RPC) Broker)

## 2.51.6. Kernel Toolkit

Version: 7.3

Namespace: XT

Brief Description: Kernel Toolkit (also referred to as "Toolkit") supplements the Kernel software package. It provides Development and Quality Assessment Tools and System Management Utilities.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: 1626

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123247/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=12>

Full Description and Features: Kernel Toolkit (also referred to as "Toolkit") supplements the Kernel software package. It provides Development and Quality Assessment Tools and System Management Utilities.

### Development and Quality Assessment Tools

- Promote standard programmer interfaces
- Provide programmer and systems management
- Provide a portable routine and global editor
- Check adherence to programming standards and correct syntax with the XINDEX tool
- Provide support for data standardization
- Provide standard error trapping, storing, and reporting
- Support quality assessment tools for the comparison of routines and data dictionaries
- Provide software project management utilities
- Provide tools to work with data in Extensible Markup Language (XML)
- System Management Utilities
- Customize and tune site parameters for local requirements
- Provide a Multi-Term Lookup Utility for enhanced VA FileMan lookups
- Provide PARAMETERS file (#8989.5) for user-specific to system-level tracking of parameter values

## 2.51.7. Kernel Unwinder



Version: 7.1

Namespace: XQOR

Brief Description: The Kernel Unwinder is a utility that is used in conjunction with the Protocol file (#101) to create modular building blocks for applications.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=13>

Full Description and Features: The Unwinder is a utility that is used in conjunction with the Protocol file (#101) to create modular building blocks for applications.

The Unwinder allows hierarchical traversing of menus, as found in Menu Management, and also the structuring of order protocols into independent, reusable modules. Each node becomes a "building block" from which more sophisticated modules may be built. For instance, the node "Order Shirt" may have as sub-items, "Get Size," "Get Color," "Get Style," and "Get Delivery Date." Each of these sub-items may, in turn, be used to build other modules.

- Provisions have been made to allow additional building blocks to be placed at the item level of the node. Their purpose is to allow modifying actions to be executed and thus increase the flexibility of each module.

#### 2.51.8. List Manager

Version: 1.0

Namespace: VALM

Brief Description: The List Manager was developed to provide an efficient way for applications to present a list of items to the user for action.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=14>

Full Description and Features: The List Manager was developed to provide an efficient way for applications to present a list of items to the user for action. It is a developmental tool that enables programmers to:

- Display a list of items to the user.
- Allow the user to browse back and forth through the items one at a time or by screen.
- Allow the user to select items from the list.
- Specify the actions that can be applied to selected items from the list.
- Call List Manager again as part of an action.

Protocols are the "actions" that users can take against items on the list. A number of standard protocols come as part of the List Manager utility. Most of these are actions that allow the user to browse the list of items. The List Manager contains the Workbench programmer utility, which allows the development of a List Manager application without having to move from one development tool to another.

#### 2.51.9. Mailman

Version: 8.0

Namespace: XM

Brief Description: The VistA Mailman software is designed to allow users to send and receive mail from individuals or groups electronically through communication lines, modems, and other networks.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA and OIT Infrastructure and Security Services (ISS)

VASI ID: 1817

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123288/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=15>

**Full Description and Features:** The VistA Mailman software is designed to allow users to send and receive mail from individuals or groups electronically through communication lines, modems, and other networks. These electronic mail messages (i.e., e-mail) can range from personal letters to formal bulletins extracting data from VA FileMan. Mailman is an electronic messaging system that transmits messages, computer programs, data dictionaries, and data between users and applications located at the same or at different facilities. Network Mailman disseminates information across any communications medium. When Mailman is integrated into an application, it notifies individuals and groups about important events. From VA FileMan, a change in the value of a field can trigger a message called a bulletin. Mailman is easy for the user to learn and to use and provides extensive online help. There is also an extensive set of Mailman Application Program Interfaces (API) for the developer.

- Delivery options set by user (e.g., individuals, mail groups, devices; staggered delivery)
- Chained responses, managed automatically and available for review by all recipients
- Configurable interface
- Mail basket organization
- Mail filtering
- Search capabilities
- Reminders and notifications
- Secure messages
- Surrogate capability
- Software message processing
- Software code transport (Whole modules and patches for installation at remote sites are sent in Kernel Installation and Distribution [KIDS] PackMan messages.)
- Network transmissions over TCP/IP (Transmission Control Protocol/Internet Protocol) channels to any Simple Mail Transfer Protocol (SMTP)-compatible mail system
- Statistics Collection
- Domain Name Service (DNS) (creates automatic replication of IP address changes to every VistA Mailman system)

#### 2.51.10.M-to-M Broker

Version:

Namespace: XWB

**Brief Description:** This software broker allows M (also known as "MUMPS") computer program instances on different servers to communicate with each other to transfer data and business rules.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA & OIT Health Systems Design & Development (HSD&D), Infrastructure & Security Services (ISS)

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=128>

Full Description and Features: The VistA M-to-M Broker is a new implementation aspect of the RPC (Remote Procedure Call) Broker offering Client/Server functionality resident solely within a VistA non-Graphical User Interface (non-GUI) environment. It enables the exchange of VistA M-based data and business rules between two VistA M servers, where both servers reside on local and/or remote VistA systems:

- The requesting server functions in the capacity of a Client
- The server receiving that request functions in the capacity of a Server

The Client/Server roles of each server can vary depending on what point in time each VistA M server is making the request for data from its counterpart VistA M server.

Note: Also see Remote Procedure Call Broker (RPC).

#### 2.51.11.National Patch Module (NPM)

Version: 2.3

Namespace: A1AE

Brief Description: The National Patch Module Guide describes the purpose, roles, responsibilities, and steps for the initiation, development, and entry of patches to VHA Information Systems and Technology Architecture (VistA) products via the National Patch Module (NPM).

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA Release Board and OIT

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=20>

Full Description and Features: The National Patch Module (NPM) software provides a database for the distribution of software patches and updates to Veterans Health Information Systems and Technology Architecture (VistA).

Options are provided for:

- Systematic entry and review of patches by developers
- Review and completion of patches by Software Quality Assurance (SQA)
- Review and release of patches by Health Product Support (HPS)
- Display and distribution of the verified/released patches to the users in the field

Once a problem is identified and a solution found or an enhancement is requested in VistA software, a developer enters a patch in the NPM. The patch is identified by software namespace, version, and a patch number. At this point, the patch entry has a status of "UNDER DEVELOPMENT" and is accessible only by other developers of the software. Once the developer has finished coding the patch and it's ready for review, SQA reviews the patch. Once SQA has reviewed the patch and no changes are required, SQA changes the status to "COMPLETED/UNVERIFIED." After the patch is completed, EVS reviews the patch. Once EVS makes the determination that it is ready for release, application coordinators/release agent change the status to "VERIFIED."

The patch is then automatically distributed and becomes available for users in the field.

Creates a patch mail message with text and installable routines that is delivered to all the sites via network mail. It allows entry of associated (dependent) patches (i.e., those patches that must be reviewed and installed prior to the current patch).

Provides flags to:

- Identify which routines in a patch have previous patches
- Hold verification/release of a patch until a certain date
- Force sequential verification/release of associated patches

Provides numerous reports including:

- Verified patches and summaries
- Completed/unverified patches for a selected package
- Under development patches for a selected package
- Provides automatic notification of new released patches

- Provides ability to copy information from an existing patch into a new patch

#### 2.51.12.Resource Usage Monitor (RUM)

Version: 2.0

Namespace: KMPR

**Brief Description:** The Resource Usage Monitor (RUM) software is intended for use by staff responsible for the capacity planning functions at their respective facilities. RUM software provides Veterans Health Information Systems and Technology Architecture (VistA) option workload information.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Utilize Information Technology Services

**VHA Portfolio:** Common Services

**Business Owner:** VHA & OIT

**VASI ID:** NA

**VASI ID Link:**

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=130>

**Full Description and Features:** Menus and options are provided locally at the respective sites to allow staff to accomplish and monitor workload/usage information. Data collection activities in RUM obtain system and VistA option information from the each site and automatically transfer this data via network mail to the Capacity Planning National Database. RUM provides information regarding current and future VistA workload at VA sites.

#### 2.51.13.Single Sign On/User Context (SSO/UC)

Version:

Namespace: XU

**Brief Description:** Single sign-on (SSO) service with interfaces to VistA and non-VistA systems.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Utilize Information Techonolgy Services

VHA Portfolio: Common Services

Business Owner: OIT & VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=162>

Full Description and Features: The goal of the Single Sign-on/User Context (SSO/UC) Project is to provide secure single sign-on architecture. This architecture allows users to authenticate and sign on to multiple applications that are Clinical Content Object Workgroup (CCOWenabled and SSO/UC-aware using a single set of credentials, which will reduce the need for multiple IDs and passwords in the VistA clinician desktop environment. SSO capability is implemented within the framework of the HL7 CCOW User Context standard.

The CCOW User Context standard:

- Is a standard of the HL7 standards body
- Provides coordination among client healthcare applications, allowing them to synchronize around several CCOW subjects and share context (e.g., Patient, Encounter, and User Context)
- Ensures secure and consistent context management

#### 2.51.14.SQL Interface (SQLI)

Version:

Namespace: DI

Brief Description: SQL Interface (SQLI) projects all of the information needed by M-to-SQL vendors to access VA FileMan through M-to-SQL products.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=25>

Full Description and Features: Recommend removal of this as it is a part of VA Fileman, if we feel it needs to say I recommend we add as either sub-section of VA Fileman or simply add some level of detail on this to VA Fileman entry.

- Programming Language: MUMPS
- Deployment Infrastructure: Varies by location
- Depends on: VistA 1.0, Kernel, Kernel Taskman, Fileman
- The following packages depend on SQL Interface (SQLI): VistA 1.0, Medical Domain Web Services (MDWS)

#### 2.51.15.Statistical Analysis of Global Growth (SAGG)

Version: 2.0

Namespace: KMPS

Brief Description: The Veterans Health Administration (VHA) developed the Statistical Analysis of Global Growth (SAGG) software in order to obtain more accurate information regarding the current and future Veterans Health Information Systems and Technology Architecture (VistA) database growth rates at the VA Medical Centers (VAMCs).

Business Function Framework Line(s) of Business: Managing Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA & OIT

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=115>

Full Description and Features: The Statistical Analysis of Global Growth (SAGG) software in order to obtain more accurate information regarding the current and future Veterans Health Information Systems and Technology Architecture (VistA) database growth rates at the VA Medical Centers (VAMCs).



The Statistical Analysis of Global Growth (SAGG) software is intended to be used by Information Resource Management (IRM) staff responsible for the capacity management functions at their facility. The SAGG software allows the facility to review database, software, and file size information.

- The collection task obtains information on the production global, software, and file information from the site and automatically transfers this data via network mail to the Capacity Planning (CP) National Database
- The information in the CP National Database is fully accessible by all sites through the national FORUM system. Menus and options are provided nationally giving the site the ability to review the growth trends of their database, software, and files

#### 2.51.16.VA FileMan

Version: 22.2

Namespace: DI

**Brief Description:** VA FileMan is the VistA database management system (DBMS). It runs in any American National Standards Institute (ANSI) environment. The majority of VHA clinical data is stored in VA FileMan files and is retrieved and accessed through VA FileMan Application Program Interfaces (API) and user interfaces.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Common Services

**Business Owner:** VHA

**VASI ID:** 1786

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123322/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=5>

**Full Description and Features:** VA FileMan is the database management system for the Veterans Health Information Systems and Technology Architecture (VistA) environment.

**For users:**

- Standalone user interface for adding, editing, printing, and searching data
- Form-based editing

- Flexible, extensive report module
- Data interchange with outside applications (import and export tools)

For developers:

- Full support for forms-based interfaces to the database
- Full database access for client-server operations
- Easy scrolling-mode interfaces to the database and full database access
- Data archiving and transport tools
- Supports keys and compound cross-references
- Performance yielded by the use of M and VA FileMan
- Portability
- Openness
- Native support for Keys and compound cross references

#### 2.51.17.VistA Data Extraction Framework (VDEF)

Version: 1.0

Namespace: VDEF

Brief Description: VistA Data Extraction Framework (VDEF) is a VistA package that uses hard-coded M routines to create and deliver Health Level 7 (HL7) messages.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA & OIT

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=144>

Full Description and Features: VistA Data Extraction Framework (VDEF) is a VistA package that uses hard-coded MUMPS (M) routines to create and deliver Health Level 7 (HL7) messages. The VDEF package supports queuing requests for messages, control of the timing of message creation, monitoring of the request queue, and recording of errors encountered during message creation. The hard-coded programs are M programs belonging to an application's namespace. Messages are delivered using the VistA HL7 package.

The VDEF package supports queuing requests for messages, controls the timing of message creation, monitors the request queue, and records errors encountered during message creation. The hard-coded programs are M programs belonging to an application's namespace. Messages are delivered using the VistA HL7 package.

#### 2.51.18.VistALink

Version: 1.6

Namespace: XOBV

Brief Description: VistALink enables applications to communicate with VistA/M systems. It provides a synchronous communication mechanism from Java-based applications to M.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: 1844

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123414/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=163>

Full Description and Features: VistALink consists of an M-side listener and Java-side adapter libraries compliant with the J2EE Connectors specification for Enterprise Information System (EIS) adapters. VistALink comports to system architecture requirements, and supplements other alternatives for communication between M-based and JAVA-based applications, including Remote Procedure Call (RPC) Broke, HL7 interface messaging software, and Web Services.

- Client/Server connectivity from Java client to M
- J2EE Application Server connectivity to M—Supports applications and services running on a J2EE application server, enabling them to initiate a call to an M server and execute RPCs.
- Implements the Java 2 Enterprise Edition (J2EE) Connectors specification
- Supports VistA modules requiring this communication capability, including Patient Advocate Tracking System (PATs), Veterans Personal Finance System (VPFS) and Blind Rehabilitation

#### 2.51.19.XML Parser

Version: 1.1

Namespace: MXML

**Brief Description:** The VistA Extensible Markup Language (XML) Parser is a full-featured, validating XML parser designed to interface with the VistA suite of M-based applications. It is not a standalone product. Rather, it acts as a server application that can provide XML parsing capabilities to any client application that subscribes to the XML Parser application programmer interface (API) implementations.

**Business Function Framework Line(s) of Business:**

**Business Function Framework Function(s):**

**VHA Portfolio:**

**Business Owner:**

**VASI ID:** 1871

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123352/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=137>

**Full Description and Features:** The VistA Extensible Markup Language (XML) Parser is a full-featured, validating XML parser written in the M programming language and designed to interface with the VistA suite of M-based applications. It is not a standalone product. Rather, it acts as a server application that can provide XML parsing capabilities to any client application that subscribes to the application programmer interface (API) specification detailed in this document.

The VistA XML Parser employs two very different API implementations. The first is an event-driven interface that is modeled after the widely used Simple API for XML (SAX) interface specification. In this implementation, a client application provides a special handler for each parsing event of interest. When the client invokes the parser, it conveys not only the document to be parsed, but also the entry points for each of its event handlers. As the parser progresses through the document, it invokes the client's handlers for each parsing event for which a handler has been registered.

The second API implementation is based on the World Wide Web Consortium (W3C's) Document Object Model (DOM) specification. This API, which is actually built on top of the event-driven interface, first constructs an in-memory model of the fully parsed document. It then provides methods to navigate through and extract information from the parsed document.

**Programming Language:** MUMPS

**Deployment Infrastructure:** Varies by location

**Depends On:** VistA 1.0, FileMan, Kernel, Kernel Toolkit

The following packages depend on XML Parser:

- Clinical Case Registries
- Compensation Pension Records Interchange (CAPRI)/Automated Medical Information Exchange (AMIE)
- Health Data Informatics
- Oncology
- Data Management (PDM)
- Remote Procedure Call (RPC) Broker
- VistALink
- VistA Blood Establishment Computer Software (VBECS)

## **2.52. VistA Laboratory**

### **2.52.1. Laboratory**

Version: 5.2

Namespace: LR and LA

**Brief Description:** The VistA Laboratory module is a clinically oriented system designed to provide lab data to health care personnel. It assists the Pathology and Laboratory Medicine Service (P&LMS) in managing and automating the workload and reporting process.

**Business Function Framework Line(s) of Business:** Deliver Healthcare, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Medical Services, Provide Ancillary Services, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pathology and Laboratory Medicine Service (P&LMS)

**VASI ID:** 1381

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123037/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=71>

**Full Description and Features:** The Laboratory module supports the following areas: General Laboratory, Microbiology, Histology, Cytology Autopsy and Electron Microscopy. Additionally, activity-specific VistA applications exist for the following Laboratory areas, and they are explained in more detail in individual write-ups immediately following this one:

- Anatomic Pathology (including Surgical Pathology, and Electron Microscopy)
- Electronic Data Interchange (LEDI)
- Emerging Pathogens Initiative (EPI)
- HOWDY Computerized Login Process
- National Laboratory Tests (NLT) Documents and LOINC coding for lab tests
- Point of Care (POC)
- Universal Interface (UI)
- VistA Blood Establishment Computer Software (VBECS)

#### Phlebotomy/Ordering

- Interfaces with Computerized Patient Record System (CPRS)
- Supports ward order entry
- Prints collection lists and labels and supports barcode printing
- Provides maximum ordering frequency (e.g., daily, user-defined limits)
- Supports immediate request for blood specimen collection

#### Processing

- Provides work lists by urgency and accession number (instrument-specific)
- Produces lists of incomplete, workload/data capture reports, and lists for verification of data
- Supports uni-directional and bi-directional Instrument interface
- Supports automatic download to automated instruments including Point of Care devices
- Supports via Laboratory Electronic Data Interchange (LEDI) a bidirectional interface that allows for ordering and processing of laboratory tests "VA to VA", "VA to DoD", and "VA to Commercial Reference Laboratory" for all areas of the clinical laboratory (excepting Blood Bank)

#### Verification/Release of Data

- Provides Delta Checks, flagging high/low/critical results
- Presents critical values to the technologist in reverse video
- Supports review/verification by group or individual accessions
- Provides various on-screen alerts
- Automated electronic result message generation via LEDI

#### Reports

- Produces supervisory management, audit trail, data integrity, quality management and utilization review reports
- Provides searches for specific antibiotic with defined antimicrobial patterns
- Supports automatic transmission of verified data to the ordering location
- Provides quality control/search capabilities (e.g., critical values, high/low values and Systemized Nomenclature of Medicine—Clinical Terms [SNOMED CT®])
- Produces reports for Laboratory Management Information Program
- Produces and transmits roll-up reports to national LMIP database
- Produces site-customized management reports

#### Data Extracts Capabilities for External Databases:

- Laboratory Management Index Program workload data

- Laboratory Workload for Decision Support System
- Hepatitis C clinical information
- Emerging Pathogen clinical data, antimicrobial trend, infection control, and Health Department reports
- CPT codes are passed to Patient Care Encounter (PCE) for outpatient workload
- LEDI messages to remote Laboratory Information Systems (LIS)
- ICD-10 code compliant

## 2.52.2. Anatomic Pathology (AP)

Version: 5.2

Namespace: LR

**Brief Description:** The VistA Laboratory Anatomic Pathology module automates record keeping and reporting for all areas of Anatomic Pathology (i.e., Surgical Pathology (SP), Cytopathology, Electron Microscopy (EM), and Autopsy).

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Medical Services, Provide Ancillary Services, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pathology and Laboratory Medicine Service (P&LMS)

**VASI ID:** 1810

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123215/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=72>

**Full Description and Features:** The module provides valuable quality management features, increases productivity, provides comprehensive search and reporting capabilities, and facilitates the gathering of workload statistics.

**Provides quality management features, including:**

- Access to historical pathology data during microscopic examination of current specimens
- Lists of incomplete cytopathology, surgical pathology, EM, and autopsy reports
- Turnaround time reports for all anatomic pathology sections

- Generation of defined groups of cases requiring additional review, as defined by the accrediting agencies
- Compilation of all information (e.g., special stains, immunopathology, or electron microscopy studies) in a single cumulative patient summary
- On-command printing of laboratory test results of specified tests
- Tracking outcomes of Quality Management review

Increases productivity through:

- On-line access to historical anatomic pathology data (diagnosis and Systemized Nomenclature of Medicine: Clinical Terms SNOMED CT®] codes only)
- Immediate availability of information regarding surgical pathology, cytology, electron microscopy specimens, and autopsy
- Access to verified/released reports by non-laboratory personnel
- Generation of labels for both specimens and slides
- Interface with Voice Recognition Systems

Provides comprehensive searching/reporting capabilities, including:

- Final pathology, autopsy, cytology, and EM reports
- A log of all specimens accessioned, including final diagnoses

A variety of reports based on morphology, procedure, and etiology disease field entries, including:

- List of patients with a particular diagnosis.
- List of specimens from a particular site.
- List of specimens from a particular procedure (e.g., biopsies, frozen sections).

Provides workload statistics for:

- Number of specimens accessioned by area
- Number of blocks, slides, and stains prepared

### 2.52.3. Blood Bank

Version: 5.2

Namespace: LR

Brief Description: Maintains and supports VHA Blood Bank medical devices that are compliant with Food and Drug Administration (FDA) Quality System Regulations and manufacturing Code of Federal Regulations (CFR). Oversight and compliance with Blood Bank business needs as pertains to supporting the software system.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services



Business Function Framework Function(s): Provide Ancillary Services, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Pathology and Laboratory Medicine Service (P&LMS)

VASI ID: 1811

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123216/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=74>

Full Description and Features: This module is DISABLED FOR NEW DATA ENTRY.  
Legacy transfusion records however are available for review.

VistA Blood Establishment Computer Software (VBECS) replaces and supersedes VistA Blood Bank v5.2 for blood bank operations. VistA Blood Bank v5.2 blood unit records remaining after the transfer of patient information to VBECS are available for reference only and are not editable.

#### 2.52.4. Emerging Pathogens Initiative (EPI)

Version: 5.2

Namespace: LR

Brief Description: Under the auspices of the Program Office for Infectious Diseases VAHQ , the Laboratory Emerging Pathogens Initiative (EPI) software package allows the Department of Veterans Affairs (DVA) to track Emerging Pathogens on a national level without the necessity for additional local data entry.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Pathology and Laboratory Medicine Service (P&LMS)

VASI ID: 1221

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122901/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=118>

Full Description and Features: Using this objective information, plans can be formulated on the national level for intervention strategies and resource needs. Results of aggregate data can also be shared with appropriate public health authorities for planning on the national level for the non-VA and private health care sectors.

The Laboratory EPI program is designed to automatically provide data on emerging pathogens to Veterans Affairs Headquarters (VAHQ) without additional individual data entry at the site level. The data will be sent to Austin Information Technology Center (AITC) for initial processing and coupling with denominator data related to workload. VAHQ data retrieval and analysis can then be accomplished.

- Identify Emerging Pathogens
- Extract specific data associated with the Emerging Pathogen
- Transmit data to AITC
- Create national SAS data sets for Infectious Diseases Program Office access

#### 2.52.5. HOWDY Computerized Login Process

Version: 5.2

Namespace: LR

Brief Description: Howdy is a Class 3 to Class 1 which introduced a computerized phlebotomy login process called "howdy" as an automated laboratory check-in application which can be used within the VistA Laboratory module.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Pathology and Laboratory Medicine Service (P&LMS)

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=194>

Full Description and Features: This software performs the following functions:

Allows the veteran patient to slip his/her ID card via a card reader and the software identifies the patient, Welcomes them, and pulls up the patient orders to be drawn. The Orders are accessioned, labels are printed and the patient is drawn reducing the wait times for our veterans in the clinic.

- Howdy automates laboratory check-in, accessioning of orders, and printing of specimen labels
- Howdy captures collection process times and provides the information required to create phlebotomy performance reports
- Howdy eliminates the need for a hand-written log book for sign-in where the patient's name and SSN can be compromised
- Howdy can utilize bar code technology to assist in the process of patient and specimen identification

#### 2.52.6. Laboratory Electronic Data Interchange (LEDI)

Version: 5.2

Namespace: LR

Brief Description: Laboratory Electronic Data Interchange (LEDI) supports the electronic order entry and real-time laboratory results retrieval between VA, DoD, and commercial reference laboratories.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner: Pathology and Laboratory Medicine Service (P&LMS)

VASI ID: 1383

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123039/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=75>

Full Description and Features: LEDI uses HL7 messaging providing communication between VA, DoD, and commercial labs that have a local sharing agreement for laboratory services. VAMC and DOD facilities can be identified as either a HOST site or a COLLECTION site. Reference labs are always a HOST site.

LEDI has enabled electronic ordering and results retrieval of general laboratory tests between VA and DoD. It also provides reference labs to transmit data back to the VAMC. Microbiology data can also be sent and received. Anatomic Pathology can only transmit orders via a manifest.

- Software was demonstrated in El Paso (El Paso Veterans Affairs Healthcare System/William Beaumont Army Medical Center) and San Antonio (South Texas VA Healthcare System/Wilford Hall Medical Center, Brooke Army Medical Center) and is available to the VA Enterprise.
- Phase 2 extends the exchange of ordering and results retrieval data to microbiology laboratory tests between VA and DoD (with either VA or DoD serving as the performing laboratory). Anatomic Pathology orders only can be sent to the host facility.

#### 2.52.7. National Laboratory Tests (NLT) Documents and LOINC® Request Form

Version: 5.2

Namespace: LR

Brief Description: The National Laboratory Test Documents establish a standard coding across documents in an effort to unite laboratory records.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Pathology and Laboratory Medicine Service (P&LMS)

VASI ID: 1822

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123293/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=119>

Full Description and Features: The benefit of this mapping effort is to provide a way to support multiple normal ranges based on test, method, specimen, sex, and patient age. The structure will allow multiple normal ranges within the same laboratory with differing equipment or methods for doing the same procedure. The final product (the normal range, critical high, critical low, reporting units, and method) will be stored with each individual result. Creation of new Data Names for normal range change will be eliminated. benefit of this mapping effort is to provide a way to support multiple normal ranges based on test, method, specimen, sex, and patient age. The structure will allow multiple normal ranges within the

same laboratory with differing equipment or methods for doing the same procedure. The final product (the normal range, critical high, critical low, reporting units, and method) will be stored with each individual result. Creation of new Data Names for normal range change will be eliminated.

#### 2.52.8. Point of Care (POC)

Version: 5.2

Namespace: LR

Brief Description: The VistA Laboratory Point of Care (POC) supports the Laboratory Health Level 7 (HL7) Point of Care (POC) interface. Point of Care systems usually consist of a POC device, a docking station and a server which is configured to connect to VistA.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Pathology and Laboratory Medicine Service (P&LMS)

VASI ID: 1812

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123217/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=149>

Full Description and Features: POC utilizes existing functionality provided by Laboratory Universal Interface (UI) and Laboratory Electronic Data Interchange (LEDI) software. The software supports the transmission, processing and storing of POC TEST RESULTS in the VistA Laboratory package. The ability of POC interfaces to subscribe to VistA HL7 Admissions, Discharge, Transfer (ADT) messages for patient demographics and location information is provided as needed. Support for 5 separate POC interfaces is provided. Additional interfaces can be added locally when naming of additional interfaces are in conformance to name spacing instructions. POC is a type of interface that downloads and stores results for a bed side analyzer/device or any instrument that performs laboratory testing at the site of care (examination, treatment, diagnosis, etc.). The accession and verification procedures are modified to accommodate POC type of data storage. POC results are not verified by the traditional laboratory methods.

- Identifies testing facility's name and address for every POC test on the laboratory report

- Tags each result to identify the person performing the testing on the laboratory report
- Enhances Laboratory Supervisor Summary reports to also display the name of the POC operator who generated the results. This will eliminate the need to store this information as comments
- Stores the Equipment Instance Identifier (EII) with the results
- Expands business rules for laboratory orders to facilitate detection of discrepancies by the provider responsible for the patient's care

## 2.52.9. Universal Interface

Version: 2.0

Namespace: LA

**Brief Description:** The Laboratory Universal Interface (UI) is designed to make the process of interfacing automated instruments easier, faster, and more reliable.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Manage Business Enabling Services

**Business Function Framework Function(s):** Perform Hospital Administration, Utilize Information Technology Services

**VHA Portfolio:** Heath Provider Systems

**Business Owner:** Pathology and Laboratory Medicine Service (P&LMS)

**VASI ID:** 1813

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123285/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=120>

**Full Description and Features:** Laboratory UI uses the standard messaging protocol Health Level Seven (HL7) to communicate with all instruments. HL7 is a standard developed by health care information systems professionals to simplify the communications between computer systems that must exchange information. HL7 was adopted by Decentralized Hospital Computer Program (DHCP) as the primary communications protocol for messaging between systems and even between applications on the same system. The laboratory technologist sees very little change between the Laboratory UI and the traditional interface system. After the Laboratory Information Manager (LIM) or ADPAC sets up the files and installs the new hardware, the technologist can accession, build Load/Work lists, download, and verify the results as usual. The benefit of using the Laboratory UI is that almost any instrument by any manufacturer can be interfaced quickly and dependably, in unidirectional or bidirectional mode. Interfacing is only subject to the limitations of the instrument.

## 2.52.10.VistA Blood Establishment Computer Software (VBECS)

Version: 1.0

Namespace: VBEC

**Brief Description:** The main purpose of VBECS is to automate the daily processing of blood inventory and patient transfusions in a hospital transfusion service. VBECS facilitates ongoing compliance with Food and Drug Administration (FDA) standards for medical devices and enhances the VA Veterans Health Administration's (VHA's) ability to produce high-quality blood products and services to veterans. The system follows blood bank standards, standards of national accrediting agencies, FDA regulations, and VA policies. VBECS is the replacement for the VistA Blood Bank application.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pathology and Laboratory Medicine Service (P&LMS)

**VASI ID:** 1525

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123502/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=182>

**Full Description and Features:** VistA Blood Establishment Computer Software (VBECS) is the Blood Bank System which replaced the previous blood bank software (VistA Blood Bank v5.2) at the Department of Veterans Affairs (VA). The system follows blood bank standards, standards of national accrediting agencies, FDA regulations, and VA policies. VBECS is considered a medical device by the FDA (Food and Drug Administration), which places OI/PD/the Blood Bank Team in the role of "manufacturer."

VBECS supersedes VistA Blood Bank v5.2 for blood bank operations. VistA Blood Bank v5.2 blood unit records remaining after the transfer of patient information to VBECS are available for reference-only and cannot be edited. VistA Blood Bank v5.2 validation records must be maintained for five years after the last of the blood unit records is transferred to VBECS.

- Interfaces with BCE-PPI Transfusion Verification, VistA Laboratory, CPRS order dialog and reports, DSS, and ADT
- Provides direct data entry user interface supported by business rules and truth tables for transfusion related testing
- Alerts users to testing conflicts, potential contraindications for testing and unit selection, and overrides from standard entries (requiring explanation to proceed)
- Provides barcode scanning capability for patient safety and technologist efficiency

## **2.53. Lexicon Utility**

Version: 2.0

Namespace: LEX

**Brief Description:** The VistA Lexicon Utility Version 2.0 is a dictionary of medical terms which can be used by all clinical areas. It provides the basis for a common language of terminology so that all members of a health care team may communicate with each other. It provides a variety of coding schemes and the ability to update these coding systems.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Health Data Systems

**Business Owner:** Health Information Management

**VASI ID:** 1814

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123286/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=76>

**Full Description and Features:** The Lexicon is a standardized reference for clinical terminology across VHA that enables clinical information to be recorded, transmitted, retrieved, and analyzed in a precise and consistent manner independent of clinic or medical center. The Lexicon provides a comprehensive Application Program Interface (API) that enables any application that needs to use standardized terminology to be able to interface.

At its inception in the early 1990s, the scope of the Lexicon was limited to expressing diagnostic clinical problems in easy-to-understand terminology and associating terms to coding systems such as



International Classification of Diseases (ICD), Clinical Modification (ICD-9-CM), Diagnostic and Statistical Manual of Mental Disorders (DSM), and the North American Nursing Diagnosis Association (NANDA), and now includes Clinical Modifications (ICD-10-CM). Over the years, this scope broadened to provide a general-purpose utility that serves the terminology needs of many packages, including Problem List (standardized using SNOMED CT®), Encounter Forms, Text Integration Utility (TIU), Event Capture, Federal Health Information Exchange (FHIE), and the Laboratory Data Sharing Interoperability (LDSI) project.

In addition to providing terminology, the Lexicon provides a coding system update deployment mechanism. A large number of applications, packages, and services (VistA and external) are now dependent on the quarterly updates including:

- Integrated Billing
- Fee Basis
- Automated Information Collection System (AICS)
- Laboratory
- Dental
- Prosthetics
- Mental Health
- Radiology
- Surgery
- Registration
- Patient Care Encounter (PCE)
- Event Capture
- Quality Audiology and Speech Analysis and Reporting (QUASAR)
- Home Based Primary Care
- Clinical Reminders
- Text Integration Utility (TIU)
- Laboratory Data Sharing Interoperability (LDSI)
- Problem List

## **2.54. Master Patient Index (MPI)**

Version: 1.0

Namespace: MPIF

**Brief Description:** The Master Veteran Index (MVI) database (formerly known as the Master Patient Index [MPI]) is the primary vehicle for assigning and maintaining unique patient identifiers. A gateway in VistA establishes connectivity between VA Medical Center (VAMC) systems and patient registration processes and links to the MVI for message processing and patient identification. The MVI was created to support maintenance of a unique patient identifier and a single master index of all Veterans Health Administration (VHA) patients and to allow messaging of patient information among the institutional partners [i.e., VHA, Veterans Benefits Administration (VBA), Board of Veterans Appeals (BVA),

National Cemetery Service (NCS), and Department of Defense (DoD).] MVI creates an index that uniquely identifies each active patient treated by the Veterans Administration, identifies the sites where a patient is receiving care, and supports crucial sharing of Veteran patient information across sites.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services, Provide Enterprise Reporting

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: 1406

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123015/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=16>

Full Description and Features: The MVI maintains a central index to correctly identify each patient and track the sites of interest. MVI data is maintained in a centralized, dynamic database that is available to meet multiple information needs across many applications and systems. The MVI central database, located at VA Austin Information Technology Center, is composed of a unique list of patients and a current list of systems to which each patient entry is correlated. This enables the sharing of patient data between operationally diverse systems. Each record (or index entry) in the MVI contains a small amount of identity and demographic data used to identify individual entries.

It is primarily used by VistA applications that need to enumerate unique patients at their facilities. The MVI assigns each patient a unique patient identifier (Integration Control Number, or ICN). Each index entry in the MVI also contains the patient's identifying information (e.g., name, SSN, date of birth, gender) and a current list of facilities where the patient has been seen. The MVI is updated as new patients are added or demographic information is updated at the correlated system.

Changes and updates to patient identity information are accepted based on an algorithm that determines level of confidence. The Master Veteran Index Patient Index/Patient Demographics (MVI/PD) was developed to initialize active patients to the Master Patient Index (MPI) and to establish the framework for the sharing of patient information between sites. (The original Master Patient Index VistA (MPI) and Patient Demographics (PD) software packages were distributed and installed together.

This software enables sites to:

- Request an ICN assignment
- Query the MVI for known data

- Update the MVI when changes occur to demographic fields stored on the index itself or to other facilities and systems of interest
- Obtain a Treating Facility List of sites where the patient is also known by this ICN (Each site becomes part of the network of sites that share key demographic data for patients via HL7 messaging)

## **2.55. Maximo (Max)**

Version: 7.6.0.9

Namespace:

**Brief Description:** The Service Oriented Architecture Research and Development (SOARD) Maximo Project is a multi-year effort to replace VA's existing asset and service management system (AEMS/MERS) with a single web-based, integrated, enterprise-level system. Maximo provides life cycle management support for all asset types on a single platform. It is used to help maximize the value of critical business and IT assets by enforcing best practices that yield benefits for users of all types of assets.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Manage Business Enabling Services

**Business Function Framework Function(s):** Perform Hospital Administration, Manage VHA-wide Administrative Services, Conduct Supply Chain Operations, Provide Financial Management

**VHA Portfolio:** Business information

**Business Owner:** VHA Procurement and Logistics Office (PLO)

**VASI ID:** 2065

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/151645/c/56/nt/-1?id=1578>

**VDL Link:**

**Full Description and Features:** The Maximo system provides the Veterans Health Administration (VHA) a modernized and integrated asset management capability. This capability includes the ability to perform requisitioning, work order management, inventory management, facilities management, equipment management, and related workforce management. This capability enhances the VHA's ability to serve Veterans by creating and maintaining an effective, integrated, administration-wide management capability to make data-driven decisions, allocate resources, and manage results.

The Service Oriented Architecture Research and Development (SOARD) project is deploying IBM's Maximo Enterprise Asset Management Commercial Off-the-Shelf (COTS) solution. The software is an

intranet web-based application that is entirely contained within the VA Wide Area Network (WAN). The Maximo product delivers Out of the box (OOB) capabilities, and only cosmetic changes to screen layout have been tailored to VA preference. The underlying Oracle database easily accommodates new data fields, and has been expanded to include relevant VA data fields unique to our mission (e.g., EIL, CMR, VA MDNS, etc.). Maximo will replace the textually based “menu tree” navigation in VistA.

## **2.56. Medicine**

Version: 2.3

Namespace: MC

**Brief Description:** The Medicine module serves clinical services and maximizes the use of the data within VistA VAMC database. The module allows entry, edit, and viewing of data for many medical tests and procedures.

**Business Function Framework Line(s) of Business:** Deliver Healthcare

**Business Function Framework Function(s):** Provide Nursing, Provide Medical Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Clinical Services

**VASI ID:** 1818

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123289/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=77>

**Full Description and Features:** The Summary of Patient Procedures allows the clinician to view a two-line summary of all medical procedures for each patient. These summaries are most often presented in descending order from most recent to oldest. Details of the procedures can be viewed by selecting the summary of interest. Medicine components include: Cardiology, Pulmonary, Gastrointestinal, Hematology, Pacemaker, Rheumatology, and Generalized Procedure.

- Provides a Summary of Patient Procedures for all procedures performed on a particular patient with simple drill downs for further information. Reports for all procedures are menu options
- Provides both scroll mode and screen entry features for all components and provides word processing-based consult software for all procedures

- Features an extensive screen entry system for Cardiac Catheterization Lab, Holter, Electrophysiology, Exercise Tolerance Test, Echo, and Electrocardiogram. Standards-based electronic transfer of ECG and Holter data to VistA is available
- Allows the entry and edit of Esophageal Gastroduodenoscopy (EGD), Endoscopic Retrograde Cholangiogram and Pancreatogram (ERCP), Colonoscopy, and Laparoscopy findings or data
- Allows the entry, edit, and printing of endoscopic data and Pulmonary Function test data
- Contains a diagnosis filter that allows the separation of primary and secondary diagnoses, a consult component, and an automatically-generated recall list within both the Gastrointestinal and Pulmonary components
- Allows data entry and edit for Generator and Lead implants, and follow-up surveillance within the Pacemaker component. The software also permits the direct electronic transfer of a report to the National Pacemaker Centers using VA network mail
- Permits data entry and edit of Bone Marrow Aspirates (BMA) and Bone Marrow Biopsies (BMB)
- Allows the tracking of Rheumatology visits and is based on standards developed by the American Rheumatology Associations Medical Information System (ARAMIS)
- ICD-10 code compliant

## **2.57. Mental Health**

Version: 5.01

Namespace: YS

Brief Description: The Mental Health module provides computer support for both clinical and administrative patient care activities associated with mental health care.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Provide Clinical Decision Support, Provide Medical Services, Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Mental Health

VASI ID: 2172

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/2430185/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=78>

Full Description and Features: Psychiatrists and psychologists have directed this VistA module's design with active input from all health care disciplines, guided by the principle of creating software that makes the clinician's job easier and leads to better patient care. A by-product of this approach has been the creation of a clinical database, which is useful to mental health program managers in many ways, including evaluating clinical productivity, monitoring and improving the quality of care, and trending various patient care events. This clinical database package is comprehensive and accessible from workstations throughout medical facilities.

Provides a mini clinical record that includes:

- A patient profile with demographic information and a brief index of the clinical database, including physical examinations, psychological tests, and clinical interviews, problem list, and diagnoses
- Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and International Classification of Diseases (ICD-9 & ICD-10) diagnoses. Psychological test and interview results, reviews of systems, past medical histories, crisis notes, clinical patient messages, and progress notes
- A Global Assessment of Functioning (GAF) Case Finder Report, which lists all patients that have not been given a GAF score within the last 90 days
- The ability for patients to undergo psychological tests and clinical interviews at a workstation, saving considerable clinician time. Psychological tests are automatically scored for retrieval, with access governed by the guidelines of the American Psychological Association
- VistA Mental Health (MH) Addiction Severity Index Multimedia Version (ASI-MV):
- Provides functionality required to run associated commercial-off-the-shelf (COTS) software
- Allows clinicians and patients to enter demographics and self-administered interviews via a workstation using video and audio technology
- Provides the patients with privacy and appropriate time to complete an interview

VistA Mental Health Assistant (MHA) Graphical User Interface (GUI):

- Provides a crash recovery file
- Displays patient demographics data, which can be printed, copied to the Windows clipboard, or saved to a text file
- Context-sensitive help is available for most items, with suggestions for test administration and interpretations
- Provides a user-friendly interface for entering interview data
- Enhances the ability of both staff and patients to enter psychological test data
- Creates reports and graphical displays of complex tests by sub-category or scales
- Creates psychological test order windows that display tests that can be ordered based on the provider privileges
- Provides a text report of selected tests and graphs of numeric scores
- Helps clarify diagnoses and provides empirical measures for treatment outcomes

## **2.58. Methicillin Resistant Staphylococcus Aureus Program Tools (MRSA-PT)**

Version: 1.0

Namespace: MMRS

**Brief Description:** The MRSA Program Tools (MRSA-PT) application provides a method to extract data related to MRSA Nares screening, clinical cultures, and patient movements within the selected facility.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Perform Hospital Administration, Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA Office of Primary Care Operations

**VASI ID:** NA

**VASI ID Link:**

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=189>

**Full Description and Features:** MRSA-PT contains reports that will extract and consolidate required data for entry into the Inpatient Evaluation Center (IPEC). Reports can also be generated to display real-time patient specific information, and can be used to identify patients that have a selected multi-drug resistant organism (MDRO) and to identify patients who did or did not receive a MRSA Nares screen upon admission to the unit. Supporting the VHA MRSA Prevention Initiative directives, this module, once configured at the local VAMC level provides the following reports which can be used to monitor MRSA:MRSA IPEC Report: This option allows the user to print the MRSA IPEC Report. The report can be run for all the locations in a Division or a specific location.

The report can be run for either Admission (prevalence measures) or Discharge/Transmission (transmission measures). Isolation Report (Census List and MDRO History): This option allows the user to print the Isolation Report for each unit. The Isolation Report includes MDROs selected in the initial setup and the historical time frame to search for the last positive result. If sites utilize Isolation Orders, these will also print on the report. Nares Screen Compliance List: This option allows the user to print a report to capture real-time patient information on a unit at a specified time to determine if a Nares screen was obtained upon admission to the unit. This report allows the unit to determine patients that received (or did not receive) a Nares screen upon admission.

## **2.59. Mobile Electronic Documentation**

Version: 2.3

Namespace:

Brief Description: Allows staff to access a patient's previously downloaded electronic medical record information when not connected to the VA network.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Office of Geriatrics and Extended Care (GEC)

VASI ID: NA

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=190>

Full Description and Features: Mobile Electronic Documentation (MED) 2.3 is a Veterans Health Information Systems and Technology Architecture (VistA) software application. It enables Department of Veterans Affairs (VA) staff to access a patient's previously downloaded electronic medical record information when not connected to the VA network. MED is designed to work in tandem with the Computerized Patient Record System (CPRS) as temporary storage of patient notes. This includes the ability to enter notes using CPRS exported Templates (.xml). MED promotes user satisfaction and efficiency in the login and documentation process by allowing access to CPRS at the point of care (POC) and avoiding the duplicate process of charting handwritten notes at the end of the day.

## **2.60. My HealtheVet**

Version: 1.0

Namespace: MHV

Brief Description: My HealtheVet (MHV) ([www.myhealth.va.gov](http://www.myhealth.va.gov)) is VA's award-winning Personal Health Record (PHR) online portal. The mission of MHV is to transform the delivery of health and health care for all Veterans, independent of where they receive care, by providing one-stop, online access to better manage their overall health, make informed health decisions, and record and store important health and military history information.



Business Function Framework Line(s) of Business: Provide Access to Health Care, Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Provide Member Access, Provide Communication and Outreach, Provide Access to Self-Services, Provide Patient Self-Management Services, Provide Care Management, Provide Medical Services, Provide Ancillary Services, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: Theresa Hancock

VASI ID: 1820

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123291/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=153>

Full Description and Features: MHV provides access to VA health care and information 24/7 through web-based tools that empower Veterans to become active partners in their health care. MHV allows VA patients to request and receive VA prescription refills and provides a blended history of VA and self-entered medications. Registrants with an upgraded Premium account (whose personal identities have been authenticated) can access copies of key portions of their VA Electronic Health Records, including VA Appointments, Chemistry/Hematology Lab Results, Allergies and Wellness Reminders. MHV registrants use the VA "Blue Button" on the website to view, print or download their available personal health information.

For VA patients with a Premium My HealtheVet account, this can include both self-entered information as well as information from the VA Electronic Health Record (such as VA Notes, lab test results, Problem List, Allergies, Immunizations, Admissions and Discharge Summaries, Pathology Reports, etc.), and Military Service Information from the Department of Defense. Veterans can choose to share their information with other providers, caregivers, family members or job advocates. VA patients with a Premium account can also communicate electronically with their VA health care team using Secure Messaging. All site visitors can access health education resources, health screening tools, special mental health resources, and feature articles. My HealtheVet combines essential health record information enhanced by online health resources.

The online environment maps closely to existing clinical business practices and extends management and delivery of care. These features enable and encourage consumer empowerment, patient engagement, and patient/clinician collaboration. The My HealtheVet system consists of a national system housed at the Austin Information Technology Center (AIRC), and the My HealtheVet Veteran Information System Technology Architecture (VISTA) package. The My HealtheVet system extracts data from various VISTA applications including Laboratory, Outpatient Pharmacy, Scheduling, Adverse Reaction Tracking, and Clinical Reminders.

## **2.61. National Provider Identifier (NPI)**

Version:

Namespace: XU

**Brief Description:** The National Provider Identifier (NPI) project began in 2006 to develop software to support NPI enumeration and taxonomy codes within the Veterans Health Administration (VHA). The work supported Public Law 104-191, the Health Insurance Portability and Accountability Act (HIPAA) of 1996.

**Business Function Framework Line(s) of Business:**

**Business Function Framework Function(s):**

**VHA Portfolio:** Common Services

**Business Owner:** VHA CBO

**VASI ID:**

**VASI ID Link:**

**VDL Link:**

**Full Description and Features:** Maintained by Centers for Medicare and Medicaid Services (CMS), NPI serves as the standard unique health identifier for health care providers. A ten-position, numeric identifier used to universally identify trained, licensed individual and organizational providers of health care services and supplies, NPIs must be obtained by health care providers who are covered entities. Taxonomy codes are national specialty codes used by providers to indicate their specialty at the claim level.

The HIPAA NPI Final Rule requires that covered entities (i.e. health plans, health care clearinghouses, and those health care providers who transmit any health information in electronic form in connection with a transaction for which the Secretary of the Department of Health and Human Services [HHS] has adopted a standard) use NPIs in standard transactions by the compliance date of May 23, 2007 for large payers, and May 23, 2008 for small payers.

**Fee Basis**

- The addition of a Referring provider prompt to the user entry and edit of fee authorizations
- Allow display and printing of the Referring provider name on VA 10-7078 and 10-7079 Authorization Forms and the Referring provider NPI on the same forms, given the provider's permission to disclose it to non-VA entities for business reasons.

#### Integrated Billing

- Authorization checks, as of May 23, 2008, will not flag an error on a claim, preventing it from being submitted, due to a missing taxonomy code associated with Attending, Rendering, and Referring providers on the claim
- Allow a given provider's NPI to be active in both the NEW PERSON file (#200) and the IB NON/OTHER VA BILLING PROVIDER file (#355.93) at the same time (from Integrated Billing's Provider ID Maintenance option)

#### Accounts Receivable

- Modifications to the 835 message from Austin to Vista. This includes the addition of rendering/servicing provider's name and NPI, and the billing provider's NPI to the Account Receivables' Electronic Explanation of Benefits (EEOB) Work list

#### Kernel

- Allow a given provider's NPI to be active in both the NEW PERSON file (#200) and the IB NON/OTHER VA BILLING PROVIDER file (#355.93) at the same time (from Kernel's Add/Edit NPI Values for Providers option)
- Implement a flag to capture a provider's permission to share his or her NPI with non- VA entities for business purposes other than those covered in currently established Routine Use provisions
- Improvements to the reports generated by the List of NPI data for CBO option and the Print Local NPI Reports option
- As of December 15, 2010 The Chief Business Office schedules an NPI Crosswalk Extract report periodically (typically once a month) from all Veteran's Administration provider sites. The scheduling of this report is done via the VA NPI Crosswalk Extract -Administration web site using HL7 messages. The NPI Crosswalk Extract process is automated and runs in the background at each site

## **2.62. National Utilization Management Integration (NUMI)**

Version: 1.1.14.3

Namespace: WEBN

**Brief Description:** The National Utilization Management Integration (NUMI) application is a web-based Quality Assurance (QA) application that allows QA nurses to assess and document the effectiveness of inpatient care for each inpatient on a daily basis. NUMI integrates a commercial-off-the-shelf (COTS) software application [Care Enhancement Management Enterprise (CERMe)] with additional NUMI features specific to VAMC's, and admission/transfer/discharge data retrieved from Vista.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Monitor Clinical Performance, Provide Financial Management, Provide Enterprise Reporting

VHA Portfolio:

Business Owner: Office of Quality, Safety, and Value

VASI ID: 1453

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122967/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=184>

Full Description and Features: NUMI provides electronic access to evidence-based criteria that assists hospital staff in the management of inpatient admissions. The NUMI application retrieves data directly from VistA, eliminating redundancy and errors from re-entering patient records and information. NUMI was established to meet a specific business need of the Office of Quality, Safety and Value (OQSV) to provide automated support to field Utilization Management nurses who perform reviews of clinical care activities. These utilization reviews are considered core procedures to support both quality improvement and business/compliance functions central to VA's mission. Utilization Management and Utilization Review staff review multiple significant events in a patient's care (admission, transfer, discharge, major procedures), assessing such patient management decisions against established clinical guidelines.

The NUMI application provides the capability for local, regional and national documenting of the following utilization review activities:

- Place patient in the most appropriate level of care
- Identify and remove system barriers to providing the right care at the right time, and at the right cost
- Automate the retrieval of patient information for the UM review process
- Modify the initial acceptance criteria
- Create a log with information about events in a patient record
- Display a list of patient records with filters and search features for each review
- Provide reasons for meeting or not meeting (UM) criteria
- Enter information ("reminders") about actions to be performed in the future
- Provide the acceptable reports to comply with VSSC reporting requirements
- Maintain the data such as Facility, Provider Outcomes, and Reason codes

NUMI is deployed at the Austin Information Technology Center (AITC).

## **2.63. Network Health Exchange (NHE)**

Version: 5.1

Namespace: AFJX

Brief Description: Network Health Exchange (NHE) is a Veterans Health Information Systems and Technology Architecture (VistA) module that provides clinicians quick and easy access to patients' information from any VA medical facility where a patient has received care.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Clinical Decision Support, Manage Health Records

VHA Portfolio: Common Services

Business Owner:

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=79>

Full Description and Features: The NHE package accesses information concerning clinic visits, diagnoses, prescriptions, laboratory tests, radiology exams, and hospital admissions. It enables clinicians to request medical or pharmacy records for a patient from a single site or several sites. NHE obtains Health Summary information through an interface with the Health Summary VistA module. NHE uses predefined formats, thus requiring less input by the user and resulting in simpler, faster access to patient data. Patient data is displayed in a format similar to that of Health Summary and can be viewed on-screen or printed.

- Simple User Interface: Users simply select the data type (Clinical or only Pharmacy data) and the amount of patient data they would like returned (all data or 12 months only), and then enter the patient's name or Social Security Number to initiate the request for data from another VA facility
- Retrieval and Printing of Patient Data: Retrieved patient data (Clinical Record or Pharmacy information, either a comprehensive history or activity only within the last 12 months) can be printed or viewed on-screen
- Quick Response: NHE is fully automated and user requests are generally fulfilled in a matter of minutes
- Data Returned in Health Summary Format: Patient data is returned in an NHE mail message, formatted similarly to the Health Summary, beginning with patient demographics, followed by categorized medical information, and indicating the name of the VA facility where the data resides

- **User Notification with Alerts:** The user requesting patient data via NHE is notified of data receipt through an alert that appears within the menu system
- **Purging Retrieved Patient Data:** To allow sites to control disk space usage, NHE provides an option to purge the retrieved patient data messages nightly
- **Special Security Features:** This system is intended for use by health professionals who have direct patient care responsibilities and have need for clinical information. NHE generates a bulletin if data is requested from a sensitive patient record. The bulletin is directed to the same user group that currently reviews notices about access to sensitive patient records
- **Package Management:** The availability of NHE options is based on the level of menu access granted to each user

## **2.64. Nursing**

Version: 4.0

Namespace: NUR

**Brief Description:** The Nursing application is a component of the Department of Veterans Affairs VistA program. It is comprised of multiple modules (i.e., Administration, Clinical, Education, Performance Improvement, and Research).

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver HealthCare, Manage Business Enabling Services

**Business Function Framework Function(s):** Perform Hospital Administration, Maintain Care Practitioners and Providers Information, Monitor Clinical Performance, Provide Patient and Family Care Education, Provide Clinical Decision Support, Provide Care Management, Manage Human Resources

**VHA Portfolio:** Health Provider Systems

**Business Owner:** ONS (Office of Nursing Service)

**VASI ID:** 1465

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122978/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=80>

**Full Description and Features:** Nursing is comprised of multiple modules (Administration, Clinical, Education, Performance Improvement, and Research).

**Administration:**

1. Personnel management information (demographic and professional data of nursing staff)
  2. Resource management/analysis tracking for reports on budgeting DRGs, overtime usage, patient care hours, supply equipment projections, and staffing hours
  3. Mandatory reports (i.e., AMIS 1106, AMIS 1106a, Annual Report)
- Tracks staff information including: personal/demographic data, previous professional experience, work assignments, grade, licensure, certification, professional education, end of probationary period, and military reserve status
  - Uses a Position Control file to monitor past, current, and future nursing positions, future vacancies, reason for vacancy, start/stop dates for the position, and the level of employee filling the position. When a registered nurse's assignment is changed, the professional experience in the staff record is automatically updated
  - Generates management reports on employees including: academic and professional degrees, grade statistics, age trends, gender trends, license renewals, certification statistics, active reservist lists, LPN and RN NPSB tracking, and proficiency tracking
  - Provides resource management reports on ward/service FTEE statistics as well as ward and bed section workload/variance reports. The option which prints current workload reports can generate data on both the current and next tours of duty
  - Accumulates daily statistics on the number of patients treated in the following bed sections: hemodialysis, drug/alcohol patients, recovery room and domiciliary
  - Generate daily, monthly, quarterly, and yearly AMIS Reports: 1106b (FTEE Budgeted/Actual), 1106 (Patient Classification), and 1106a (Manhours)
  - Provides a workload statistics based on AMIS data
  - Provides a telephone list of employees by service or location
  - Provides miscellaneous patient acuity report

#### Clinical:

1. Patient classification
  2. Patient assessment
  3. Nursing care plans which are system focused and contain both nursing problems and medical diagnoses
  4. Patient care assignments
  5. Clinical protocols/guidelines for care
  6. Patient education material
  7. Discharge planning
  8. Other patient related medical record data
- Contains a patient classification system which generates reports by bed section and ward
  - Includes nationally developed standard nursing care plans for initiating patient care plan generation
  - Allows nurses to generate a patient care plan based on patient problems, identified goals, and specified nursing interventions. The software accommodates evaluation and resolution dates for problems, identifies target and met dates for goals, and discontinuation dates for interventions/orders

- Produces two types of assignment worksheets for each patient (brief and complete). The brief worksheet does not display selected care plan information
- Contains an option for printing a ward census by room and provides information on current patient location
- Generates reports for unclassified patients and provides a function for classifying unclassified patients only
- Allows a staff nurse to update a patient's nursing ward location and/or nursing AMIS bed section to insure accurate patient classification entries
- Allows users to generate a Health Summary Report by patient or ward

#### Education:

1. Education reports (i.e., mandatory inservice attendance, continuing education attendance, authorized absence/funding analysis)
  2. Student affiliation information (i.e., scheduling of student clinical labs, affiliation agreements)
- Tracks employee continuing education data
  - Prints AA/Funding Requests Reports which indicate money authorized for C.E. attendance by specified year
  - Tracks mandatory inservice information for multiple years. Information on program attendance can be provided by last attendance date or for three full fiscal years. Deficiency reports are available for the current or past three fiscal year

#### Performance Improvement:

1. QA problem tracking system
  2. Infection control trends
  3. Patient incident analysis
  4. Employee accident analysis
  5. Continuous care monitors (clinical data)
  6. Administrative monitors (e.g., safety equipment)
- Contains options for reviewing patient classification and tracking errors
  - Allows QA staff and ADP coordinators to revise erroneous AMIS data
  - Tracks units with no manhours data

#### Research:

1. Resource listing of VA nurse researchers
2. Additional functionalities as defined by the Nursing Focus Group

#### Package Management:



- Allows sites to modify data (e.g., service positions, salary, grade/step codes, mandatory inservices, certifications, nursing locations, tour of duty) in specified nursing files
- Accommodates additional site-specific standard care plans
- Provides special ADP Coordinator functions for executing nursing options which affect patient acuity, manhours, FTEE status, etc., when TaskMan is off-line
- Provides ADP Coordinator options for admitting/transferring/discharging patient within the Nursing system when the MAS System is off-line. This feature ensure that patient information will be updated and available to nursing providers. When the package is off-line due to the installation of a new version, the software will automatically update the patient in the Nursing system by admitting and discharging patients before the system is made available to the user

## **2.65. Nutrition and Food Service (N&FS)**

Version: 5.5

Namespace: FH

**Brief Description:** The Nutrition and Food Service (N&FS) software integrates the automation of many Clinical Nutrition, Food Management, and Management Reports functions. The Clinical N&FS activities of Nutrition Screening, Nutrition Assessment, Diet Order Entry, Tube Feeding and Supplemental Feeding Orders, Patient Food Preferences, Specific Diet Pattern Calculations, Nutrient Analysis of meals, Consult Reporting, Encounter Tracking, and Quality Care Monitoring are all available in this program.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care

**Business Function Framework Function(s):** Manage Health Care Costs and Administrative Efficiency, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Nutrition and Food Service

**VASI ID:** 1466

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122979/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=67>

**Full Description and Features:** The Food Management function has complete automation of food production activities; Service and Distribution, Inventory and Cost Management, Recipe Expansion, Menu and Recipe Nutrient Analysis, Meal and Diet Pattern Development and Implementation, Diet Card

and Tray Ticket Printing and Quality Service Tracking are available. The Management Reports include the Served Meals, Additional Meals, Cost per Meal, Tube Feeding Cost, Supplemental Feeding Cost, Staffing Data, Encounter Data, and Annual Management Reports.

- Allows the building of a site-specific listing of patient food preferences that can be incorporated in meal production calculations and the printed diet card and tray tickets programs
- Manages patients' requests or dietary requirements for specific food items or utensils, allowing the selection of standing orders for any patient, for any meal or quantity.
- Controls all aspects of ingredient usage
- Develops a list of site-specific recipes that includes portion size, preparation area and time, equipment and serving utensils, recipe category, ingredients, and directions for preparation. Recipes can be quickly analyzed for their nutrient value
- Creates multiple meals and menu cycles. Meals can be used in different patterns by creating menu cycles or by creating special holiday dates within a cycle. It allows for the nutrient analysis of meals or daily/weekly menus
- Controls quantities produced in the Food Management program. Specific patient diet orders are reorganized into production diets and diet patterns that reflect the foods to be served. This information is used along with data from the meal file to generate production reports, diet cards and/or tray tickets. A forecasting tool also exists in the section that allows the manager to anticipate, by percentage of total census, the type and quantity of various production diets that will be needed by any selected service point
- Allows the entry of information required by the Annual Report that is not automatically retrieved from the program
- Prints a patient-specific record of all diet order entry information.
- Controls the order entry activity
- Manages food items and their nutrients using the latest USDA data, food items from sources such as Bowes and Church, and additional data from research
- Handles N&FS consults and allows the reassignment of active consults from one staff member to another
- Manages the supplemental feeding food items and menus. A supplemental feeding menu automatically goes into effect at the time of diet order entry and changes automatically with new orders

## **2.66. Occupational Health Recordkeeping System (OHRS)**

Version: 1.4

Namespace: OHRS

Brief Description: VA built the web-based Occupational Health Recordkeeping System (OHRS) to electronically document, track and report health information on VA employees, volunteers and others who work in VA facilities, and to document care provided to other Federal agency employees.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1467

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123152/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=186>

Full Description and Features: OHRS enables occupational health staff to create, maintain, and monitor medical records for VA employees and generate national, VISN, and site-specific reports.

VA clinical staff involved in administering seasonal and H1N1 flu vaccine to VA staff and other Federal agency employees must use OHRS to:

- Document vaccination administration
- Track persons who need vaccinations
- Report on vaccination and immunity status

VA staff can access OHRS through the VA Clinical Information Support System (CISS) portal. OHRS is locally hosted within the Clinical Information Support System (CISS) application. Hence, it is hosted nationally at Austin Automation Center. Ongoing OHRS work covers requirements, deployment, architecting, data portioning, and technology.

## **2.67. Occurrence Screen**

Version: 3.0

Namespace: QAO

Brief Description: The Occurrence Screen module supports VHA policy by identifying patients' clinical events requiring follow-up review. It generates worksheets used by clinical, peer, management, and committee-level reviewers and identifies practitioner, systems, and equipment-related problems and results.

Business Function Framework Line(s) of Business: Provide Health Care Administration

Business Function Framework Function(s): Perform Hospital Administration

VHA Portfolio: Business Informatics

Business Owner: Office of Patient Care Services

VASI ID: 1826

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123296/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=49>

Full Description and Features: The Occurrence Screen (OS) application is a component of the Quality/Risk Management subsystem within the Veterans Health Information Systems and Technology Architecture (VistA) system. It is designed to be used as a tool to automate the gathering of Occurrence Screen data. This is accomplished by a nightly run of the automatic enrollment program, which captures patients meeting criteria for screens 101.1, 102, and 107. The identified data is called "fallout".

OS automates the creation of clinical, peer, management, and committee worksheets. The findings and/or actions of the previous review levels can be printed. It facilitates tracking of occurrences through various reports, including a Semi-Annual Summary of Occurrence Screening. An ad hoc report feature is included for use in trend analysis.

The Occurrence Screen software gathers and manipulates data for the following nationally released screens:

A. Readmission within 10 days (Screen 101.1)

Justified exceptions excluded by the software:

- Scheduled readmission
- Prior discharge AMA (against medical advice) or Irregular
- Readmission to CLC, Intermediate Medicine, or Domiciliary

Justified exceptions that cannot be excluded by the software:

- Readmission for alcohol or drug abuse, chemotherapy, or radiation therapy
- Condition precipitating readmission didn't exist at time of prior admission

B. Admission within 3 days following unscheduled Ambulatory Care visit (Screen 102)

Justified exceptions excluded by the software:

- Scheduled admission
- Admission same day as visit
- Admission to Psychiatry Service, CLC, Intermediate Medicine, or Domiciliary

C. Return to OR in same admission (Screen 107)

Justified exceptions excluded by the software:

- Two operations separated by more than 7 days
- Second procedure unrelated to first
- Planned multiple stage procedure documented prior to first surgery (when the case is scheduled prior to the first surgery)

Justified exceptions that cannot be excluded by the software:

- Planned multiple stage procedure documented prior to first surgery (when the case is not scheduled prior to the first surgery)
- Second operation in response to findings from first procedure
- Provisions exist for the addition of other hospital-specific screens to be created locally, but manual identification and data entry are needed to maintain them. National screens that were discontinued through policy changes are listed in the package as "Inactive" but may be made "Local" to reactivate them.
- A nightly data screening program looks back over the last 24 hours of patient activity and identifies patient events that meet criteria in screens 101.1, 102 and 107. The events found are called "fallout" data and a report is generated.
- Allows configuration of hospital-specific screens. Fallout must be identified and entered manually for locally-created screens.
- Automates the creation of clinical, peer, management, and committee worksheets. The findings and/or actions of the previous review levels can be printed.
- Facilitates the tracking of occurrences by various tracking reports. An ad hoc report feature is included for use in trend analysis.
- Produces the Semi-Annual Summary of Occurrence Screening.

## **2.68. Oncology**

Version: 2.2

Namespace: ONC

**Brief Description:** The Oncology module automates the tumor registry and supports tumor registrars in abstracting cancer cases, following up on cancer patients and producing the Hospital Annual Report. Functions are grouped according to order of use: Case Finding and Suspense; Abstracting, Printing and Quality Management; Follow-up; Registry Lists; Annual Reports; Statistical Reports; and Utilities.

**Business Function Framework Line(s) of Business:** Manage Public Health, Manage Business Enabling Services

Business Function Framework Function(s): Conduct Epidemiological Assessments, Provide Medical Registry Service, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Office of Patient Care Services

VASI ID: 1716

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123220/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=81>

Full Description and Features: The Oncology application functions in accordance with the current editions of American College of Surgeons (ACOS) guidance. It contains required data standards and data sets necessary to bring the tumor registry module into compliance with the Facility Oncology Registry Data Standards (FORDS) 2011 specifications approved by the Commission on Cancer (COC); Surveillance, Epidemiology, and End Results Reporting (SEER) Extent of Disease for site-specific surgery; International Classification of Disease: Oncology 3rd Edition; and American Joint Commission on Cancer (AJCC) Manual for the Staging of Cancer, 1st through 7th Editions.

- The software supports multi-divisional sites
- The program automatically finds cases by searching the database from Anatomical Pathology (Surgery, Cytology, Electron Microscopy, and Autopsy), Radiology, and Patient Treatment File (PTF)). Cases can be entered into the Suspense File by date of diagnosis, and chart request pull lists can be printed
- Demographics are drawn directly from Patient Information Management System (PIMS) patient file and stored permanently. Cancer identification data is obtained from the local database (e.g., laboratory and radiology test results)
- The program accessions and abstracts with extensive on-line help and stages the extent of disease automatically
- It produces a wide range of follow-up lists and registry lists needed for accreditation and allows entry of contacts directly into Oncology Contact File
- Professional letters covering diverse situations and customization of letters are available
- Predefined annual reports can be generated and the user can create specialized reports using VA FileMan
- Reports to the ACOS can be generated using special routines that extract data onto floppy disk
- The same functionality is available for state reporting
- The database can be customized to suit the individual hospital
- The full set of TNM codes is included from the appropriate edition of the AJCC Manual on Staging of Cancer
- The program allows on-line completion of Patient Care Evaluations (PCEs) during the abstracting function if the case being abstracted fulfills the selection criteria for the PCE

## **2.69. Order Entry/Results Reporting (CPRS)**

Version: 3.0

Namespace: OR

**Brief Description:** The Computerized Patient Record System V. 1.0 (CPRS) is a Veterans Health Information Systems and Technology Architecture (VistA) computer application. CPRS enables you to enter, review, and continuously update all information connected with any patient.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Clinical Decision Support, Provide Medical Services and manage health records.

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA HI/CMIO

**VASI ID:** 1828

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123298/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=61>

**Full Description and Features:** CPRS allows the user to order lab tests, medications, diets, radiology tests and procedures, record a patient's allergies or adverse reactions to medications, request and track consults, enter progress notes, diagnoses, and treatments for each encounter, and enter discharge summaries. CPRS not only allows you to keep comprehensive patient records, it enables you to review and analyze the data gathered on any patient in a way that directly supports clinical decision-making.

**OE/RR core module.** All basic CPRS tasks occur within the M environment. Tasks relegated to the GUI workstation include those necessary to communicate with the server and to present and obtain data.

**Specific components of the core M module for OE/RR include:**

- Order processing and storage
- A mechanism for clinical orderable items
- Flagged orders
- Electronic signature
- Encounter management
- Patient selection

**GUI Interface -** Clinical workstations in the Windows environment access CPRS through a Delphi-based Graphical User Interface (GUI). Based on years of prototyping, usability studies, and actual clinical use, the CPRS GUI is a full implementation of results reporting and order entry. It communicates with CPRS

server processes through the Kernel Broker client-server utility. Data is exchanged via an extensive list of remote procedure calls.

VAMC Parameters and Defaults - Every VAMC has specialized needs regarding CPRS functionality and processing. To allow variation and modification among VAMCs, CPRS provides a hierarchically structured set of parameters. Each parameter can have a user, team, service/section, patient location, division, system, and package value.

## **2.70. Patient Care Encounter (PCE)**

Version: 1.0

Namespace: PX

Brief Description: Patient Care Encounter (PCE) captures clinical data resulting from ambulatory care patient encounters. The data includes captured clinical data documents ("encounters") and related encounter information, problems treated during the encounter, procedures done, immunizations, patient education, service connection, and skin tests.

Business Function Framework Line(s) of Business: Deliver Healthcare, Manage Business Enabling Services

Business Function Framework Function(s): Provide Medical Services, Manage Health Records, Provide Enterprise Reporting

VHA Portfolio: Business Informatics

Business Owner: VHA OIA Health Information Governance

VASI ID: 1829

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123299/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=82>

Full Description and Features: PCE provides a data repository for long-term clinical data. A goal of PCE is to support many data capture methods for integrating clinical data from many environments. Pilot efforts included population of the PCE clinical repository via scanner technologies and workstations. The key users are clinicians, management, and quality management personnel. PCE also captures classification information such as Service Connected (SC) condition, Agent Orange Exposure, Military Sexual Trauma, Shipboard Hazard and Defense (SHAD), etc., as these pertain to the specific patient. PCE is vital in collecting Current Procedural Terminology (CPT) and International Classification of Diseases (ICD-10) information during patient care episodes.



- Acts as VA's long-term clinical repository, documenting encounters from local and non-VA facilities.
- Provides a primary and secondary clinical visit management utility based on appointments and related services.
- Interfaces with the Health Summary package to provide components based on data captured and stored in the PCE clinical repository.
- Supports capture of outpatient encounter data. Data collection methods include:
  - o Interface between scanner/workstation and clinical repository.
  - o On-line data capture using List Manager user interface.
  - o Historical load utilities for lab and outpatient pharmacy.

## **2.71. Patient Centered Management Module (PCMM Web)**

Version: 1.19

Namespace: WEBP

**Brief Description:** The Patient Centered Management Module (PCMM Web) allows users to create, manage, and define teams and assign staff to these teams. This function helps in maintaining accurate listings for primary care teams and panels.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration

**Business Function Framework Function(s):** Perform Hospital Administration

**VHA Portfolio:**

**Business Owner:** VHA

**VASI ID:** 1530

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123113/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=211>

**Full Description and Features:** The mission of the Department of Veterans Affairs (VA), the Office of Information and Technology (OIT), and the Veteran Health Administration (VHA) is to provide benefits and services to Veterans of the United States. In meeting these goals, OIT strives to provide high-quality, effective, and efficient Information Technology (IT) services to those responsible for providing care to the Veterans at the point-of-care as well as throughout all the points of the Veterans' health care in an effective, timely, and compassionate manner.

VHA has developed a Primary Care (PC) system that balances productivity with quality, access, and patient service. Management of patient panels in PC through mandatory and consistent use of the Patient-Centered Management Module (PCMM) has supported this system redesign. In a PC setting and in the Patient-Aligned Care Team (PACT) model, patients are assigned a Primary Care Provider (PCP) who is responsible for delivering essential health care, coordinating all health care services, and serving as the point of access for VA care. The PCP works together with a team of professionals which includes nurses, pharmacists, social workers, health care professions, trainees, clerks, and more.

The PCMM Web software is considered to be an important component in measuring patient demand and PCP capacity to meet that demand, as well as reduce wait times. It allows users to set up and define treatment teams, assign positions to the team, assign staff to positions, assign patients to the team, and assign patients to a PCP. PCMM Web was developed to assist VA facilities in implementing PC. PCMM Web supports both PC and non-PC teams. Teams are groups of staff members organized for a certain purpose.

The PCMM software will be referred to as PCMM Web. It is a National website and contains data for all sites. It will replace the current PCMM software accessible on the user's desktop. An integral part of PCMM Web is the Data Migration that migrates the data from Legacy PCMM to PCMM Web. It is accessed via the VA intranet by users who have been trained and granted access. The main users of PCMM Web are PCMM Coordinators, Mental Health Treatment Coordinators, Transition and Care Management Coordinators, and Travelling Veteran Coordinators. PCMM Web retrieves provider and patient data from VistA via VistALink and interfaces with the Master Veteran Index via HL7 and Java to validate each patient's national identity. PCMM Web synchronizes data back to the VistA PCMM files so it can continue to be accessed by existing software that currently utilizes it.

- Enables a team to be formed based on specific Care Type (i.e., Primary Care, Mental Health) and aligned around a patient, including providers across multiple VA sites and in non-VA settings for efficient care coordination and communication. Team and Patient management is possible through interactive screens with navigation links, expandable sections, and actions icons, providing an overall view of care coverage and maintenance capabilities.
- Identifies team members and specialists (VA and non-VA) involved in the care of the patient, as well as their contact information and provide modalities to facilitate provider-to-provider communication.
- Enables users to set up and define a healthcare team, assign staff and health professionals to positions within the team, assign patients to the team, and assign patients to practitioners, including trainees. Teams can be grouped together for a larger collaborative team.
- Quickly generates a team based on a modeled configuration for a specific team care type with team positions included, eliminating the need to manually create each team and position.
- Supports automated data collection for management metrics and analysis related to access, workload, and panel management for Multiple PACT functionality at the team level.
- Patients assigned to Primary Care teams are assigned as "Pending" until a Primary Care encounter is verified by a Primary or Secondary Provider, who is also a teamlet of the assigned team. The assignment then changes to "Active". If there is an Active assignment and a Pending assignment for a patient at the same site and when a qualifying PC encounter is detected for the Pending assignment, an intra-facility transfer will be executed by the System. The Active assignment will be inactivated and the

Pending assignment will be Activated. The patient can be assigned to the “Team” (i.e., the Primary Care Provider and the teamlet inherits the assignment) or to the “Associate Provider” that has a valid preceptor relationship established.

- Patient assignments to Primary Care teams are interrogated nightly to verify for Automatic Inactivation. An established assignment without activity for 24 months is automatically inactivated due to inactivity. A new assignment without activity for 12 months is automatically inactivated due to inactivity. The PCMM user is notified of the pending inactivation three months prior to the automatic inactivation. Reports are also available.
- Identifies and tracks patient assignments across stations. A Multiple PACT request enables a patient to be assigned to multiple PACT teams as required for care coverage across VA systems. This request requires an approval or a denial from all involved stations. Multiple assignment requests for the same patient for different stations are allowed, but there can only be one active assignment per patient, per station at a time.
- Patients assigned to non-primary care teams (i.e., Mental Health or specialty) must be assigned to specific providers within the team.
- Search capabilities enable a user to quickly search for a patient, team, room, group, or staff member for assignment/unassignment management through interactive screens and menu options. To expand a search outside of PCMM Web, a user can search for a patient through VistA.
- Quickly assign or reassign one or more patient to and from a team or a position using a batch process, instead of manually performing the tasks one-by-one.
- Enables clinical reviews and approvals to reinforce status activity and assignment management.
- One or more users at each physical site (i.e., hospital, clinic) in the VA hold roles within the PCMM Web application (such as PCMM Coordinator, Traveling Veteran Coordinator, VISN Coordinator, and National Administrator). Each role has associated access privileges which enables the user to perform functions within PCMM Web.
- Eligible preceptor relationships are managed through team position profiles.
- Manage how reference data displays in PCMM Web by enabling the definition of your own reference values.
- Summarizes alert notifications per station for a user to quickly identify alert types and act accordingly.
- Defines the appropriate team members to receive notifications (i.e., MailMan messages) concerning patient assignments. Notifications are sent to all team patients, positions, or preceptors or set as “Do Not Send”, indicating no notifications are sent.
- PCMM Web utilizes Microsoft SQL Report Server for its reporting capabilities. Canned and AdHoc reports are available.

## **2.72. Patient Data Exchange (PDX)**

Version: 1.5

Namespace: VAQ

Brief Description: Patient Data Exchange (PDX) is a VistA module designed to electronically request and receive patient demographics, episodes of care, medications, and diagnostic evaluations from other VA facilities. Data is retrieved from files at the remote site and is assembled into a coherent, composite record, greatly enhancing the quality of care provided for the patient.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: 1463

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122976/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=22>

Full Description and Features: PDX allows configuration of a work group of selected facilities that agree to an automatic data exchange. For facilities in the work group, data is returned automatically, within minutes after a request is entered. There are exceptions, however, such as records that have been flagged as sensitive. Any record that does not meet the criteria for automatic processing is reviewed and processed manually.

Once the request is processed, the patient's record is forwarded to the requesting facility. The requests and data are moved from one facility to another using Mailman, VA's electronic mail utility. The requesting facility receives administrative, pharmaceutical, and clinical information that is stored in its files and is available for display or printing.

- Electronic data requests for selected patient from other facility(ies)
- Automatic processing, and allows for manual processing for certain records, e.g., those flagged as sensitive
- Capability to send data to a remote site without first receiving a request
- Display/print capability for data received from other facility(ies)
- Encryption of site-specific patient information
- Send/request capability for a patient from multiple sites for multiple segments
- Status check on results
- Display of demographic data received from a remote site, and capability to load/edit select demographic data into the local site file

## **2.73. Patient Record Flags (PRF)**

Version: 1.0

Namespace: DGPF

Brief Description: The Patient Record Flags (PRF) software provides users with the ability to create, assign, inactivate, and edit flags, produce reports, and view patient record flag alerts.

Business Function Framework Line(s) of Business: Managing Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Health Provider Systems/Business Informatics

Business Owner: VHA Chief Business Office (CBO)

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=156>

Full Description and Features: This VistA module provides the ability to create, assign, inactivate, edit, produce reports on, and view patient record flag alerts. Patient record flags are used to alert VHA medical staff and employees of patients whose behavior, medical status, or characteristics may pose a threat either to their safety, the safety of other patients or employees, or which may otherwise compromise the delivery of quality safe health care.

The use of patient record flags must be strictly controlled and implemented following VA Directives. Patient record flags are divided into Category I (national) and Category II (local) flags. Category I flags are nationally approved and distributed by VHA nationally released software for implementation by all facilities. Category I flags are shared across all known treating facilities for the patient utilizing VistA HL7 messaging, and can only be changed or deactivated by the owning facility. Category II flags are locally established by individual VISNs or facilities and are not shared between facilities.

- Flags missing or wandering patients
- Flags patients with behavioral risks
- Flags patients who are a threat to themselves or others, or for whom delivery of safe health care is compromised
- Flags patients who are at risk for harm
- The "owning" facility transmits the flag to other facilities where the patient has been treated
- Flag reviewers belong to a mail group and review incoming Category I flag messages, and can continue, inactivate, or delete existing flags
- Interfaces with Text Integration Utility (TIU) progress notes through TIU document definitions specifically related to Patient Record Flags

## **2.74. Patient Representative**

Version: 2.0

Namespace: QAC

**Brief Description:** The purpose of the Patient Representative module is to ensure that VA medical facilities respond to patient needs. The software tracks and trends compliments and complaints and measures the facility's types of complaints as they relate to the Customer Services Standards and the National Patient Satisfaction Survey.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Provide Health Care Administration , Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Communications and Outreach, Manage Customer Relations, Utilize Information Technology Services , Provide Enterprise Reporting

**VHA Portfolio:** Business Informatics

**Business Owner:** National Veteran Service and Advocacy Program (NVSAP)

**VASI ID:** 1464

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122977/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=50>

**Full Description and Features:** This package supports the Patient Advocate with the collection and categorization of complaints and compliments that give the medical center an opportunity to meet and exceed the customer's expectations. The issue codes provide the opportunity to track types of complaints and provide trends of specific complaints. Included within the issue codes are the Customer Service Standards. A recent reliability study of the codes has revealed an exceptionally high reliability in the selection of appropriate codes. To help with improving perceptions, the tracking program can also extract data specific for women veterans by eras of service (i.e., Gulf War, Vietnam) as well as clinic, product line, or services.

- Entering and editing contact information
- Sending Reports of Contact via the Alert system
- Tracking contacts that have responses due
- Printing various lists, statistical reports, and ad hoc reports

## **2.75. Pharmacy**

### **2.75.1. Automatic Replenishment/Ward Stock (AR/WS)**

Version: 2.3

Namespace: PSGW

**Brief Description:** The Automatic Replenishment/Ward Stock (AR/WS) package provides a method to track drug distribution and inventory management within a medical center.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care

**Business Function Framework Function(s):** Conduct Disaster Preparedness Programs, Provide Ancillary Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1515

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123252/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=83>

**Full Description and Features:** The Automatic Replenishment/Ward Stock (AR/WS) package provides a method to track drug distribution and inventory management within a medical center. The AR/WS module is designed to allow each medical center to adapt the system to its own needs.

**The AR/WS Package:**

- Provides inventory management capabilities for clinical care locations and drug crash carts.
- Allows easy drug item inactivation for inventory locations.
- Provides tools to develop medication storage areas with lists of drugs to be maintained in that area. Drugs are classified by inventory type and assigned storage location and stock level.
- Groups medication storage areas together by inventory group name. Grouping may be by location, date (time or frequency of inventory), or inventory type.
- Provides tools to conduct inventory: prints inventory sheets and/or pick lists to determine stock to be replenished in medication storage areas and, by a selected method, replaces needed inventory items.
- Maintains backorder totals if a physical inventory is conducted and entered into AR/WS software.
- Provides inventory management reporting capabilities for clinical care locations and drug crash carts.
- Provides ability to select by inventory group on all reports.

- Supplies a report to fill on-demand requests for out-of-stock items or items not part of the standard inventory.
- Provides various printouts as well as several management statistical reports for the creation and maintenance of the system.

## 2.75.2. Bar Code Medication Administration (BCMA)

Version: 3.0

Namespace: PSB

**Brief Description:** Bar Code Medication Administration (BCMA) software provides a real-time, point-of-care solution for validating the administration of Unit Dose (UD) and Intravenous (IV) medications to inpatients and outpatients in Veterans Administration Medical Centers (VAMCs).

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver HealthCare, Manage Business Enabling Services.

**Business Function Framework Function(s):** Perform Hospital Administration, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services.

**VHA Portfolio:** Health Provider Systems

**Business Owner:** OIA/BCMA and PBM

**VASI ID:** 1047

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122714/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=84>

**Full Description and Features:** Bar Code Medication Administration (BCMA) software provides a real-time, point-of-care solution for validating the administration of Unit Dose (UD) and Intravenous (IV) medications to inpatients and outpatients in Veterans Administration Medical Centers (VAMCs). Compiles reports by Patient, Ward or Clinic for Nursing, Pharmacy, and Information Resources Management (IRM). Reports available for printing include: Medication Administration History, Medication Log, Missed Medications, Missing Dose Request, PRN Effectiveness Log, Medication Due List, Medication History, Medication Variance Report, Cumulative Vitals/Measurement Report, and Administration Times Report.

The BCMA software provides the following features:

- Medication Tabs on a patient's Virtual Due List (VDL) are designed for separating and viewing the different types of active Unit Dose, IV Push, IV Piggyback, and large-volume IV medication orders.



Each Tab provides an "alert" light, which turns green only when the patient has active medication orders for that Tab

- Patient safety tools include a Missed Medications Report, an alert when due medications are not administered, a notification when a patient is transferred, and an alert light to indicate that a medication order exists for the Schedule Type and Start/Stop Date and Time selected on the VDL. Other tools include a listing of Allergies and Adverse Drug Reactions (ADRs) that are documented for a patient in the Allergy/Adverse Reaction Tracking (ART) package
- A Computerized Patient Record System (CPRS) Med Order Button (or "Hot Button") on the BCMA Tool Bar streamlines the workflow in ICU-type environments. This button link nurses directly to CPRS for electronically ordering, documenting, reviewing, signing verbal, telephone STAT and NOW (One-Time) medication orders already administered to patients
- BCMA increases the amount and type of information available to nurses at point of care, it also improves communications between Nursing and Pharmacy staff, records Missing Doses for patients, sends an electronic Missing Dose Request to the Pharmacy, and supports Health Level Seven (HL7) messaging
- Management and accountability tools identify PRN entries that require effectiveness comment and pain scores, list medications that were not scanned as administered during an administration time window, list early/late administration variances, and allow nurses to set site-specific parameters and defaults on their systems
- Compiles reports by Patient or by Ward for Nursing, Pharmacy, and Information Resources Management (IRM). Reports available for printing include: Medication Administration History, Medication Log, Missed Medications, Missing Dose Request, PRN Effectiveness Log, Medication Due List, Medication History, Medication Variance Report, Cumulative Vitals/Measurement Report, and Administration Times Report
- Either VA or HIS Operational Environment is recognized and appropriate patient identifier displayed
- Section 508 enhancements are in place to ensure enhanced accessibility
- Additions to the BCMA Order Detail report include CPRS Order Checks, Provider override reasons, Pharmacist intervention information, and a "hover-over" feature displays visual indicator when override/intervention reasons exist
- Automated reporting method of bar code scanning failures (both patient wristbands and medication bar code labels) shorten resolution times, and allow for proactive analysis of failure information to prevent future scanning failures
- Creation of a record within Patient Care Encounter (PCE) for medications marked as given in BCMA that have been identified as immunizations

### 2.75.3. Bar Code Medication Administration (BCMA) Backup Utility

Version: 3.0

Namespace: PSB or BCBU

Brief Description: Bar Code Medication Backup Utility (BCBU) allows compliance with Automated Information Systems (AIS) security directives requiring all facilities to be responsible for the

development, maintenance, and annual testing of individual AIS contingencies. BCBU maintains a current copy on the designated workstation of all inpatient pharmacy activities, including the inpatient medication orders, medication administrations, and allergies that are included on a Pharmacy Medication Administration Record (MAR).

Business Function Framework Line(s) of Business: Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: OIA/BCMA and PBM

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=84>

Full Description and Features: Bar Code Medication Backup Utility (BCBU) allows compliance with Automated Information Systems (AIS) security directives requiring all facilities to be responsible for the development, maintenance, and annual testing of individual AIS contingencies. BCBU maintains a current copy on the designated workstation of all inpatient pharmacy activities, including the inpatient medication orders, medication administrations, and allergies that are included on a Pharmacy Medication Administration Record (MAR). Designated workstation(s) will contain current information regarding inpatient medication orders (Unit Dose and IV), medication administration record (MAR), medication administration history (MAH) and patient allergies. Workstations are updated using the HL7 package. These workstations are available for use according to local policies concerning VistA, BCMA, or network contingencies.

- PSB BCBU Errors Mail group notifies responsible users of potential problems with sending information to the Contingency Workstations
- Active inpatient data are kept
- Menu options on workstations allow users to generate reports if VistA is unavailable
- BCMA allows outpatient clinic orders; BCBU was updated to support outpatient clinic orders

#### 2.75.4. Controlled Substances

Version: 3.0

Namespace: PSD

**Brief Description:** The Controlled Substances package provides functionality to monitor and track the receipt, inventory, and dispensing of all controlled substances.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Ancillary Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1190

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122930/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=86>

**Full Description and Features:** The Controlled Substances package provides functionality to monitor and track the receipt, inventory, and dispensing of all medications which are controlled substances. This software provides the pharmacy with the capability to define a controlled substance location and a list of controlled substances to maintain a perpetual inventory. The capability for Pharmacy personnel to receive a controlled substance order, which automatically updates the quantity on hand and receipt history, is also available. Nursing personnel can request orders for controlled substances via on-demand requests, and receive these orders when delivered from Pharmacy. Pharmacy may dispense controlled substances, using the automated VA forms 10-2321 and 10-2638, to complete an order request.

- Monitors/tracks the receipt, inventory, and dispensing of controlled substances
- Allows management inspections to automatically identify discrepancies in stock levels
- Allows nursing to place orders for controlled substances via on-demand requests
- Provides AMIS and cost reporting data
- Maintains perpetual vault inventory balances
- Provides the functionality to return to stock, transfer between locations, cancel orders, and log outpatient prescriptions
- Automates current inventory requirements that allow medical facilities to detect discrepancies or diversions of controlled substances, thereby improving overall drug accountability
- Provides a Controlled Substance Inspector Menu that allows access to several specialized reports used in the inspection process
- Interfaces with the Outpatient Pharmacy package to provide updates to inventory upon Return to Stock activity
- Provides tracking for controlled substances being held for destruction and allows for the documentation of destruction
- Provides an HL7 interface to Narcotic Dispensing Equipment systems

## 2.75.5. Drug Accountability/Inventory Interface

Version: 3.0

Namespace: PSA

Brief Description: The Drug Accountability/Inventory Interface works toward perpetual inventory for each VA medical facility pharmacy by tracking all drugs through pharmacy locations.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Ancillary Services

VHA Portfolio: Health Provider Systems

Business Owner: Pharmacy Benefits Management (PBM)

VASI ID: 1790

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123326/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=87>

Full Description and Features: The Drug Accountability/Inventory Interface works toward perpetual inventory for each VA medical facility pharmacy by tracking all drugs through pharmacy locations. Drugs are added to the appropriate pharmacy locations as they are received from the Prime Vendor. This allows sites to receive invoice information containing data for confirmed orders. With the prime vendor, the data is uploaded into VistA using a Graphical User Interface to perform the upload. The files are uploaded into Drug Accountability, processed, and upon verification, the pharmacy locations or master vaults are updated. Dispensing data is collected from pharmacy packages to decrement balances. Drug Accountability also provides the capability for Pharmacy personnel to display or print procurement history, drug balance adjustments, and order data.

There are two primary methods of receiving invoice data into Drug Accountability:

- Prime Vendor Data
- IFCAP Data

Both methods involve having the user place the invoice orders with the appropriate company. With the prime vendor, the data is uploaded into VistA using a Graphical User Interface to perform the upload. With IFCAP, the data is automatically shipped to VistA upon receipt at the warehouse.

The Prime Vendor Interface includes the following features:

- It automatically updates the Drug Accountability pharmacy locations based on dispensing and receiving information, and it also updates master vaults based on receiving information.
- Drugs are added as the invoice data is received.

- If the invoiced drug's order unit and dispense units per order unit are the same as the information currently contained in the local DRUG file, the NDC field in the DRUG file is overwritten with the most recent National Drug Code (NDC) number.
  - The reorder quantities for the pharmacy locations and master vaults are provided on a daily basis by way of a mail message Generic Inventory Package
- The IFCAP Interface includes the following features:
- When a pharmacy order invoice is received and entered into the IFCAP purchasing system, the receipt data will be collected and compiled to an Health Level Seven (HL7) message and transmitted 'real time' to VistA Drug Accountability.
  - Upon receiving the message, the receipt data will be stored in a temporary global, and Drug Accountability will alert the user about the Pharmacy receipt.
  - After receiving invoice data into the warehouse, the transmission from IFCAP will place data into a temporary global.
  - When Pharmacy personnel sign into the Drug Accountability package, the program will check for the existence of orders to process.
  - If the orders exist, and the user has the proper security key, the data can then be received into Drug Accountability.
  - Each Purchase Order received will be for a specific pharmacy location. If items are to be shipped/received at different pharmacy locations, a different purchase order will be created/shipped for each location

Both Interfaces include the following features:

- Vendor-specific information and procurement history is displayed for a selected drug
- Pharmacy locations are established and populated
- A purge capability with scheduling queuing is provided
- Support is provided for NDC code set and pricing for Electronic Claims Management Engine pharmacy electronic billing

#### 2.75.6. Inpatient Medications

Version: 5.0

Namespace: PSJ

Brief Description: The Inpatient Medications package integrates functions from the Intravenous (IV) and Unit Dose (UD) modules.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Conduct Disaster Preparedness Programs, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: Pharmacy Benefits Management (PBM)

VASI ID: 1965

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123383/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=88>

**Full Description and Features:** The Inpatient Medications package integrates functions from the Intravenous (IV) and Unit Dose (UD) modules. This integration provides a comprehensive record of medications utilized during hospitalization of the veteran, the functionality for clinician order entry through Computerized Patient Record System (CPRS), and tailors processes by facility, user, and/or medication. Inpatient Medications also facilitates BCMA, Barcode Medication Administration, function and record of all medication administration to patients. Inpatient also includes PADE, Pharmacy Automated Dispensing Equipment, perpetual inventory interfaces to the inpatient drug dispensing cabinets.

Integrated software allows these features, via the List Manager interface, for both IV and Unit Dose. This provides the user the capability to:

- Browse through a list of orders and take action(s) against those items
- Print 7-day, 14-day, and 24-hour Medical Administration Records (MARs), labels, and profiles from within the options
- Select a detailed allergy report, document new allergies or adverse drug reactions
- Update the Patient's Record from within List Manager
- Provides Drug/Drug Interaction, Drug/Class Interaction, Duplicate Drug, and Duplicate Class Order checks
- Allows easier drug selection using Orderable Item
- Provides on-line order maintenance (for example: edit, renewal, cancellation) and marks orders that need attention
- Provides on-line order entry with an integrity check for each order type
- Generates labels containing order and patient information upon the entry/maintenance of an order
- Provides on-line or printed patient profiles that include a history of medication orders for the current or last medical center visit
- Displays patient order information and histories of all actions taken on active orders
- Provides an Action Profile of patient medication orders for use by physicians to cancel or continue medications
- Provides a Stop Order Notice report to notify users of orders near expiration
- Cancels/holds medication orders for patients transferred between wards and/or services
- Provides dispensing cost reports by patient, ward, service, drug, and providers
- Provides reports and forms by patient, ward, and selected groups of wards
- Allows electronic entry and inpatient processing of medication orders for an outpatient receiving treatment via a clinic or ancillary service
- Maximum single dosage order check

- Implements Maximum Single Dose Order Check for simple and complex orders in Outpatient Pharmacy and Inpatient Medications applications and CPRS
- Provides error messages with reasons at the order level when a Maximum Single Dose Order Check cannot be performed for Pharmacy users
- Integrates with BCMA, Barcode Medication Administration, function and record of all medication administration to patients
- Includes PADE, Pharmacy Automated Dispensing Equipment, perpetual inventory interfaces to the inpatient drug dispensing cabinets

#### 2.75.6.1. Inpatient Medications - Intravenous (IV)

Version: 5.0

Namespace: PSJ

**Brief Description:** Inpatient Medications' Intravenous (IV) module provides pharmacists and their staffs with IV labels, manufacturing worksheets, ward lists for order updates, and management reports. It permits the Pharmacy staff to track the manufacture of IV formulas with greater control than manual procedures allow.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Conduct Disaster Preparedness Programs, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1965

**VASI ID Link:** <https://www.va.gov/vdl/application.asp?appid=88>

**VDL Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123383/c/56/nt/-1?id=1578>

**Full Description and Features:** Inpatient Medications' Intravenous (IV) module provides pharmacists and their staffs with IV labels, manufacturing worksheets, ward lists for order updates, and management reports. It permits the Pharmacy staff to track the manufacture of IV formulas with greater control than manual procedures allow. Through order entry and ward list updating, the staff can easily establish and maintain an accurate and timely data set of IV orders. A carefully designed set of checks and balances has been incorporated to ensure that the patient is supplied IV solutions quickly and accurately.

- Generates Manufacturing Lists to facilitate maximum efficiency in the preparation and delivery of IV products
- Generates IV labels containing all necessary patient, drug, and schedule information Labels provide a bar-coded identifier which when used in conjunction with Bar Code Med Administration greatly enhances patient safety
- Generates management reports designed to track drug costs and workload by ward, provider, IV room, and patient
- Provides on-line generation of production reports such as renewal lists, active order lists, and formulary drug reports
- Discontinues/holds orders for patients transferred between wards and/or services
- Allows electronic entry and inpatient processing of medication orders for an outpatient receiving treatment via a clinic or ancillary service
- Implements Maximum Single Dose Order Check for simple and complex orders in Outpatient Pharmacy and Inpatient Medications applications and CPRS
- Provides error messages with reasons at the order level when a Maximum Single Dose Order Check cannot be performed for Pharmacy users

#### 2.75.6.2. Inpatient Medications - Unit Dose (UD)

Version: 5.0

Namespace: PSJ

**Brief Description:** The Unit Dose (UD) module of Inpatient Medications provides a standard computerized system for dispensing and managing inpatient medications. Timely, accurate, accessible, and up-to-date patient medication information is available from any terminal within the facility. Computer-generated working forms allow personnel to dedicate more time to patient care.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Conduct Disaster Preparedness Programs, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1965

**VASI ID Link:** <https://www.va.gov/vdl/application.asp?appid=88>

**VDL Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123383/c/56/nt/-1?id=1578>



Full Description and Features: The Unit Dose (UD) module of Inpatient Medications provides a standard computerized system for dispensing and managing inpatient medications. Timely, accurate, accessible, and up-to-date patient medication information is available from any terminal within the facility. Computer-generated working forms allow personnel to dedicate more time to patient care.

- Allows immediate entry of pre-defined sets of unit dose orders
- Provides computerized pick lists, which include pre-calculated doses for pharmacists
- Provides an interface to automated dispensing equipment
- Implements Maximum Single Dose Order Check for simple and complex orders in Outpatient Pharmacy and Inpatient Medications applications and CPRS
- Provides error messages with reasons at the order level when a Maximum Single Dose Order Check cannot be performed for Pharmacy users

## 2.75.7. Pharmacy Reengineering (PRE)

### 2.75.7.1. Enterprise Customization System (PECS)

Version: 5

Namespace: PREC

Brief Description: PECS allows users to customize the contents of a number of pharmacy-related information sets.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Clinical Decision Support

VHA Portfolio: Health Provider Systems

Business Owner: Pharmacy Benefits Management (PBM)

VASI ID: 1588

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123093/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=204>

Full Description and Features: Pharmacy Enterprise Customization System (PECS) is a Java 2 Enterprise Edition (J2EE) application used to research, review, report, and manage customized drug information from First Data Bank's (FDB) MedKnowledge Framework (formerly Drug Information Framework (DIF)), which is a Commercial-off-the-Shelf (COTS) product, used in the enhanced order checking process.

The PECS application, through a web-based Graphical User Interface (GUI), allows VHA pharmacists and clinicians to research and request custom changes to Drug-Drug Interaction, Drug Pairs, Dose Range, Duplicate Therapy, and Professional Monograph records, controlling access through a role based authorization. VHA Pharmacy Benefits Management (PBM) periodically (as needed in support of VA procedures and priorities) prepare, review and approve the customizations, which result in VA Custom drug data, which will supersede or enhance the industry standard FDB-drug data.

The advantages to the VA for using PECS are as follows:

- All customizations will be performed at the National level to provide consistent order checks between facilities
- Use of First Databank for drug interaction, duplicate therapy, and dosing data
- More specificity in drug interaction order checks with the ability to include or exclude dose route
- More specificity in duplicate therapy order checks with FDB data
- Weekly FDB updates with monthly customization updates
- More frequent customization updates when needed

PECS does the following:

- Allows users to customize the FDB standard reference tables used in the enhanced order checking that will be used by the Pharmacy Benefits Management (PBM) group, Pharmacy Informaticist, and National Drug File (NDF) managers or designees to enter and update the custom table values
- Allows users to do the following customizations:
  - A custom drug-drug interaction, and any important attributes for that interaction
  - Drug pairs associated with a custom drug-drug interaction
  - A custom Professional Monograph for a drug-drug interaction, including any important attributes
  - A custom duplication allowance value for a duplicate therapy class
  - Custom values for attributes associated with a custom dose range check table
- Provides a Searching capability for a user to see Drug-Drug Interaction, Duplicate Therapy, or Professional Monograph information separately or together, for chosen drugs
- Provides the following reports:
  - History of custom changes for each of the five concepts
  - Exportable FDB or Custom Data - Individual query data can be exported from the five FDB-DIF or Custom tables. The available format is Excel
- FDB Comparison Reports to compare incoming updated FDB data against VA customized data to help determine if the VA customized data needs to be modified
- Provides a process via File Transfer Protocol (FTP) to transfer Custom data from a National server to all local/regional instances servers
- Leverages the existing FDB data loader utility at each site that is used to update the FDB-DIF databases

Custom table content distribution involves using an automated utility, Data Update (DATUP). The distribution method supports the following data content scenarios:

- Only FDB standard reference table data
- FDB standard reference table data and Custom table data
- Only Custom table data

Custom table content distribution supports both periodic and as-needed releases.

#### 2.75.7.2. Medication Order Check Healthcare Application (MOCHA)

Version: 3.0

Namespace: PREM

**Brief Description:** Medication Order Checks for Healthcare Applications (MOCHA) provides enhanced order checking functionality in the Computerized Patient Record System (CPRS) and in the Veterans Health Information Systems and Technology Architecture (VistA) Pharmacy packages.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1414

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123105/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=201>

**Full Description and Features:** Medication Order Checks for Healthcare Applications (MOCHA) provides enhanced order checking functionality in the Computerized Patient Record System (CPRS) and in the Veterans Health Information Systems and Technology Architecture (VistA) Pharmacy packages. This functionality includes providing easy access to Drug Monograph information, enhanced drug-drug interaction order checking which displays clinical information, and improved drug interaction and duplicate therapy by therapeutic classification. Changes made to the order check display sequence will improve efficiency and consistency between Inpatient and Outpatient Pharmacy packages.

MOCHA v2.0 implemented the first increment of dosage checks and introduced the Maximum Single Dose Check for simple and complex orders for Computerized Patient Record System (CPRS), Outpatient Pharmacy and Inpatient Medications applications.

MOCCHA v2.1 implemented Max Daily Dose Order Checks for simple medication orders entered through Computerized Patient Record System (CPRS), InpatientMedications, and Outpatient Pharmacy. If the Daily Dose exceeds the First Databank (FDB) recommended Max Daily Dose, a warning shall be displayed to the user. If the Max Daily Dose Order Check cannot be performed, an error message will be displayed to the user, along with general dosing information for the drug in most cases.

- Implements Maximum Single Dose Order Check for simple and complex orders in Outpatient Pharmacy and Inpatient Medications applications and CPRS
- Provides error messages with reasons at the order level when a Maximum Single Dose Order Check cannot be performed for Pharmacy users
- Provides a generic error message at the order level when a Maximum Single Dose Order Check cannot be performed for CPRS users
- Supports the ability to exclude a schedule from all Dosing Order Checks
- Creates a new PDM option called Lookup Dosing Check Info for Drug [PSS DRUG DOSING LOOKUP] so that a user can view all data that can affect Dosing Order Checks for a drug
- Creates and auto enables a new DOSING\_INFO web service
- Provides an option to enable/disable Dosing Order Checks called Enable/Disable Dosing Order Checks [PSS DOSING ORDER CHECKS], which also includes generation of a notification and an audit trail
- Implement Dose Range Checking with a Max Daily Dose limit for simple medication orders entered through Outpatient Pharmacy, Inpatient Medication, and CPRS
- Display a generic error message when the Max Daily Dose Order Check cannot be performed in CPRS
- Display an error message when the Max Daily Dose Order Check cannot be performed in CPRS with a detailed reason when height and/or weight is required, but does not exist in the Vitals application for the patient
- Display an error message when the Max Daily Dose Order Check cannot be performed in Pharmacy with a detailed reason
- Create a General Dosing Information message to be displayed when Dosing Checks cannot be performed
- Correct identified daily dose errors due to frequency failure
- Resolve miscellaneous frequency issues with incorporation of new dosing check frequency fields
- Apply Daily Dose Check exclusion for schedule to medication orders entered through Outpatient Pharmacy, Inpatient Medications, and CPRS.
- Apply advisory note to high dose warnings and General Dosing Guidelines for medication administered through eye, ear, or nose
- Create a customized frequency message
- Create a Max Daily Dose Warning message for the calculated Daily Dose
- Add FDB data elements from Dosing Order Check call to VistA side of interface
- Modifications to the 'Available Dosage(s)' list when a screen break occurs during order entry through the Outpatient Pharmacy application
- Modifications to the accompanying dialog for the 'Available Dosage(s)' list displayed during order entry through the Outpatient Pharmacy application
- Modification to display the most recent Serum Creatinine value and date resulted if available, even if the CrCL cannot be calculated on the pharmacy patient demographic header
- Display BSA and CrCL information in the headers on all Outpatient Pharmacy medication order detail screens and all Inpatient Medications and Outpatient Pharmacy patient information screens that are currently missing this information
- Display one warning if Maximum Single Dose and Max Daily Dose Order Check warning texts are identical

- Adjustment to the Daily Dose if a Single Dose Adjustment is made for an IV order when performing Dosing Order Checks
- Notify user when an Old Schedule Name is used for an order during Inpatient
- Medications backdoor order entry for finish, verify, copy, and renew actions
- Modify entries to the DOSE UNITS File (#51.24), see Section 4 for details
- Modify entries to the DOSE UNIT CONVERSION File (#51.25), see Section 4 for details
- Update Check PEPS Services Setup [PSS CHECK PEPS SERVICES SETUP] option to perform the Max Daily Dose Order Check instead of the Daily Dose Range Order Check
- Enhance lookup functionality when entering a schedule for an outpatient medication order through the pharmacy backdoor

### 2.75.7.3. Pharmacy Product System - National (PPS-N)

Version: 1.0

Namespace:

**Brief Description:** The Pharmacy Product System - National (PPS-N) is a Web-based application that allows select members of the Department of Veterans Affairs (VA) Pharmacy Benefits Management (PBM) Services to create and revise pharmacy drug information.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services, Provide Enterprise Reporting

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1518

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123255/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=202>

**Full Description and Features:** The PPS-N and the PPS-L Migration projects provide two distinct capabilities that are included in the same application which is part of Pharmacy Re-Engineering (PRE) initiatives within VHA. The Pharmacy Product System (PPS) is intended to improve the VA's formulary processes. PPS is envisioned as two distinct processes. The first process covers PPS at the national level (called PPS-N). The PPS-N environment provides for the ability to manage pharmacy-specific data across the enterprise, ensuring that all facilities are using the same base data for their operations. The second process encompasses PPS processes at the local level (called PPS-L). The PPS-L application

environment will provide services that enact business logic for the daily operations of pharmacy users at the VA's medical centers and clinics.

The PPS-N application allows national VA personnel to more easily, quickly and safely manage the VA National Formulary which directs which products, such as medications and supplies, are to be purchased and used by the VA hospital system. The key capabilities are:

- Provide a means for users to manage the National VA Formulary items. This includes being able to request the addition and update of items, and then approve these requests
- Provide a means to synchronize PPS-N data with NDFMS
- Provide a means to interface with a third-party commercial-off-the-shelf (COTS) drug data source
- Via this interface PPS-N:
  - Provides a means for users to manage additions and changes made in the COTS drug data source, including synchronization of this data with the PPS-N Enterprise Product List (EPL)
  - Provides a means for users to search for data within the COTS drug data source
  - Provides a means for users to manage the mapping of VA concepts to COTS concepts
  - Provides a means for users to perform reports on items added by the COTS drug data source
  - Provide a means for users to perform various simple and advanced searches for item data contained within PPS-N
- Provide a means for users to perform reports on the item data contained within PPS-N.
- Provide a means to retrieve pricing information from the Federal Supply Schedule (FSS) system, and then to display this information to the PPS-N users
- Provide a means to retrieve Standard Medication Route information from the VA Enterprise Terminology System (VETS), and then to manage this data within PPS-N
- Provide a process executed on the legacy NDFMS system to support data synchronization with the PPS-N database

#### 2.75.8. National Drug File (NDF)

Version: 4.0

Namespace: PSN

**Brief Description:** The National Drug File (NDF) package provides standardization of the local drug files in all VA medical facilities. Standardization includes the adoption of new drug nomenclature and drug classification, as well as linking the local drug file entries to data in the National Drug files.

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Medical Services, Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

Business Owner: Pharmacy Benefits Management (PBM)

VASI ID: 1821

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123292/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=89>

**Full Description and Features:** The National Drug File (NDF) package provides standardization of the local drug files in all VA medical facilities. Standardization includes the adoption of new drug nomenclature and drug classification, as well as linking the local drug file entries to data in the National Drug files. For drugs approved by the Food and Drug Administration (FDA), NDF provides VA medical facilities with the ability to access information concerning dosage form, strength and unit, package size and type, manufacturer's trade name, and National Drug Code (NDC) information. The NDF software also lays the foundation for sharing prescription information among medical facilities.

- Standardizes drug file information
- Standardizes drug classifications
- Adopts standard nomenclature
- Provides up-to-date prescription and over-the-counter information
- Provides available sources for drugs manufactured and approved by the FDA
- Provides a base for implementation of drug inventory control and management throughout VA (i.e., Consolidated Mail Outpatient Pharmacy and Pharmacy Benefits Management)
- Allows file access by NDC, manufacturer's trade name, ingredient, dosage form, dosage strength, route of administration, and VA drug classification
- Allows management of drug information, including reports on drugs by classification, ingredient, NDC, trade name, and/or active/inactive status
- Matches additions to medical center drug files with the national drug database
- Provides an ingredient file that is an integral component of the Allergy Tracking and Outpatient Pharmacy (drug-drug interactions) modules
- Provides an enhanced formulary report listing local, VISN, and National Formulary information
- Includes the Patient Medication Information Sheets that feature the following:
  - o An explanation of how and why to take a medication and the possible side effects.
  - o Information supplied by commercial sources.
  - o Information that is copyrighted and periodically updated.
- Utilizes data provided and standardized by contract for point of sale electronic billing using Electronic Claims Management Engine (ECME)
- Manage FDA Medication Guides

#### 2.75.9. Outpatient Pharmacy

Version: 7.0

Namespace: PSO

Brief Description: Outpatient Pharmacy provides a method for managing the medications given to Veterans who have visited a clinic or who have received prescriptions upon discharge from the hospital.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Conduct Disaster Preparedness Programs, Provide Medical Services, Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Pharmacy Benefits Management (PBM)

VASI ID: 1972

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123458/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=90>

Full Description and Features: Outpatient Pharmacy provides a method for managing the medications given to Veterans who have visited a clinic or who have received prescriptions upon discharge from the hospital. Prescription labels, refill request forms, FDA Med Guides and PMI sheets can be generated. Medication histories are kept online to permit checks for potential interactions. Profiles can be generated to assist the clinician in managing the patient's medication regimen. Management reports aid the pharmacy in controlling inventory and costs.

- Allows the Action Profile to be used as a quick renew/cancel request form by clinic providers when electronic notifications are not available or the site is not fully automated
- Transfer outpatient controlled substances prescriptions dispensing information to the respective State Board of Pharmacy in accordance with Controlled Substances State Prescription Monitoring Program
- Allow the ability to utilize Outpatient Pharmacy Automation Interface (OPAI) for automated dispensing and release of prescriptions by the Automated Robots
- Implements Maximum Single Dose Order Check for simple and complex orders in Outpatient Pharmacy and Inpatient Medications applications and CPRS
- Implements Dose Range Checking with a Max Daily Dose limit for simple medication orders entered through Outpatient Pharmacy, Inpatient Medications and CPRS
- Provides error messages with reasons at the order level when a Maximum Single Dose Order Check cannot be performed for Pharmacy users
- Provides error messages when Max Daily Dose Order Check cannot be performed in CPRS and Pharmacy applications



- Checks new prescriptions against existing prescriptions (for the same medication, therapeutic class, reported allergies, reactions, or drug interactions)
- Allows pharmacists to verify data entered by technicians prior to the printing of labels.
- Allows for the renewal of prescriptions that have no remaining refills. Prints labels for new, renewed and refilled prescriptions
- Auto-cancels individual prescriptions for a patient after admission for inpatient treatment
- Creates medication profiles for patient charts to meet the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requirements for a current medication list. Profiles are suitable for counseling patients
- Allows the Action Profile to be used as a quick renew/cancel request form by clinic providers, which allows for rapid entry of request by Pharmacy staff
- Provides the Screen Profile for review at several points in the order/entry process
- Provides basic Drug Use Evaluation (DUE) template generator
- Provides necessary laboratory checks and reports to meet national requirements for Clozapine dispensing
- Provides finishing of orders entered through CPRS
- Provides information for billing any applicable medication co-payment when the prescription is released
- Allows the user to select a different action without leaving an option

Uses List Manager features to allow:

1. Pharmacist or technician to browse through a list of actions
2. Pharmacist or technician to take action against those items
3. User to select an action that displays an action or informational profile

- Works with Integrated Billing (IB) and Electronic Claims Management Engine (ECME) to enable and manage point of sale billing supporting the Healthcare Insurance Portability and Accountability Act (HIPAA) Electronic Claims and Code set congressional mandate
- Allows prescription labels and Prescription Medication Information (PMI) sheets to be printed in another language if the system has the other language fields populated in Pharmacy Data Management and the individual patient is identified with the other language preference flag
- Allows the ability to print a microchip-embedded label for a prescription. This label can then be read by ScripTalk®, thus improving patient safety for visually impaired veterans
- Provides display of Herbal, over the counter (OTC), and Non-VA medications documented through CPRS. The data will be used for screening of Drug-Herbal and Drug-Drug Interactions with prescribed medications in VistA
- A maximum single dosage order check
- State Prescription Monitoring Program - The pharmacies comply with Mandatory Reporting to State Controlled Substance Rx Databases required by Consolidated Appropriations Act, 2012, PL 112-74
- Titration/Maintenance Rx functionality
- OneVA Pharmacy - Provides Pharmacists the capability to dispense prescriptions that originated in other VistA host sites

## 2.75.10. Pharmacy Benefits Management (PBM)

Version: 4.0

Namespace: PSU

**Brief Description:** The Pharmacy Benefits Management (PBM) package extracts medication dispensing data elements from numerous locations and makes reports available allowing projections of local drug usage and identification of potential accountability problem areas. The extracted data is transmitted to the PBM using VA Mailman. The Pharmacy Benefits Management (PBM) database that collects information on medication dispensed to both inpatient and outpatient veterans who receive care from the VA is housed at the Hines Information Technology Center (HITC).

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Medical Services, Provide Ancillary Services, Utilize Information Technology Services, Provide Enterprise Reporting

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Pharmacy Benefits Management (PBM)

**VASI ID:** 1832

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123403/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=91>

**Full Description and Features:** The Pharmacy Benefits Management (PBM) package replaced the Drug and Pharmaceutical Products management (D&PPM) application. The software extracts medication dispensing data elements from the Outpatient Pharmacy, Inpatient Medications IV and Unit Dose, Automatic Replenishment/Ward Stock, and Controlled Substance modules; it also extracts procurement information from Drug Accountability, Integrated Funds Control, Accounting and Procurement (IFCAP), and a limited amount of Laboratory data on a monthly basis.

The software makes data extraction reports available at Veterans Affairs Medical Centers (VAMCs) and allows local management to use the data to project local drug usage and identify potential drug accountability problem areas. The Pharmacy Benefits Management Strategic Health Group (PBM) is able to provide information on local facility, Veterans Integrated Service Network (VISN) and national product use on monthly, quarterly, and annual intervals.

The extracted data is transmitted to the PBM using VA Mailman. The Mailman message headers display how many messages were sent for a particular module along with the facility name and number from which the data was extracted. The header easily identifies the module from which the data was extracted, and confirmation messages include the number of Mailman messages generated for each module.

- Breakout of Inpatient Medications IV and Unit Dose, Outpatient Pharmacy, and Controlled Substance modules by dispensing occurrence
- Breakout of procurement information by line item from Drug Accountability, Integrated Funds Control, Account and Procurement (IFCAP) and a limited amount of Laboratory data
- Collection of the Prime Vendor Procurement Information (requires implementation of Drug Accountability V 3.0), Pharmacy AMIS data, Laboratory data, and Patient and Provider information
- Capture of controlled substance dispensing to patients if electronic Controlled Substance Administration Record (CSAR) is implemented with Controlled Substance Version 3.0
- Extraction of data and generation of drug and statistical data summary reports by inpatient division or outpatient site whenever possible
- Inclusion of National Formulary Indicator and Restriction
- Mechanism to monitor the successful completion of the automatic monthly extraction job and to notify users if a problem exists
- Extraction of data to the PBM national database on a monthly basis

#### 2.75.11. Pharmacy Data Management (PDM)

Version: 1.0

Namespace: PSS

Brief Description: The Pharmacy Data Management (PDM) package provides tools for managing site configurable data in pharmacy files.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Clinical Decision Support, Provide Medical Services, Provide Ancillary Services

VHA Portfolio: Health Provider Systems

Business Owner: Pharmacy Benefits Management (PBM)

VASI ID: 1833

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123404/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=93>

Full Description and Features: Pharmacy Data Management (PDM) provides tools for managing Pharmacy data. It includes tools for creating Pharmacy Orderable Items and maintaining files necessary for the Computerized Patient Record System (CPRS). PDM consolidates tools for managing the various Pharmacy software products. It provides Pharmacy Supervisors, in one location, the capability to enter

and edit data for the local DRUG file (#50) for all Pharmacy related packages. PDM now allows users to enter medication instruction components (e.g., dosage, noun, verb, expansion) in a language other than English. However, at this time, the Patient Medication Information Sheets only allow patient data to be in English or Spanish.

## **2.76.    Prosthetics**

Version: 3.0

Namespace: RMPR

Brief Description: The VistA Prosthetics package automates purchasing. The Prosthetics module enhances patient care by determining what prosthetic services and devices have been provided to the Veteran in the past, and decreasing the time required for the order, delivery, and/or repair of devices.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Prosthetics and Sensory Aids

VHA Portfolio: Health Provider Systems

Business Owner: VHA Office of Patient Care Services Programs

VASI ID: 1836

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123407/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=96>

Full Description and Features: The Prosthetics package automates purchasing. The Prosthetics module enhances patient care by determining what prosthetic services and devices have been provided to the veteran in the past, and decreasing the time required for the order, delivery, and/or repair of devices. The Prosthetics package provides control, inventory, auditing of expenditures and generates management reports. The Record of Prosthetics Service, VAF 10-2319, and the appropriate IFCAP obligation, are updated at the time of purchase (entry into the computer) of the item or service provided to the veteran. This update is accomplished through direct links to IFCAP and the Electronic Patient VAF 10-2319.

- The Purchasing module interfaces with IFCAP (Integrated Funds, Distribution, Control Point Activity, Accounting and Procurement). Users enter requests to purchase and repair items or services using online VA forms or Purchase Card that allows tracking of the transactions. The Purchasing module uses a Prosthetics VistA Suite Graphical User Interface (GUI) application
- The Electronic Record of Prosthetic Services (VAF 10-2319) tracks demographics, disability codes, new purchases, repairs/replacements, service cards, clothing allowance, automobile adaptive

equipment, and Home Improvement Structural Alterations (HISA). This module is accessible using the Prosthetic VistA Suite GUI

- The Lab module has Orthotic Lab, Restoration Lab, Shoe Last Clinics, Wheelchair Repair Shops, and the Denver Distribution Center. This module is accessible using a Prosthetics VistA Suite GUI
- The Home Oxygen module manages vendor billing and current prescriptions. Sites have the ability to update various information for billing (vendor, PSAS HCPCS, Fund Control Point, Item and Unit Cost) as appropriate
- The Inventory module tracks quantities of prosthetic items that facilities have in stock.
- The Suspense module tracks patient requests for prosthetic appliances or services through Prosthetics or sent electronically from the Computerized Patient Record System (CPRS) via Consult/Request Tracking
- The National Prosthetics Patient Database (NPPD) module captures medical center Prosthetic patient transaction data. The NPPD Detail Display Report is accessible using a Prosthetics VistA Suite GUI
- The Delayed Order Report (DOR) functionality is also available through the Prosthetic VistA Suite GUI

## **2.77. Quality Audiology and Speech Analysis and Reporting (QUASAR)**

Version: 3.0

Namespace: ACKQ

Brief Description: Quality Audiology and Speech Analysis and Reporting (QUASAR) is a VistA software package written for the Audiology and Speech Pathology Service. QUASAR is used to enter, edit, and retrieve data for each episode of care.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Ancillary Services

VHA Portfolio: Health Provider Systems

Business Owner: Audiology and Speech Pathology

VASI ID: 1506

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123096/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features:

- Provides automatic transmission of visit data to the Patient Care Encounter (PCE) program in order to incorporate QUASAR visit data in Ambulatory Care Reporting Program (ACRP) and in the Decision Support System (DSS)
- Produces a variety of reports useful to local managers, medical center management, and central planners
- Allows for Generation of customized reports
- Produces an automated Cost Distribution Report (CDR) RCS-10-01 41
- Generates and processes Audiology compensation and pension visits through an agreement with the Automated Medical Information Exchange (AMIE) package
- Allows input of a patient's audiogram and display of audiometric data in graphical or tabular format. The audiogram may then be signed and transmitted to the VA Denver Distribution Center (DDC) for inclusion in a patient's hearing aid order. (The audiogram will also be recorded in the DDC's national database of audiometric data.)
- ICD-10 code compliant

## **2.78. Quality Management Integration Module**

Version: 1.7

Namespace: QAQ

**Brief Description:** The QM Integration Module, (previously "Quality Assurance Integration") contains utilities that are common to some or all of the QM software packages. Configuration is part of the installation for all QM packages (via the Combined Site Parameters Edit option.)

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Deliver Health Care

**Business Function Framework Function(s):** Provide Member Access, Provide Medical Services, Manage Health Records

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA CBO

**VASI ID:** 1947

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123400/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=117>

**Full Description and Features:** The QM Integration Module links the QM software applications through a QM Manager menu.

**Date Selector:** The date selector is found within many of the reports options. It lets the user choose the date range that is needed for the report.

**Group Selector:** The group selector is a sort process that provides the ability to select a list of records. It lets the user select more than one item to print or view at a time. This reduces the number of key strokes needed to produce a specific outcome.

**AD Hoc Report Generator:** The Ad Hoc Report Generator uses basic VA FileMan sort and print modifiers and adds the capability of building macros (often termed templates) for those reports that are routinely required.

**Audit File:** The audit file builds an audit trail for each record in the QM packages. You can see the contents of the audit file in the Occurrence Screen software by using the Audit File Inquiry option. In other software, the audit trail is accessible to the IRM staff through VA FileMan.

## **2.79. Radiology/Nuclear Medicine**

Version: 5.0

Namespace: RA

**Brief Description:** Radiology/Nuclear Medicine is a comprehensive software package designed to assist with the functions related to processing patients for imaging examinations.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Deliver Health Care

**Business Function Framework Function(s):** Provide Member Access, Provide Medical Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA

**VASI ID:** 1837

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123408/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=98>

**Full Description and Features:** The Radiology/Nuclear Medicine package automates the entire range of diagnostic functions performed in imaging departments, including order entry of requests, registration of patients for exams, processing of exams, recording of reports/results, verification of reports on-line, displaying/printing results for clinical staff, automatic tracking of requests/exams/reports, and generation of management statistics/reports, both recurring and ad hoc.

- Functionality is screened by Imaging Type to make it look as if there are separate sub-packages. Many options are also screened by or allow selection by division and/or imaging location
- There is on-line patient registration for exams, automatic printing of Radiology orders and transcription of patient radiological/nuclear medicine reports
- Management reports include workload, complications and ad hoc summaries, daily activity logs, examination statistics, and performance indicators
- Health Level 7 (HL7) (e.g., voice-to-text and PACS equipment) standard for interfacing with non-VistA computer systems is supported for the exchange of radiology/nuclear medicine results
- There is on-line physician verification of radiological/nuclear medicine exam reports using electronic signatures
- Stop codes and procedures associated with a radiological/nuclear medicine exam are automatically credited for reimbursement purposes
- It interfaces with the Computerized Patient Record System module for entry of radiology/nuclear medicine requests and display of results to clinical staff
- It interfaces with the Adverse Reaction Tracking (ART) module by allowing users to add contrast media reactions to ART via the Radiology/Nuclear Medicine package
- It interfaces with the Women's Health module by automatically adding mammogram and ultrasound procedures for female patients to the Women's Health database
- It supports entry of multiple diagnostic codes and multiple interpreting by residents and staff
- There is a single combined report for a set of related procedures. This is a "print set" mechanism for entering a single report for all descendent cases registered from a parent order
- It provides the ability to enter and edit information specific to radiopharmaceuticals for Nuclear Medicine
- It allows on-line verification of "STAT" category requests
- It allows for the selection and printing of multiple reports
- Patient-specific radiation dosage aggregation
- Secondary diagnosis allowed from studies that are imported into VistA

## **2.80. Record Tracking**

Version: 2.0

Namespace: RT

**Brief Description:** The Record Tracking module provides for the maintenance and control of hardcopy health records and x-ray films to facilitate availability to a variety of users. The system offers a wide range of individual site-definable parameters so that it may be custom-tailored to specific needs and used in any type of file setting.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Ancillary Services, Manage Health Records



VHA Portfolio: Business Informatics

Business Owner: Director, HIM

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=53>

Full Description and Features: The Record Tracking module is integrated with patient administrative and clinical modules. The module supports requisitioning activities for individual records within a facility and between facilities, and automates file room functions in support of the following activities:

- Creation of new records/volumes
  - Charge-out/check-in of records
  - Inactivation/reactivation and deletion of records
  - Printing of bar code labels
  - Transfer of records to other facilities
  - Recharging records to other borrowers
  - Flagging a record as missing
  - Record retirements
- 
- Uses bar code technology, prints bar code labels for the charts, and uses bar code equipment to charge records
  - Displays informational bulletins when a record is checked into a file room
  - Bulletins may include the following information: pending requests for the record, the record has previously been flagged as missing, loose filing exists, the patient is currently an inpatient, or the record is being checked into a file room other than its home
  - Offers a complete system for maintenance and control of records that may be used with ease in any type of file setting
  - Produces a variety of reports associated with the module that may be used to assist management in workload analysis and control of records
  - Creates pull lists to provide requests for records in conjunction with clinic scheduling and record retirement

## **2.81. Remote Order Entry System (ROES)**

Version: 3.0

Namespace: RMPF

**Brief Description:** The Remote Order Entry System (ROES) is the front-end of the Denver Acquisition & Logistics Center (DALC) supply chain/order fulfillment production system. ROES is used by Department of Veterans Affairs (VA) clinicians to place orders for certain types of medical products and services that are maintained under contract by the DDC.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Manage VHA-wide Administrative Services, Conduct Supply Chain Operations

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA

**VASI ID:** 1838

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123409/c/56/nt/-1?id=1578>

**VDL Link:**

**Full Description and Features:** The most substantial product line handled through ROES is custom hearing aids. As implied by the name, custom hearing aids are highly specialized devices custom made for individual Veteran patients. Other product lines handled through ROES include stock hearing aids, hearing aid accessories and batteries, prosthetic items, aids for the visually impaired and assistive devices. The hearing aid repair is a line of service provided by the DALC and facilitated by ROES. The ROES application and database integrates the DDC enterprise business functions of contracting/acquisition management, order fulfillment, distribution management, finance, and product life cycle support. Extensive order tracking, serialized device registration, patient/device history, and sales/financial reporting are also supported by the database.

- ROES uses advanced technologies and practices in software design, supporting hardware platform, database management, and network integration
- ROES also integrates Web-based application architecture with a VistA environment, obtaining an optimum mix of decentralized VistA interfacing with centralized data management
- The database is optimized for the DALC's progressive procurement and distribution practices, advanced general business practices, and current VA regulations

## **2.82. Remote Procedure Call Broker (RPC)**

**Version:** 1.1

**Namespace:** XWB

Brief Description: RPC enables for Veterans Health Information Systems and Technology Architecture (VistA) providing Windows-based graphical user interface (GUI) software applications.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA & OIT

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=23>

Full Description and Features: This type of software application typically runs as a client in a client/server environment. One of the challenges in creating such applications is establishing communication between the client workstation and VistA's M-based servers. In a secure manner over a Transmission Control Protocol/Internet Protocol (TCP/IP) network, users need to be able to log onto a server, initiate activities on the server, and retrieve and update data on the server. VistA's Remote Procedure Call (RPC) Broker software provides functionality so that

GUI developers can:

- Establish a connection from a client workstation to a VistA M Server
- Run RPCs on the VistA M Server
- Return data to the client workstation

The VistA M Server continuously runs an RPC Broker listener process whose purpose is to establish connections with clients. When the listener process receives a connection request from a client, it spawns a separate handler process, which then handles all communications with the client. Once connected, the client can execute Remote Procedure Calls on the VistA M Server. RPCs are written in M and accessed through the VistA M Server's REMOTE PROCEDURE file (#8994).

- Broker Developer Kit (BDK)
- Dynamic Link Library
- Client/Server security
- Integrated Single Sign-On
- Silent Sign-On
- Shared Broker
- Non-callback connection
- CCOW-enabled

- M-to-M Broker
- Broker Security Enhancement (BSE)

## **2.83. Repositories**

### **2.83.1. Administrative Data Repository (ADR)**

Version:

Namespace: Multiple Namespace

**Brief Description:** The ADR is a transactional data repository which serves as the authoritative source for selected VistA demographic and eligibility/enrollment information for all persons. The ADR houses information migrated from the Health Eligibility Center and Master Veteran Index.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Use Information Technology Services

**VHA Portfolio:** Health Data Systems

**Business Owner:** OIA

**VASI ID:** 1006

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/121873/c/56/nt/-1?id=1578>

**VDL Link:**

**Full Description and Features:** The Administrative Data Repository (ADR) was established to provide support for the administrative data elements relative to multiple categories of a person entity such as demographic and eligibility information. Although initially focused on the computing needs of the Veterans Health Administration, the ADR is positioned to provide identity management and demographics support for all IT systems within the Department of Veterans Affairs.

The ADR Project primarily supports the Enrollment System (ES) and Person Service applications and may support several additional VistA re-engineering projects. ADR incorporates standard administrative reference data from Standards & Terminology Services (STS).

Information in the system of records is used to:

- Update, verify and validate Veteran eligibility
- Conduct income testing and verification activities
- Validate social security numbers of Veterans and spouses of those Veterans receiving VA health care benefits

- Ensure accuracy of Veterans' eligibility information for medical care benefits
- Operate an annual enrollment system
- Update Veteran eligibility
- Provide enrollment materials to educate Veterans on enrollment
- Respond to Veteran and non-Veteran inquiries on enrollment and eligibility
- Compile management reports

## 2.83.2. Clinical Data Repository/Health Data Repository (CHDR)

Version: 2.1.2

Namespace: CHDR

**Brief Description:** The Clinical Health Data Repository (CHDR) shares computable health record data elements between DoD's Clinical Data Repository (CDR) and VA's Health Data Repository (HDR).

**Business Function Framework Line(s) of Business:** Deliver Health Care, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Clinical Decision Support, Provide Ancillary Services, Manage Health Records, Utilize Information Technology Services

**VHA Portfolio:** Health Data Systems

**Business Owner:** OIA HI

**VASI ID:** 1115

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122823/c/56/nt/-1?id=1578>

**VDL Link:**

**Full Description and Features:** The CHDR generates standards-based, computable electronic health record (EHR) data elements between DoD's Clinical Data Repository (CDR) and VA's Health Data Repository (HDR) for patients identified and matched as Active Dual Consumers (ADCs) of both VA and DoD health care.

Clinical data for these "dual consumers" (patients receiving healthcare or expected to receive healthcare at both VA and DoD medical facilities.) Data for patients is stored at each agency's local healthcare systems: at DoD this occurs in the Clinical Data Repository (CDR), a component of the Armed Forces Health Longitudinal Technology Application (AHLTA). At VA, the Health Data Repository (HDR) stores the CHDR data.

The CHDR system is the link between the two repositories, and once the patient is marked "active," the data exchange is enabled. Most patients marked active are so marked by the DoD automated process. At VA, patients can be marked "active" manually, using the CHDR Administration Application Interface (CHDR Admin GUI.)

After the computed data is exchanged, it can be used by each agency's native healthcare information system. At VA, the integrated data can be viewed through VistAWeb while triggered Drug/Drug and/or Drug Allergy alerts will manifest in the Computerized Patient Record System (CPRS.)

### 2.83.3. Health Data Repository (HDR) Data Warehouse (DW)

Version: 3.21

Namespace: HDS

Brief Description: HDR is a national, clinical data storehouse that supports integrated, computable and/or viewable access to the patient's longitudinal health record. The HDR serves as the authoritative source for data from DoD Clinical Data Repository and for the Home TeleHealth program.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: OIA

VASI ID:

VASI ID Link:

VDL Link:

Full Description and Features:

The Repositories Program supports storage of enterprise-wide, Veteran-centric clinical and administrative data via the Health Data Repository (HDR) and Administrative Data Repository (ADR) products. HDR, a relational database that stores discrete data rather than messages, enables provider to obtain integrated data views and acquire patient-specific clinical information to support treatment decisions.

HDR provides clinical data from VistA in a computable and/or viewable access form to user interfaces such as RDI, CHDR, and VistAWeb. The HDR Data Warehouse (DW) meets the data needs of the VA research and analysis community without impacting database performance for the end-users.

## **2.84. Resident Assessment Instrument/Minimum Data Set (RAI/MDS)**

Version:

Namespace: DGRU

**Brief Description:** The Resident Assessment Instrument/Minimum Data Set (RAI/MDS) provides a standardized assessment tool in support of long-term patient care assessment and serves as the basis for development of a patient's plan of care. RAI/MDS is used in data collection from VA long-term care facilities.

**Business Function Framework Line(s) of Business:** N/A

**Business Function Framework Function(s):** N/A

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA HQ Geriatrics and Extended Care

**VASI ID:** 1571

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123146/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=125>

**Full Description and Features:**

The Resident Assessment Instrument/Minimum Data Set (RAI/MDS) provides a standardized assessment tool supporting the completion of a comprehensive, accurate, and reproducible patient assessment, and serves as the basis for developing the patient's plan of care. The RAI/MDS aligns the VA's data collection processes with private sector skilled nursing facilities. The Centers for Medicare and Medicaid Services (CMS) and the States require that long-term care facilities implement RAI/MDS to receive Medicare and/or Medicaid reimbursement. Use of RAI/MDS in VA long-term and Nursing Home Care Unit programs provides a structure for meeting JCAHO long-term care accreditation standards. It also provides opportunities for comparison of patient outcomes within and across VA and with non-VA long-term care and/or nursing home programs. The VA contracts for Caribou, which has been implemented nationally, with a gateway interface to import patient data from VistA. Data is electronically transmitted to the national database at the Austin Information Technology Center (AITC). The AITC in turn uses the

MDS to produce Resource Utilization Groups (RUG-III) and Quality Indicator reports. In addition, it provides the basis for the unannounced survey program.

- Admissions module with demographic and patient movement information interfaced from Vista
- Assessments module based on the MDS, a core set of preliminary screening and assessment elements including common definitions and coding categories
- Resident care plan and report modules
- Electronic transmission of assessments to AITC

## **2.85. Scheduling**

Version: 5.3

Namespace: SD, SC

**Brief Description:** The Scheduling module automates all aspects of the outpatient appointment process, including the ability to check in/check out patients, clinic set-up and maintenance, enrollment/scheduling/discharge of patients to and from various clinics, and the generation of managerial reports, statistical reports, patient letters, and workload reporting. It provides for multiple-appointment booking, which enables the user to schedule, at one time, numerous appointments on a consecutive day/week basis.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Provide Health Care Administration

**Business Function Framework Function(s):** Provide Member Access, Perform Hospital Administration, Manage Health Records, Perform Financial Management, Utilize Information Technology Services

**VHA Portfolio:** Business Informatics

**Business Owner:** Office of Veterans Access to Care (OVAC)

**VASI ID:** 1840

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123410/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=100>

**Full Description and Features:** The system may display numerous messages when an appointment is scheduled depending on the availability of the slot requested. These include notification that the appointment is an overbook, the patient already has an appointment scheduled for that date and time, or the appointment cannot be made due to previous inactivation of the designated clinic. In addition, certain classification questions are prompted during the check-out process (if applicable) to determine if



treatment rendered was connected to special circumstances (such as Agent Orange, Ionizing Radiation, Persian Gulf, etc.).

If an appointment cannot be scheduled because of limitations, the user is prompted to add the appointment information to a Wait List for future scheduling.

Ambulatory Care data meeting specified criteria are transmitted to the Austin Information Technology Center (AITC). Subsequent transmissions will update the National Database. This additional data supplements the existing Clinic Appointment Wait Time extracts.

The functions within Scheduling currently fall into four major categories: Appointment Scheduling, Local Reporting (outputs), National Data Collection, and Module Set-Up and Maintenance.

- Creates fixed or variable length clinic patterns
- Provides on-line clinic availability and system identification of conditions such as first available appointment
- Interacts with the Record Tracking module allowing chart request at the time of appointment scheduling
- Generates cancellation, no-show, and pre-appointment letters
- Transmission of pertinent visit information to the national database at AITC
- ICD-10 code compliant

Ambulatory Care Reporting Project (ACRP)

- Provides clinical, diagnostic, and administrative data to assist in determination of resource utilization, corporate costs, forecasting, and healthcare planning. Identifies date, time, and provider of services provided, patient demographic data, and transmission of workload credit data to the National Patient Care Database (NPCDB)
- Vista transmissions, error-handling and reporting options, and NPCDB are scheduled for decommission Oct 1 2018. Corporate Data Warehouse (CDWS) will store ambulatory care data and replace the error-handling features

Automated Service Connected Designation (ASCD)

- Automates Service Connected (SC) or Non-Service Connected (NSC) designation based upon clinician input (e.g., ICD or Related Disability Codes) during encounter processing
- Lists potential billable and non-billable encounters
- Dual eligibility encounters require additional human intervention

Electronic Wait List (EWL)

- Automatically places patients on a Wait List or multiple Wait Lists for a Primary Care team or position, scheduling service/specialty, or specific clinic
- Provides reporting capabilities
- Places patients on wait lists as needed when appointments are cancelled by the clinic

Primary Care Management Module (PCMM)

- Assists in maintaining accurate patient listings for primary care teams and panels, providing a Graphical User Interface (GUI) for creating positions and assigning staff to teams, as well as for assigning/un-assigning patients to primary care teams and providers' positions
- PCMMR is being implemented as a web-based replacement for PCMM

Recall Reminder

- Provides prompts to clinic staff for patients requiring return appointments when those appointments are greater than 90-120 days in the future

- Produces clinic recall letters or cards for patients to encourage them to schedule appointments
- VistA Scheduling Enhancement (VSE)
- VSE is a Graphical User Interface (GUI) software module that allows schedulers to make appointments quickly by viewing multiple appointment request types and multiple clinics in one screen
  - A scheduler can easily view patient requests for service, find the next available open appointment, view the provider's availability in multiple clinics, and track a patient's appointment process

## **2.86. Shift Handoff Tool**

Version: 1.0

Namespace: CRHD

Brief Description: The Shift Handoff Tool standardizes information exchanged between clinicians as they transfer patient care responsibilities incidental to changes of shifts.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Medical Services, Manage Health Records

VHA Portfolio: Health Provider Systems

Business Owner: Patient Care Services (PCS)

VASI ID: 1591

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123224/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=175>

Full Description and Features: The Shift Handoff Tool had its beginnings in the "CAIRO" product originally developed by the Indianapolis VAMC Development Group. Shift Handoff Tool provides standard data elements such as Do Not Resuscitate, Allergies, Medications, Problems, History and Physical, Admitting Diagnosis, Labs, and Consults as part of the information elements routinely communicated between Clinicians (e.g., Physicians, Nurses, Pharmacists) at shift handoff.

This multidisciplinary tool yields clear, readable and standardized-format communications that enhance patient safety and efficacy of care. The tool allows for information to be updated and shared electronically.

## **2.87. Standards and Terminology Services (STS)**

Version: 1.0

Namespace: Multiple Namespace

Brief Description: STS is the authoritative source for clinical and administrative data standards for the VHA.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Health Data Systems

Business Owner: OIA

VASI ID: 1610

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123235/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=191>

Full Description and Features: In 2003, Enterprise Terminology Services (ETS) was formed as a subproject of the Health Data Repository (HDR) project to help standardize the terminology reference files that are used by Veterans Health Information Systems and Technology Architecture (VistA) applications through the Veterans Health Administration (VHA). In FY06, ETS merged with the Data Standardization (DS) and Standard Data Service (SDS) project teams into one team, becoming Standards & Terminology Services (STS).

Historically, VistA applications were developed in a decentralized manner and could be specialized in response to the needs of individual medical centers. As a result, VistA terminologies were not always standardized. Today, there is a shift toward enterprise-wide terminology standards, which are essential to establish consistency in meaning of data within VHA as a whole. The shift from dispersed, non-standard terminologies to a controlled, centralized terminology helps VHA meet requirements for an authoritative, longitudinal, accessible, and portable electronic health record (EHR).

STS has worked closely with VHA stakeholders and partners to develop and maintain both the Enterprise Reference Terminology (ERT) content and VHA Enterprise Terminology Services (VETS) application and runtime services. STS software includes databases and tools that are used to maintain terminology content. ERT content ranges from simple lists of standardized terms to reference terminologies with fully populated semantics such as the National Drug File Reference Terminology (NDF-RT).

VETS software includes the databases and services that provide the terminology content to STS stakeholders. VETS includes deployment and application runtime services that will provide common

access to ERT content in both the current VistA and future My HealtheVet VistA environments. STS has created and documented a Terminology Model, which will be used internally to structure ERT data and to provide services to VHA clinical applications. The model also supports data interchange within VHA and with various government and commercial partners.

The VETS applications are:

#### NTRT (New Term Rapid Turnaround)

A web application that has two groups of users: external request submitters and internal terminologists. Clinicians from the VA Medical Centers obtain an NTRT login (provided by STS) that enables them to request new terms to be added to the standardized VistA packages (Allergies, Vitals, TIU, Pharmacy). When a request is submitted, STS terminologists then use the NTRT application to track the request through a review process to determine if the request is valid.

#### TDS (Terminology Deployment Services)

A web application that only STS terminologists use to version and deploy standardized VHAT (VHA Terminology) content and Map Sets. NTRT requests that are approved are versioned in TDS and after a rigorous testing process are deployed to all 129 VistA production sites using TDS.

#### Terminology Browser

A web application that is available to the entire VA enterprise. This tool allows users to browse Standard Code Systems (SCS) like SNOMED or ICD-9, Map Sets that contain mappings, and VHAT terminology by domain (e.g. Allergies) or subset (e.g. Reactions). This tool was published in VETS v9.

#### TED (Terminology Editor)

A web application that allows STS terminologists to author new Map Sets that contain mappings. This is a Graphical User Interface editor tool that was created to replace importing content using XML files. This is new for VETS v10.

#### VOID (VHA Unique Identifier Service)

A web application that allows users that have a valid login (both internal and external to STS) to request one or more VOIDS to use for terminology standardization purposes.

See Also - Health Data Informatics, Lexicon Utility.  
See additional VDL links below to STS applications:

- Standards & Terminology Services (STS)
- Current Procedural Terminology (CPT)

- Enterprise Terminology Services (ETS)
  - Lexicon Utility
  - Health Data Informatics (HDI)
  - ICD-9-CM
- Provides an overall terminology model for VHA that supports clinical data entry, retrieval, aggregation, and processing.
  - Supports information processing for decision support systems.
  - Supports concept mediation, mappings, and translation between code systems using Health Information Technology Standards Panel (HITSP) and other standards.
  - Supports the use, maintenance, versioning, and updating of code systems from standards development organizations (SDOs) that are required by statute, mandated by an oversight body, or required by VHA business needs.
  - Provides a concept based, controlled medical vocabulary for VHA.
  - Supports VHA Health Information Models, including detailed models that are used by specific applications and their terminologies.
  - Supports semantic comparisons between concepts.
  - Supports the deployment of standardized reference files to VistA sites as VistA patches or VETS deployment sets.
  - Implements the New Term Rapid Turnaround (NTRT) process to facilitate timely updates to standardized reference files after they are deployed on a domain-by-domain basis.

## **2.88. Surgery**

Version: 3.0

Namespace: SR

**Brief Description:** The Surgery package is designed to be used by Surgeons, Surgical Residents, Anesthetists, Operating Room Nurses and other surgical staff. The Surgery package is part of the patient information system that stores data on the Department of Veterans Affairs (VA) patients who have, or are about to undergo, surgical procedures. This package integrates booking, clinical, and patient data to provide a variety of administrative and clinical reports.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Deliver Health Care

**Business Function Framework Function(s):** Perform Hospital Administration, Monitor Clinical Performance, Provide Medical Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** National Surgery Office

VASI ID: 1046

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122750/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=103>

#### Full Description and Features:

In the operating room, the software provides on-line access to the clinical record and automatically generates post-operative reports, including the Nurse Intraoperative Report. Automated scheduling provides better operating room utilization and greater ease in distributing the operating room schedule, and the software generates monthly, quarterly, and annual surgical reports, thus reducing the amount of clinical overhead associated with the management of the Surgical Service. The Surgery software facilitates morbidity and mortality tracking and other complications, providing vital information to the Chief of Surgery and to VA Central Office.

- Allows a surgeon to generate requests for surgical procedures
- Allows operating room scheduling managers to assign operating rooms and time slots and generates operating room schedules
- Allows for the rescheduling or cancellation of operative procedures
- Facilitates entry of information specific to an individual surgical case (e.g., staff, times, diagnoses, complications, anesthesia)
- Provides for on-line entry of data inside the operating room during the actual operative procedure
- Generates patient records and nurse reports
- Produces management reports (e.g., Annual Report of Surgical Procedures, Attending Surgeons Report, Nurse Staffing Report, and Anesthesia Management)
- Produces quarterly and annual reports for VA Central Office
- Provides secured access to lists of cancellations and the Morbidity and Mortality Report
- Extracts data necessary to monitor risk management issues
- Provides additional checks for Transfusion Error Risk Management
- Includes a generic Health Level Seven (HL7) interface for use with commercial Automated Anesthesia Information Systems
- Includes an interface to the Patient Care Encounters (PCE) software that allows ambulatory procedure workload information to be transmitted to the National Patient Care Database (NPCD) at AITC
- Allows for on-line electronic signature of the Nurse Intraoperative Report and the Anesthesia Report
- ICD-10 code compliant

#### Risk Assessment

- Provides tracking mechanism for both surgical risk and observed-to-expected (O/E) risk- adjusted outcomes across facilities for all surgeries for eight major sub-specialties and for cardiac surgery

- Provides for entry of non-cardiac assessment information including pre-operative information, laboratory test results, operation information, and intraoperative and post-operative occurrences
- Provides for entry of cardiac assessment information, including clinical information, cardiac catheterization and angiographic data, operative risk summary data, cardiac procedures requiring cardio-pulmonary bypass, and intraoperative and post-operative occurrences
- Creates a Surgery Risk Assessment on each patient assessed and lists these by categories including complete, incomplete, and transmitted assessments, as well as list of major surgical cases and all surgical cases
- Generates monthly Surgical Case Workload Report
- Prints follow-up letters to patients 30 days after a procedure

## **2.89. Survey Generator**

Version: 2.0

Namespace: QAP

Brief Description: The Survey Generator is a software package which allows creation and maintenance of computerized survey forms.

Business Function Framework Line(s) of Business: Provide Healthcare Administration

Business Function Framework Function(s): Manage Customer Relations, Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: VHA

VASI ID: 1842

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123412/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=27>

Full Description and Features:

The Survey Generator is a software package which allows creation and maintenance of computerized survey forms. It also provides for entry of any respondents answers via computer terminal or a hard copy filled out and then entered by any designated person. In addition, it provides useful statistical information by survey alone or by demographic data items.

This package is designed with both the survey author and the respondent in mind. It is simple to use and straightforward in operation and does not require any exceptional skills on the user's part.

## **2.90. Veterans Crisis Line (VCL)**

Version: 1.0

Namespace: VCL

Brief Description: The Veterans Crisis Line (VCL) Application replaces the manual call log (paper log documents) using a web-based application and allows for a seamless transition from VA Suicide Prevention Hotline to Suicide Prevention Coordinator (SPC).

Business Function Framework Line(s) of Business: Suicide Prevention

Business Function Framework Function(s): Suicide Prevention

VHA Portfolio: Health Provider Systems

Business Owner: VHA Mental Health

VASI ID: 1619

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123242/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=78>

Full Description and Features: Mental Health Services (MHS) is currently managing a web-based application (herein referred to as the Veterans Crisis Line Application (VCL)) utilized by their confidential, free 24-hours hotline staff to make referrals to the appropriate field-based Suicide Prevention Coordinators (SPCs).

History: VCL Project is an important function to support recent suicide prevention legislation. The Department of Veterans Affairs (VA) has begun operation of the national suicide prevention hotline (now called VCL) to ensure that veterans with emotional crises have round-the-clock access to trained professionals. The VA is partnering with the Substance Abuse and Mental Health Services Administration (SAMHSA) of the Department of Health and Human Services (HHS) and the National Suicide Prevention Lifeline to operate the national hotline. Veterans can call 1-800-273-TALK (8255) and press "1" to reach the VA hotline, which is staffed by mental health professionals 24/7/365 in Canandaigua, N.Y. who work closely with the callers' local VA Suicide Prevention Coordinators and mental health providers to help the callers.



Legislation has been passed requiring VHA to take specific actions in the effort to prevent Veteran suicides. On November 6, 2007, President Bush signed into law the Joshua Omvig Veterans Suicide Prevention Act. It's named after a soldier who committed suicide in Grundy County, Iowa, in December 2005, after serving an 11-month tour in Iraq. The bill requires the Department of Veterans Affairs to meet deadlines in providing the following services:

- Train VA staff on suicide prevention and mental health care
- Staff each VA medical facility with a suicide prevention counselor
- Screen soldiers who seek care through the VA for mental health needs
- Support outreach and education for veterans and their families
- Research the most effective strategies for suicide prevention
- Create a peer support counseling program so veterans can help other veterans

However, while the bill requires the VA to provide these services, it provides no funding.

On February 6, 2008, Representative Leonard Boswell (D-IA) and Representative Robin Hayes (R-NC) introduced the Armed Forces Suicide Prevention Act (H.R. 5223). This bill is focused on Department of Defense implementing a comprehensive suicide prevention program within all branches in the military, including National Guard and the Reserves. The Air Force implemented a suicide prevention program in the 1990's. By 2002, the suicide rate had declined by 33% and researchers found a decrease in violent crime and family violence after program implementation. This bill is designed to help the VA and Department of Defense deal with the increase in mental health needs of Iraq and Afghanistan service personnel. Both VA Central Office and Congress want periodic reports relating to Veteran suicide and suicide prevention efforts.

Tracking cases may also allow for best practice identification. The Suicide Prevention Hotline Web Application went live, nationwide, on 6/9/2009 and the first update was put into production on 11/22/2010. Description of Current VCL Application: The VCL application provides an electronic version of the call log via a web-based application. VCL also stores information from hotline calls, which provides the ability to retrieve and view call information as needed.

The VCL application has three components:

- Log Application used at the VA Suicide Prevention Hotline by Health Services Specialist (HSS) to log calls
- Response Application used at VA facilities by Suicide Prevention Coordinators (SPCs) to document referrals and save them in the Computerized Patient Record System (CPRS) as Progress Notes
- Admin Component which is nested with the Health Techs (HT) application. This component is used by hotline administrators and Social Services Assistants (SSA) to audit and administer the system
  - o In the Admin view, the Log Application stores call information that can later be used for data collection and reporting purposes.
  - o In the Admin view, the Log Application provides a mechanism for hotline staff to view Veteran demographic information. The application also provides the risk assessment module and the ability to identify the VA Medical Center (VAMC) closest to the caller's physical location.

- o In the admin view, the Log Application provides a means to refer a caller to a VAMC for follow-up care. The referral is directed to the VA Medical Center's SPC in real time.
- o The SPC Response Application allows the ability to document the hotline referral in CPRS in the form of a Text Integration Utility (TIU) Progress Note.
- o The SPC Response Application ensures all progress notes have a common note title.
- o The SPC Application is automatically updated when a SPC completes the referral process.

## **2.91. Veterans Health Identification Card (VHIC)**

Version: 4.8

Namespace: WEBC

**Brief Description:** The VHIC serves as an identification mechanism for Veterans that are enrolled in the VA Healthcare system and supports efficiencies at VA medical facilities throughout the United States. Although not required by Veterans to receive medical care at a VA facility, it does enable Veterans to check in for VA appointments more quickly. The VHIC system is a web-based application that VHIC Associates use to issue VHICs to enrolled Veterans.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Provide Health Care Administration, Deliver Healthcare

**Business Function Framework Function(s):** Provide Member Access, Perform Hospital Administration, Manage Health Records

**VHA Portfolio:** Business Informatics

**Business Owner:** CBO

**VASI ID:** 1710

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123177/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=140>

**Full Description and Features:** The VHIC displays a color photograph of the veteran and the veteran's name, as well as other information about the veteran such as branch of service, service connected, medal of honor, purple heart, and former POW. VHIC system, which is a web based application, allows the user to take a color photograph of the veteran through a web browser. Identity proofing of the veteran is required, and this service is provided by the Identity Access Management system.

Once the Health Eligibility Center (HEC) has verified the patient's eligibility and the veteran has been assigned an appropriate enrollment status, the veteran's photograph and data are transmitted to the

external card print vendor using secure protocols. The external card print vendor creates the VHIC card and mails it to the veteran.

The VHIC can show the following information on the card as applicable to the Veteran:

- Veteran's name
- Veteran's photograph
- Service connected
- Medal of Honor
- Purple Heart
- Prisoner of War
- Branch of Service
- Other information on the card is the Veteran's Member ID number and Plan ID number

## **2.92. Veterans Personal Finance System (VPFS)**

Version: 1.1.3

Namespace: VPFS

Brief Description: The Integrated Patient Funds software automates the "bank-like" functionality that VA provides for patients to manage their personal funds while hospitalized in a VA medical facility.

Business Function Framework Line(s) of Business: Provide Healthcare Administration

Business Function Framework Function(s): Perform Hospital Administration

VHA Portfolio: Business Informatics

Business Owner: VHA CBO

VASI ID: 1751

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123428/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=170>

Full Description and Features:

VPFS replaces the Personal Funds of Patients (PFOP) system that was used previously. VPFS looks different from PFOP because it is a web-based application; however, its design and functionality are modeled after PFOP. You can perform all of the functions in VPFS that were available in PFOP, with the exception of a few functions that are no longer needed because of the new built-in security controls. One of the major changes is that VPFS is a centralized system. With PFOP, each site used a stand-alone copy

of the software and there were differences between local versions, such as data structures, business rules, etc. With VPFS, all sites access the same centralized application using a web browser over the VHA secure Intranet. VPFS stores all data for all sites in one centralized database. Access to the data in the database is controlled by security software that limits access according to VistA site and user role.

## **2.93. Veterans Point of Service**

Version: 1.0

Namespace: VPS

Brief Description: Point of Service supports the VHA's implementation of interactive kiosks which allow Veterans and VA staff to perform a variety of administrative, financial and clinical tasks.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio: Business Informatics

Business Owner: CBO

VASI ID: 1752

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123429/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=209>

Full Description and Features:

The VA's vision for the VETLINK VA Point of Service (VPS) kiosk is to streamline and improve patient clinical and administrative processes across the VA healthcare network and to provide standard, easy-to-use capabilities for patients and employees to access and update information and perform business transactions through incremental releases. The VA's vision includes a modular and configurable solution that may be tailored to fit each facility's individual needs. The VETLINK VPS Kiosk Application Server uses the RPC BROKER to make calls to the Remote Procedures (RPCs) residing on the VistA host.

- VPS KIOSK INTERFACE: This broker type option contains the RPCs that support the VPS Kiosk system. The VETLINK VPS Kiosk system will call upon these RPCs for specific events triggered by the kiosk machine accessed by a patient (e.g., at check-in) or by VAMC staff. The following remote procedures are attached to this menu
- VPS GET PATIENT DEMOGRAPHIC: This RPC will accept patient SSN as input then retrieve patient demographic data from VistA

- VPS GET CLINIC: This RPC will accept a partial or full Clinic Name as input then retrieves Clinic IEN, Clinic Name, Clinic Physical Location from VistA based on the matching Clinic Name characters from the INPUT String
- XWB GET VARIABLE VALUE: This pre-existing RPC BROKER RPC accepts the name of a variable that will be evaluated and its value returned to the server. For example, this RPC may be called with a parameter like DUZ that will be returned as 123456
- ORWPT FULLSSN: This pre-existing OE/RR RPC accepts an SSN in the format 999999999(P), and returns a list of matching patients
- ORWPT LAST5: This pre-existing OE/RR RPC returns a list of patients matching the string of Last Name Initial Last 4 SSN (Initial/Last 4 look-up to PATIENT file)
- ORWPT LIST ALL: This pre-existing OR/RR RPC returns a set of patient names for use with a long list box
- CONNECT,VPS: VPS connector proxy account that is added to the NEW PERSON file (#200) that is used to configure the VETLINK VPS Kiosk
- VPS RETRIEVE PATIENT VITALS: This RPC will retrieve and display patient vitals data read from the VistA Vitals package
- VPS STORE VITALS: This RPC provides the capability for consuming application user interfaces to enter patient vitals data (temperature, blood pressure, pulse) into the VistA Vitals package
- VPS ENHANCED GET PATIENT DEMO: This RPC retrieves patient health factors and inpatient status
- VPS GET2 PATIENT DEMOGRAPHICS: This RPC retrieves the patient demographic data from the given patient SSN, DFN, ICN or VIC/CAC
- VPS SAVE CLINICAL SURVEY: This RPC provides the capability to enter, store and view patient Clinical Screening Questionnaires through the consuming application interface
- VPS GET SURVEY DATA: This RPC retrieves a patient's clinical survey questionnaire information
- VPS EDIT PATIENT DEMOGRAPHIC: This RPC receives the data request to make edits to the patient record in the PATIENT file (#2)
- VPS PATIENT CHECK-IN: This RPC submits the check-in that is entered by VAMC staff or by self checking-in using a VIC card via the VETLINK VPS Kiosk
- VPS PATIENT PRE-REGISTRATION: This RPC will accept the pre-registration request submitted by the VETLINK VPS kiosk
- VPS GET SITES: This RPC will return the list of facilities at which the veteran was treated
- VPS GET DFN: This RPC will return the patient DFN
- VPS FULLSSN: This RPC returns a list of patients with associated SSNs that match the value stored in ID
- VPS LAST5: This RPC returns a list of patients matching LastNameInitial\_Last4SSN based on Restricted Patient List
- VPS LIST ALL: This RPC returns a list of patients matching input value if "NAME" or "IEN^NAME"
- VPS WRITE MRAR PDO: This RPC retrieves patient's MRAR instance data values that is used to create the patient's MRAR PDO
- VPS WRITE KIOSK PARAMETERS: This RPC retrieves and stores outpatient clinic kiosk configuration parameters used to define clinic kiosk functionality and device

- VPS GET MRAR PDO: This RPC retrieves the patient's MRAR clinical data to provide PDO output
- VPS GET LAST MRAR: This RPC retrieves an identified patient's MRAR clinical data
- VPS UPDATE LAST MRAR TIU IEN: This RPC updates an identified patient's most recent MRAR clinical data with applicable TIU document internal entry number (IEN)
- VPS PRINT PATIENT LABEL: This RPC prints the patient label using the standard VistA print patient label routine (DGPLBL)
- VPS GET CLINICAL REMINDERS: This RPC retrieves clinical reminder applicable to a patient and "Due Now"
- VPS PATIENT WRISTBAND PRINT: This RPC prints a patient wristband with barcode to a VistA printer in a secure area. This RPC requires the printer device name, patient identifier type, and a patient identifier of the specified type
- VPS GET PRINTERS: This RPC works with common application program interfaces (APIs) to support VPS printing functionality
- VPS GET ALL CLINICS: This RPC retrieves a list of hospital locations defined in the HOSPITAL LOCATION file (#44)
- VPS GET APPOINTMENTS: This RPC retrieves all appointments for a patient in a given date range
- VPS GET CHANGED APPOINTMENTS: This RPC retrieves the appointments that have changed since the last execution of the VPS GET APPOINTMENTS RPC

## **2.94. Virtual Electronic eHealth Exchange (VLER)**

Version: 6.0.1.3

Namespace: NHIN

Brief Description: The Virtual Lifetime Electronic Record (VLER) Health Program allows VA, non-VA health care providers, and Veterans to securely share certain health information from a Veteran's health record electronically.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=195>

**Full Description and Features:** The VA eHealth Exchange program will ensure that appropriate medical information is shared through secure and interoperable information management systems, making the necessary information available to those who need it, when they need it, and in a form that is suited to the stakeholders' needs.

The Department of Veterans Affairs (VA), Department of Defense (DoD), and other partners also understand that there is a compelling need to promote the sharing of health information not only with other government agencies but also with private sector healthcare entities to provide for the continuity and quality care of all veterans. eHealth Exchange is designed to give both VA clinicians as well as external eHealth Exchange partners immediate access to vital Veteran health record information at the point of care, either within a VA facility or at a participating partner facility, and therefore has the potential to improve the quality of care for all Veterans.

eHealth Exchange is a query-based exchange where a clinician from one organization can request, receive and display health information from other participating organizations that know the patient. The health information exchanged is primarily a health summary document known as a Continuity of Care Document (CCD or C32) and associated clinical notes.

## **2.95. Virtual Patient Record (VPR)**

Version: 1.0

Namespace: VPR

**Brief Description:** Virtual Patient Record (VPR) is a foundation software package component of the Health Management Platform architecture. This architecture is part of the scope of the Health Informatics Initiative and Healthshare. The Joint Legacy Viewer is highly dependent on the payloads from the VPR routines.

**Business Function Framework Line(s) of Business:** Manage Business Enabling Services

**Business Function Framework Function(s):** Utilize Information Technology Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** Dr. Margaret Donahue

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=197>

Full Description and Features: VPR extracts patient data from domains at local and remote VistA sites to provide a cached view of patient charts. It provides normalized fields with common field names and data structures across domains. VPR includes four remote procedure calls (RPCs), which extract data from VistA in different formats (JSON, XML) and returns the current version number for VPR. Software has patient record JSON data export capability.

## **2.96. VistA Imaging System**

Version: 3.0

Namespace: MAG

Brief Description: VistA Imaging facilitates medical decision-making by delivering complete multimedia patient information to the clinician's desktop in an integrated manner. Windows-based workstations, which are interfaced to the main hospital system in a client-server architecture, make images and associated text data available at all times anywhere in the hospital or across VA.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Provide Ancillary Services, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Chief Consultant, Diagnostic Services

VASI ID: 1328

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122887/c/56/nt/-1?id=1578>



VDL Link: <https://www.va.gov/vdl/application.asp?appid=105>

Full Description and Features: VistA Imaging handles high quality image data from many specialties, including cardiology, dermatology, ophthalmology, pulmonary and gastrointestinal medicine, pathology, radiology, hematology, and nuclear medicine. VistA Imaging can also provide text reports from the hospital information system, scanned documents, and electrocardiograms. VistA Imaging is integrated with the Computerized Patient Record System ((CPRS), Joint Legacy Viewer (JLV), Joint Legacy Viewer-Community Viewer (JLV-CV), MyHealthEVet (Blue Button), Image Viewer Service (IVS-Mobile Apps), Embedded Fragment Registry (EFR), DocRef, and After Visit Summary (AWS), to provide a comprehensive electronic patient record with access to images from across VA as well as DoD, and provides VA images to DoD as well. VistA Imaging's diagnostic display software (VistARad) can be used when a commercial Picture Archiving and Communication System (PACS) is unavailable for the filmless interpretation of radiology studies and for workflow management.

VistA Imaging is made up of the following components:

- Core Infrastructure
- Document and Ancillary Imaging
- Filmless Radiology
- Telemedicine
  
- Provides capture, display, manipulation, and management functions for a wide variety of medical images such as radiographs, sonograms, EKG tracings, gastroenterology studies, pulmonary bronchoscope exams, podiatry, dermatology, and ophthalmology images. VistA Imaging can store and display any sort of multimedia data, including digital images, motion video clips, graphics, scanned documents, and audio files
- Integrated with CPRS, Joint Legacy Viewer (JLV), Joint Legacy Viewer-Community Viewer (JLV-CV), MyHealthEVet (Blue Button), Image Viewer Service (IVS-Mobile Apps), Embedded Fragment Registry (EFR), DocRef, and After Visit Summary (AWS), allowing users to view images automatically for a selected patient. When a user views a radiology report, consult, or progress note in CPRS, the associated images are easily available
- Provides a standard interface between VistA and commercial PACS
- Automatically acquires complete studies from DICOM-compliant modalities (CT, MRI, digital X-ray, ultrasound, etc.), associates the studies with the correct patient and report, and stores the studies in VistA Imaging for inclusion in the electronic patient record
- Provides image file storage, management, and retrieval from magnetic and optical disk servers and supports data capture, storage, and retrieval over a local or wide area network (LAN/WAN)
- Provides access to electronic medical records from remote VA medical facilities over the VA intranet
- Has the ability to track and report the cumulative dose of radiation received per patient during specific radiological imaging procedures
- Track and report cumulative radiation dose per patient during specific procedures
- Supports multiple modality work list capability for different clinical subspecialties
- Allows for DICOM storage commitment

- Enables transmission of HL7 messages for CPRS consult request tracking orders and reports and Admission, Discharge, Transfer (ADT and patient tracking to be transmitted to external systems, like Cardiology PACS and Eye Care PACS
- Provides a VistA Imaging Release of Information (ROI) disclosure service that runs on the local VIX server
- Enables a telepathology solution that includes the VistA Imaging Telepathology Applications (VITA). This includes the VistA Imaging Telepathology Worklist and VistA Imaging Telepathology Configurator. The VITA provides a graphical user interface that pathologists can use to view daily workload at their sites. for Surgical Pathology (SP), Cytopathology (CY) and Electron Microscopy cases (EM). At this time the applications will not be in support of autopsy cases. It also provides a graphical interface that site administrators can use to set some configuration parameters for the VistA Imaging Telepathology Work list and to view the VITA and the system logs
- Provides Zero footprint HTML5 based image viewer to support viewing images in VA Web Applications such as JLV, JLV-CV, MyHealthEVet (Blue Button), and the like. The Zero Footprint image viewer can be invoked by client software interacting with any VIX instance

#### Core Infrastructure

- Includes the components used to capture, store, and display all types of images. Images can be captured using video cameras, digital cameras, document scanners, x-ray scanners, and imported files created electronically by commercial systems. Images can also be directly acquired from DICOM-compliant devices such as CT scanners, MR scanners and digital x-ray machines. Components include:
  - o DICOM text gateways, which provide patient and order information to medical devices (such as CT scanners and digital radiography systems), allowing selection of the examination to be performed. The data provided by DICOM text gateways complies with the DICOM Modality Work list standard.
  - o DICOM image gateways, which allow VistA Imaging to receive images from PACS or acquisition devices. Image gateways can also be used to transfer images from the VistA system to any DICOM-compliant devices for display, printing, or teleradiology, and telemedicine purposes.
  - o Windows-based workstation software for clinical image display and capture.
  - o The Background Processor, which manages image storage on various network devices, including magnetic storage (RAID) and optical storage (jukebox/archive appliance/storage grid) as a long-term archive.
  - o The VistA Imaging database, which manages image information and the relationship between images and study data.
  - o The commercially available equipment required by VistA Imaging, including magnetic servers, optical disk jukeboxes, archive appliances, and utility workstations.

#### Features of the Core Imaging Infrastructure:

- Acquires images and multimedia data
- Stores images to allow immediate access and long-term permanent storage
- Communicates and displays images in a timely manner
- Processes various types of images from multiple specialties
- Links images to the VistA integrated patient record so that they can be retrieved by patient or study/progress note
- Protects security and privacy of images, and prevents alteration of images after capture.
- Provides access to available DoD images
- Enables remote viewing and capture of images

- Automatically acquires complete studies from DICOM-compliant modalities (CT, MRI, digital x-ray, ultrasound, etc.), associates the studies with the correct patient and report, and stores the studies in VistA Imaging for inclusion in the electronic patient record
- Provides image file storage, management, and retrieval from magnetic and optical disk servers and supports data capture, storage, and retrieval over a local or wide area network (LAN/WAN)
- Provides access to electronic medical records from remote VA medical facilities over the VA intranet
- Provides access to available DoD images

Document and Ancillary Imaging provides document imaging and management and integration to the medical record.

DOCUMENT IMAGING allows scanned and electronically generated documents to be associated with the online patient record and displayed on clinical workstations.

Benefits and features include:

- Online availability of all information in the electronic patient record, including handwritten papers, drawings, signed documents, and medical correspondence
- Linkage of paper-based patient information to the electronic patient record, making all patient information quickly available and easily retrievable through a single workstation
- Immediate availability of critical documents, such as advance directives and informed consent forms, at the time they are needed
- Elimination of lost or misfiled medical chart information
- Interfaces to commercial document scanning systems and systems that generate documents electronically
- Scanning and indexing of black-and-white, grayscale, and color documents, including: signed advance directives, consent forms, annotated drawings, external medical records documents, and administrative documents such as Means Test forms
- Ability to annotate standard online diagrams and save the annotated diagrams with a progress note
- Document image storage in short- and long term- storage devices
- Display and printing of document images for clinical and administrative purposes

ANCILLARY IMAGING captures, stores, and displays images for a particular service or specialty. This may be accomplished using the Clinical Capture workstation or by interfaces to commercial systems.

Features include:

- Interfaces to commercial EKG systems for display of electrocardiograms on clinical workstations. Supports automatic DICOM interfaces for capture of specialty images from compliant systems (DICOM Modality Worklist Conformance Requirements are provided to sites purchasing specialty equipment)
- Processes various types of images from multiple specialties. DICOM and Clinical Workstation support for ophthalmology, dental, endoscopy, pathology, cardiology, and other specialties is provided
- Links images to the VistA integrated patient record so that they can be retrieved by patient or study/progress note
- Protects the security and privacy of images, and prevents alteration of images after capture

Filmless Radiology uses high-resolution workstations and high-speed servers to allow radiology departments to operate without generating x-ray film when a commercial Picture Archiving and Communication System (PACS) is unavailable. Workstations running VistARAD, VistA Imaging's

diagnostic image display software, are used by radiologists for the online interpretation of images acquired by CR, CT, MRI, and other modalities.

Features include:

- Highly customizable hanging protocols
- User-specific profiles that are applied regardless of login location
- Integration with voice dictation systems
- Automatic data integrity checks and notifications
- Easy access to image review, analysis, and manipulation tools
- Optional on-demand routing for telemedicine/teleradiology
- Direct access to requisitions, reports, and health summary data
- Compliant with HIPAA, the Federal Privacy Act, and VA security policies
- Key image identification and saved annotations
- A 'ReadList' function that allows a user to update the status of an open exam and immediately and display the next unread exam in a single step
- Site-configurable exam lists
- Supports viewing of available DoD radiology images

Telemedicine VistA Imaging Telemedicine provides immediate access to images from anywhere in the VHA, including imported images and reports. Functionality includes remote viewing and access to images during disaster situations. This "Remote Image Views" capability allows access to the complete electronic health care record no matter where the patient is within the VA healthcare network.

Features include:

- Immediate access to images from any other point on the VHA healthcare network without contacting the other facility
- Avoidance of redundant testing that is often done in urgent situations if images and reports are not readily available
- Reduction of patient wait times because all information is immediately available.
- More informed decision making because all images and reports can be reviewed, providing a clear picture of the patient's care in the past and of the treatment the patient has been receiving
- No need to make hard copy of images or films to send with the patient for a referral visit to another VAMC
- Images and reports from studies done at hospitals outside the VA network, once imported into VistA Imaging, are available immediately everywhere
- Patients can view their own images with their clinician, even if those images are stored at another facility
- Clinicians can access all images and scanned documents locally at the site or from remote clinics/locations

In case of disasters, the images of displaced patients are available at other VA facilities.

## **2.97. Visual Impairment Service Team**

Version: 4.0

Namespace: ANRV

Brief Description: The Visual Impairment Service Team (VIST) module enhances the efficiency of the Visual Impairment Service Team programs within the Department of Veterans Affairs (VA).

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Care Management, Provide Ancillary Services

VHA Portfolio: Health Provider Systems

Business Owner:

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=106>

Full Description and Features: With this program, Visual Impairment Service Teams are able to easily manage and track activities and services provided to blind Veterans in their service area. This program integrates several fields of patient data to produce a variety of reports. The VIST patient record printout can be used in place of VA Form (10-1371) and is a more versatile document than the card. Semi- annual Automated Management Information System (AMIS) reports can be run and Veterans can be added or deleted from the rolls as indicated.

- Enhances the efficiency of the Visual Impairment Service Team programs
- Provides a way to easily track and manage activities and services provided to blinded veterans
- Provides a wide variety of reports based on patient data. Blinded veterans can be quickly added or deleted from the rolls

## **2.98. Vitals/Measurements**

Version: 5.0

Namespace: GMRV

Brief Description: The Vitals/Measurements application is designed to store, in the patient's electronic health record, all vital signs and various measurements associated with a patient's hospital stay or outpatient clinic visit. Data entered can be accessed by several VistA (Veterans Health Information Systems and Technology Architecture) applications (e.g., Health Summary) that interface with the Vitals/Measurements application.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Medical Services

VHA Portfolio: Health Provider Systems

Business Owner: Patient Care Services (PCS)

VASI ID: 1854

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123335/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=107>

Full Description and Features: The Vitals application is composed of two modules: Vitals and Vitals Manager. Each module is accessed separately through the GUI executable icons on the user's desktop. The Vitals module is used to enter patient data, and is assigned to clinical staff. The Vitals Manager module is used to manage the Vitals templates and abnormal value ranges, and is assigned to the Clinical Application Coordinator, package coordinator, and Information Resource Management Service (IRMS) staff.

- Provides a Graphical User Interface (GUI) to make collecting and viewing of data easier
- Supports documentation of a patient's vital signs (e.g., temperature, pulse, and respiration)
- Tracks a patient's height, weight, central venous pressure (CVP), circumference/girth, and oxygen saturation via oximetry with supplemental oxygen information
- Supports documentation of detailed or positional blood pressure for a patient (for example, bilateral blood pressures taken in a sitting position)
- Displays latest information on all of the patient's vitals/measurements in both metric equivalents and U.S. customary units (when appropriate) along with the date/time the information was obtained and the name of the user who entered the information
- Allows facilities to establish hospital-wide high and low values for most vital signs and measurements. Identifies abnormal values, those values outside the high and low range on vitals/measurements reports
- Allows user to record a reason for the omission of a patient's vitals/measurements (such as Patient on Pass)
- Associates qualifiers (alpha characters appended to the measurement's numeric value) to provide a more detailed description of the patient's vitals/measurements
- Contains online help windows to assist users
- Displays graphic reports on workstation monitors, and provides a variety of printable reports. Reports can be printed for an individual patient or for multiple patients
- Provides APIs that pass patient vitals/measurements information within a specific date range to the other VistA applications
- Provides compliance with the Clinical Context Object Workgroup (CCOW) standard. The CCOW standard provides a way for applications to know which other applications are currently running, and which patients are selected in those applications

- Supports an interface to vital signs monitor connected to the workstation
- Allows the site to configure the ORWT TOOLS MENU in the CPRS GUI to access the application

## **2.99. Voluntary Service System**

Version: 5.3

Namespace: VSS

Brief Description: VSS is a national-level application replacing the site-based Voluntary Timekeeping System (VTK); it is used to track and manage the hours of service contributed by volunteers and volunteer organizations at VA facilities.

Business Function Framework Line(s) of Business: Provide Health Care Administration, Manage Business Enabling Services

Business Function Framework Function(s): Perform Hospital Administration, Manage Human Resources

VHA Portfolio: Business Informatics

Business Owner: VHA Office of Voluntary Service Programs

VASI ID: 1483

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123058/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=135>

Full Description and Features: The VSS application helps voluntary staff accomplish their tasks more easily through a Web-based graphical user interface. Users at the local and national level are able to generate a wider array of reports about volunteers and sponsoring organizations. In addition, volunteers are able to log their own hours and print meal tickets themselves at secure log-in "kiosks." VSS users interact directly with a national, centralized database, and consolidated national reporting no longer requires data transmissions back and forth between sites and the Austin Information Technology Center (AITC). Direct access to data provides instantaneous updates and up-to-minute reporting for all users. Central Office administrators and voluntary staff thus have broader and more reliable data for managing volunteer services.

- Provides multi-lingual interaction with volunteers during log-in
- Supports and enhances security for multiple division facilities
- Displays/prints entire master record for a single volunteer
- Provides local printing of address labels and telephone lists

- Reduces workload required to input mass award code changes
- Prints individual meal ticket for volunteer after Auto Log-in
- Provides real-time national reporting of data for all stations

## **2.100. Women's Health**

Version: 1.0

Namespace: WV

Brief Description: The Women's Health (WH) application provides tracking functionality for procedures of particular interest to women patients (e.g., screening mammogram). The application provides a full range of breast and gynecologic cancer screening and tracking functions.

Business Function Framework Line(s) of Business: Manage Public Health, Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Provide Medical Registry Service, Provide Medical Services, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: Women's Health Services

VASI ID: 1846

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123416/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=109>

Full Description and Features: Women's Health application is a patient management tool for tracking the breast and gynecologic treatment needs of women, the procedures they receive, and the communications between healthcare staff and women regarding their treatment and follow-up. The application also provides some program-wide epidemiological reports which are of use to clinicians and program administrators.

The Women's Health software is composed of three main modules:

- Patient Management
- Management Reports
- Manager's Functions



Patient Management is the portion of the software used to manage individual patient care, that is, their procedures, due dates and correspondence. Under the Patient Management menu it is possible to maintain patient data such as the date of the next PAP smear, colposcopy or mammogram, the patient's pregnancy and her EDC (due date), as well as the patient's current PAP regiment. It is also possible to track the patient's individual procedures: the date performed, the provider and clinic, the results or diagnosis, etc. Notifications (letters and phone calls) may also be tracked. A file of form letters has been included in the software, and these letters may be edited and personalized for a clinic's particular needs. Reminder letters can be queued months in advance of a future appointment, then printed and mailed out shortly before the tentative appointment.

Management Reports is the portion of the software used to print epidemiological reports such as the number of women who received a mammogram for the selected time period, or the number of patients having abnormal PAP results during a selected time period. Under the Management Reports menu it is possible to produce lists of patients who are past their due dates for follow-up procedures. It is also possible to store program statistics by date for later comparison of program trends and progress.

Manager's Functions is that portion of the software that provides the ADPAC with a set of utilities for configuring the software to the specific needs of the site. It also provides utilities for other program needs such as customizing tables, making special edits to patient data (e.g., pregnancy log, PAP regiment log), printing notification letters, running error reports, and documenting laboratory results. By using the File Maintenance options under the Manager's Functions menu, it is possible to maintain site specific parameters such as the text of form letters, the types of notifications and their synonyms, how and when letters get printed, and several defaults relating to dates.

## **2.101. Wounded, Injured and Ill Warriors**

Version: 1.0

Namespace: WII

Brief Description: Wounded Injured and Ill Warriors (WII) module was developed as a tool to provide accurate and timely personnel and health related data to the Department of Defense/Defense Finance and Accounting Service (DoD/DFAS) supporting adequate maintenance of pay and entitlements for all wounded warriors.

Business Function Framework Line(s) of Business: Deliver Health Care

Business Function Framework Function(s): Provide Medical Services, Provide Ancillary Services

VHA Portfolio: Business Informatics

Business Owner: VHA

VASI ID: 1847

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123417/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=178>

**Full Description and Features:** Through a collaborative effort between VHA and DoD/DFAS, a Memorandum of Understanding (MOU) was reached to provide defined data elements to DFAS for tracking of active duty service members who were admitted to VA inpatient facilities. The MOU established the authorities and agreement for the exchange of information relating to admissions and discharges from VA inpatient facilities of active duty personnel. There is a weekly collection process of admissions and discharges for active duty service members at each VA inpatient facility. This collection and consolidation of data into a single repository is reviewed and transmitted to DFAS to a central data collection point. Each facility runs the weekly background job which collects data based on admissions and discharges for patients with a Primary or Other Eligibility of TRICARE, SHARING AGREEMENT or OTHER FEDERAL AGENCY. Upon completion of the background job, VistA will send an email message to the local WII ADT REVIEWER mail group alerting facility staff on whether there are entries requiring approval. The message indicates either potential or no potential active duty admissions/discharges for the past week. If there were potential admissions/discharges, then the message will state there are active duty admissions, reflect the number of potential active duty admissions or discharges needing review, the record count, and the time period of the report. Staff will review and process those potential active duty cases.

## **2.102. On-going/Completed Application Decommissioning**

### **2.102.1. Automated Safety Incident Surveillance Tracking System (ASISTS)**

Version: 2.0

Namespace: OOPS

**Brief Description:** Automated Safety Incident Surveillance Tracking System (ASISTS) was designed to manage the data from all employee accidents, create a Report of Accident (VA Form 2162) from the data, and produce both the Office of Worker's Compensation Programs Form CA-1 (Instructions for Completing Employee's Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation) and Form CA-2 (Federal Employee's Notice of Occupational Disease and Claim for Compensation).

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Manage Business

**Business Function Framework Function(s):** Perform Hospital Administration, Manage Human Resources

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Public Health

VASI ID: 1037

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/122741/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=56>

Full Description and Features: Improving tracking and management of employee accidents, in general, and exposures to blood borne pathogens from needle sticks and sharps, in particular, is a high priority of VHA. Consequently, the package contains fields that are specific to needle stick, sharps, and bodily fluid exposures. The data collected from ASISTS is electronically transferred to a national database and used to identify system-wide problems and opportunities for focused education and to conduct research. The electronic submission of workers' compensation claims to the Department of Labor is improving submission rates and reducing duplicate data collection and data entry.

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

- Electronic signature is used extensively throughout this program. All three forms (VA Form 2162, CA-1, and CA-2) require appropriate signatures including that of the employee for the CA-1 and CA-2, which is used when electronically transferring the date to the Department of Labor
- Bulletins alert employee health and infection control of any exposures to blood borne pathogens. The employee's supervisor, the safety officer, Human Resources Management, and union representatives are notified of every incident. Electronic signatures trigger bulletins from the employee to the supervisor and union representatives and from the supervisor to the safety officer, alerting the recipient of action that should be taken
- Every medical center employee has access to a menu structured specifically to the level of his/her involvement in the process: employee health, supervisor, safety officer, union representative, workers' compensation personnel, and employee
- The graphical user interface (GUI) for ASISTS facilitates the input and processing of accident reports and claims and improves the reporting functionality, including a revised OSHA and Needle stick log and graphical representation of the incident reports
- Future versions will include a comprehensive employee health module for tracking and following numerous health issues

#### 2.102.2.Beneficiary Travel

Version: 1.0

Namespace: DGBT

Brief Description: The Beneficiary Travel module provides the ability to perform the functions involved in issuing beneficiary travel pay. Travel reimbursement is provided to specified categories of eligible veterans. It is also provided to non-employee attendants who are eligible for such reimbursement. These attendants will be issued travel pay under the veteran's name.

Business Function Framework Line(s) of Business: Provide Access to Health Care, Manage Business

Business Function Framework Function(s): Facilitate Patient Travel to Points of Care, Provide Financial Management

VHA Portfolio: Business Informatics

Business Owner: VHA Chief Business Office

VASI ID: 1781

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123318/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=123>

Full Description and Features: The Beneficiary Travel options provide the ability to perform the functions involved in issuing beneficiary travel pay. Travel reimbursement is provided to specified categories of eligible veterans. Issuance of travel pay to the veterans in some of these categories is subject to a deductible per visit and per month. The deduction requirement may be waived for any veteran who meets specific criteria subject to the approval of the local medical center director or designee. Some of the categories have income limitations. An income certification form is completed and signed yearly by the veteran. Cash reimbursement is paid on VAF 70-3542d, Voucher for Cash Reimbursement of Beneficiary Travel Expenses. Non-employee attendants who are eligible for travel reimbursement will be issued travel pay under the veteran's name in the computer. Payment for travel by special mode (ambulance, hired car, handicapped van, etc.) may be authorized under certain conditions. The amount payable is computed from factors such as account type, parameter set up of deductible amount per visit and per month, one-way or round-trip mileage, and applied costs. The amount payable for claims with an account type of Compensation and Pension (C&P) will also be computed by the system.

The Beneficiary Travel Dashboard (BT Dashboard) web application was released in 2012 as an accessory to the existing VistA Beneficiary Travel application. Travel clerks use BT Dashboard concurrently with the VistA BT claims functionality, usually on side-by-side screens, to calculate mileage with Bing™ Maps.

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

- Automatically computes the amount payable for claims with an account type of Compensation and Pension
- Allows each site to define and edit site-specific beneficiary travel parameters
- Produces a variety of statistical reports for a specified date range

- Provides the ability to reprint the standard pre-formatted beneficiary travel form for cash reimbursement

### 2.102.3.Care Management

Version: 1.0

Namespace: ORRC

**Brief Description:** Care Management is the first application to offer a convenient way for health care providers to view on a single screen, pertinent information about multiple patients.

**Business Function Framework Line(s) of Business:** Provide Healthcare Administration, Deliver Healthcare

**Business Function Framework Function(s):** Perform Hospital Administration, Provide Medical Services, Manage Health Records

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA Primary Care

**VASI ID:** 1784

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123320/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=138>

**Full Description and Features:** With Care Management, users can see at a glance multiple patients for whom they have items that require attention. The current distribution of Care Management offers the following four perspectives (which are similar to applications):

**Clinician Dashboard:** Provides an easy-to-read table of patients for whom clinicians have unacknowledged results or event notifications (such as hospital admissions, discharges, or unscheduled clinic visits), unsigned documents, or uncompleted tasks.

**Nurse Dashboard:** Provides an easy-to-read table of patients for whom nurses have unacknowledged results, unviewed events, uncompleted tasks or text orders, unverified orders, or recent vitals.

**Query Tool:** Enables authorized users to create reports based on the most current patient data available. The Query Tool offers five pre-defined reports and enables users to create their own customized reports.

**Sign List:** Enables users to sign multiple items for multiple patients. For example, using the Sign List, a clinician can sign a discharge summary for John Smith and notes for Jane Smith simultaneously. This

distribution of Care Management also includes the Task Editor, which enables users to create patient-related tasks.

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

Care Management comprises an extensive set of features designed to simplify and improve patient care. These features include (but are not limited to) the following:

- Colored-coded icons that indicate the priority status of dashboard items
- A default patient list that is based on users' Computerized Patient Record System (CPRS) default patient list
- A dynamically generated, user-based patient list
- Custom patient lists
- Checkboxes for acknowledging and verifying individual or multiple dashboard items
- The ability to set date ranges for dashboard items
- The ability to link tasks to other tasks or to events
- The ability to prioritize, edit, and delete tasks
- Text boxes that expand to provide detailed information about dashboard items

A variety of predefined reports, including the following:

- Abnormal Results
- Consult Status
- Incomplete Orders
- Recent Activity
- Scheduled/Due Activity

Custom reports with a wide selection of criteria, including (but not limited to) the following:

- Screen by Inpatient, Outpatient, or Pharmacy Visits
- Screen by Primary Outpatient Provider
- Orders/Results
- Consults/Procedures
- The ability to print and export reports

Care Management is tightly integrated with CPRS. As a result, from within CareManagement, users can:

- Go directly to a patient's chart in CPRS
- Clear selected result notifications in CPRS, including notifications in the following categories:

Events, Results, Actions

Care Management's intuitive Graphical User Interface (GUI) includes an extensive selection of clickable items from which users can:

- Select a default perspective
- Select dashboard preferences
- View demographic information for individual patients
- View details about specific action items

Namespace: HMP

Brief Description: eHMP was a read-only version which has been slated to replace VistAWeb. The system will provide enhanced presentations of clinical data that will range from trend views that provide a quick snapshot of easily understandable data, to detailed views that provide the user with a full range of options for examining longitudinal patient medical records. the EHMP project was shut down in early 2018.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 2052

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/150347/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=219>

Full Description and Features: The Enterprise Health Management Platform (eHMP) project is a multi-year (starting year 2016) effort to evolve a modern, service-oriented platform which provides a web-based user interface (UI), clinical data services (CDS), and assembles patient clinical data from federated Veterans Health Information Systems and Technology Architecture (VistA) repositories, Department of Defense (DoD), and private partner data sources, reflective of each location providing care to the patient. This federated data is aggregated into an enterprise patient record. eHMP service components will span all application layers, including presentation, business and core services, and data access.

Release 1.2 introduces critical viewer edition enhancements to provide new capabilities to the Department of Veterans Affairs (VA) beyond what is available today via Computerized Patient Record System (CPRS), Joint Legacy Viewer (JLV), and VistAWeb. The system will provide enhanced presentations of clinical data that will range from trend views that provide a quick snapshot of easily understandable data, to detailed views that provide the user with a full range of options for examining longitudinal patient medical records. Users will be able to configure these views into a limitless number of custom workspaces in order to support a variety of clinical workflows. There will also be multiple pre-configured workspaces available to the user, which are filtered for specific conditions. The workspaces will provide the appropriate clinical information for a selected condition (e.g., COPD, Diabetes). Further enhancements will include improved text search and online application help screens.

Note: This product has been decommissioned and will not appear in future versions of the Monograph.

## 2.102.5.Incident Reporting

Version: 2.0

Namespace: QAN

**Brief Description:** The Incident Reporting module supports VHA policy by compiling data on patient incidents. It organizes the data into defined categories for reporting and tracking at medical facility level and for transmission to the National Quality Assurance Database for Headquarters review and tracking.

**Business Function Framework Line(s) of Business:** Provide Health Care Administration, Manage Business Enabling Services

**Business Function Framework Function(s):** Perform Hospital Administration, Utilize Information Technology Services

**VHA Portfolio:** Business Informatics

**Business Owner:** VHA Office of Quality, Safety and Value

**VASI ID:** 1963

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123381/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=43>

**Full Description and Features:** Incident Reporting allows for the entry of all required incident information plus descriptive data and actions taken on all reportable and/or locally defined incidents.

- Prints out a Pseudo 10-2633 Incident Worksheet

Provides an ad hoc reporting mechanism that uses VA FileMan modifiers for sorting or printing the following data fields:

- Patient Type of Death
- Patient ID Level of Review
- Date of Admission
- Date of Incident
- Patient Type Incident Case Status
- Ward/Clinic Severity Level
- Treating Specialty Fall Assessment Score
- Service Person Reporting the Incident



- Responsible Service Patient Diagnosis
- Medication Errors Medical Center Action
- Case Number Incident Description
- Incident Pertinent Information
- Incident Location National Case Status

Note: This product has been identified for decommissioning (with patch QAN\*2\*34) and will not appear in future versions of the Monograph.

## 2.102.6.Integrated Funds Distribution, Control Point Activity, Accounting and Procurement (IFCAP)

Version: 5.1

Namespace: PRC

Brief Description: Integrated Funds Distribution, Control Point Activity, Accounting and Procurement (IFCAP) module automates a spectrum of VA financial activities. VA employees use IFCAP to manage budgets, order goods and services, maintain records of available funds, determine the status of a request, compare vendors and items to determine the best purchase, record the receipt of items into the warehouse, and pay vendors.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Manage Fixed Assets, Conduct Supply Chain Operations, Provide Financial Management

VHA Portfolio: Business Informatics

Business Owner: VHA Procurement and Logistics Office

VASI ID: 1807

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123213/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=42>

Full Description and Features: IFCAP automates the written regulations and policy for VA funds and procurement, which define the actions taken on requests for goods and services as formal transactions, orders, and payments.

- Allows users in different services to view the same document on-screen
- Automates funds distribution, request for goods and services, purchase order, funds obligation, and the receipt process

- Standardizes funds management. Automatically generates yearly budget elements for IFCAP control points
  - Maintains year-to-date balance for control points. Integrates service-level requisitions and facility administrative activities, and updates service-level records
  - Shares vendor and item master data to eliminate duplicate input and promote user accuracy
  - Affixes processing status to each request at each step in the ordering cycle
  - Enhances security with the use of a unique electronic signature code for each user required to authorize an action
  - Sets an encoded value based on key fields from each record signed
  - Transmits financial and inventory data to VA central accounting and inventory systems.
  - Updates IFCAP records automatically with central accounting system data
    - Provides various reports that give the current status of any request, a service fund balance, and data required for budget analysis, and a listing of requests sorted according to control point specifications
  - Enables electronic transmission of purchase orders to vendors through Electronic Data Interchange (EDI) and updates purchase order status automatically
  - Enables authorized users to purchase goods using Electronic Data Interchange (EDI) process for total electronic processing between vendor and buyer
  - Supports the ordering of goods under contract from specific vendors via delivery orders
  - Supports the payment for goods/services via the government purchase card and the subsequent on-line reconciliation
  - Transmits Federal Procurement Data System (FPDS) data to the Austin Information Technology Center (AITC) to support enterprise level tracking of procurement history
  - Supports monthly management analysis activities by transmitting inventory and purchase order activity data to the Clinical Logistics Report Server at AITC
  - Supports, via a graphical tool, the reviewing of purchase order activity and other logistical data within IFCAP; and the export of that data to MS Excel spreadsheets for further analysis
  - Supports both the identification of items by their National Item File number (NIF #) and the standardized naming of Items through an interface between IFCAP and the National Item File
  - Transmits inventory and purchase order activity data to the Clinical Logistics Report Server (CLRS) on a monthly basis for management analysis
  - Provides numerous Inventory management features including desired stock levels, automatically generated (autogen) replenishment orders, identification via bar code technology, and numerous reporting mechanisms
  - Supports the identification and tracking of on-demand items at the primary and the secondary level
  - Enforces the separation of duties. Controls are implemented with respect to Requestors, Approving Official and Obligators
  - Provides bi-directional communication between IFCAP and the commercial Electronic Contracting Management System (eCMS) location at the (AITC) in Austin, TX
- Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

## 2.102.7.Library

Version: 2.5

Namespace: LBR

Brief Description: Patch LBR\*2.5\*15 retired the Library (LBR) version 2.5 package. All national components associated with the Library package were removed as of compliance date, May 3, 2018. The Library module is designed to automate the entire serials management process in VA Library Services.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio: Business Informatics

Business Owner: OIA Patient Care Services

VASI ID: 1815

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123287/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=47>

Full Description and Features: Patch LBR\*2.5\*15 retired the Library (LBR) version 2.5 package. All national components associated with the Library package were removed as of compliance date, May 3, 2018.

The Serials Control module has three components. The Serials Management component creates the local library's serials database, along with retrospective holdings and purchasing information and copy information, such as location and category. The module is designed so that access to this component may be restricted, if desired, to the serials expert on the library staff, usually a medical librarian or the Chief. Access to the Serials Control component where daily actions are managed (e.g., check-ins, routing, and generation of reports) may be given to other Library Service staff members. A minor component of the module, Library Site Parameters, allows for the initialization of the module. A centrally produced Title Authority file, a database of over 9,477 serials titles owned by VALNET (VA Library Network) libraries, was preloaded with standard bibliographic data and provided as a part of this module. Library makes it possible for local sites to carry only locally active entries in their local database. When new entries are needed, they can be downloaded automatically from the national database into a site's local database.

- Creates a local serials database
- Provides acquisition and retention information
- Provides purchasing and vendor information

- Provides holdings information and shelving location information
- Categorizes by type and subject
- Provides check-in with next issue prediction
- Generates routing slips
- Tracks materials returned from routing
- Displays check-in history
- Generates 20 management reports (e.g., listings, monthly check-in statistics, monthly routing statistics, tracking of unreturned routed issues, missing issue reports for claiming replacements or reports, etc.)

Note: This product has been decommissioned and will not appear in future versions of the Monograph.

## 2.102.8. Medical Domain Web Services (MDWS)

Version: 1.0

Namespace: MWSV

Brief Description: Medical Domain Web Services (MDWS) (pronounced "meadows") is a suite of Service Oriented Architecture (SOA) middle-tier web services that exposes medical domain functionality.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Utilize Information Technology Services

VHA Portfolio: Common Services

Business Owner: OIA HI HI2

VASI ID: 2000

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123367/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=192>

Full Description and Features: Medical Domain Web Services (MDWS) (pronounced "meadows") is a suite of Service Oriented Architecture (SOA) middle-tier web services that exposes medical domain functionality, Medical Domain Objects (MDO). MDWS is equipped with the capacity to virtualize any legacy Veterans Health Information Systems and Technology Architecture (VistA) Remote Procedure Call (RPC) as a web service. A web service is an Application Programming Interface (API), which uses Simple Object Access Protocol (SOAP), the standardized protocol to communicate with subscribed client applications.

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

## 2.102.9.Patient Advocate Tracking System (PATs)

Version: 1.0.2

Namespace: QACV (QAC for patch designation)

**Brief Description:** The Patient Advocate Tracking System (PATs) is a web-based application with a centralized database and notification function (email) for tracking patient-related issues and is designed to work on various operating systems.

**Business Function Framework Line(s) of Business:** Provide Access to Health Care, Provide Health Care Administration, Manage Business Enabling Services

**Business Function Framework Function(s):** Provide Communications and Outreach, Manage Customer Relations, Utilize Information Technology Services

**VHA Portfolio:** Business Informatics

**Business Owner:** Office of Patient Advocacy

**VASI ID:** 1492

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123064/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=172>

**Full Description and Features:** PATs is a centralized, JEE light-client application, used by Patient Advocates via a browser, at each VA healthcare facility, to manage, record and resolve veteran (patient) compliments and complaints, regarding the veteran's care and interactions at the facility serving them, so that issues are addressed in a convenient and timely manner.

In 2007, PATs, as part of the VistA application reengineering effort, replaced the legacy VistA Patient Representative application which had been used at VA Medical Centers (VAMC) in prior years by Patient Representatives for this purpose. Use of PATs was originally mandated as the VA's System of Record for patient (veteran) concerns, through the National Veterans Service & Advocacy Program and VHA Support Service Center, in VHA Directive 1003, and was, in 2011, brought under business ownership of the Office of Patient Advocacy Veterans Experience Program, within the Deputy Under Secretary for Health for Ops and Mgt (DUSHOM), with continuation of its recognition as System-of-Record.

Patient Advocates use a cooperative effort with the patient, health care providers, and other employees at the healthcare facility, to facilitate expression and resolution of the patient's concerns. These patient encounters, created, recorded and managed by Patient Advocates in PATs as Reports of Contact (ROCs),

may originate from a variety of sources including the patient, family members, congressional members and Veterans service organizations on behalf of the Veterans receiving care at VA facilities, by direct contact with Patient Advocates or via the Inquiry Routing and Information System (IRIS), after inquirers contact the IRIS Agents.

Besides its function of assisting in resolving patient-centered concerns, PATS also provides reports capabilities for assessment of complaint trends based on its data, providing trending feedback to the healthcare facility healthcare providers, customer care, and quality control managers, for recognition of and improvement of quality of care, and for adherence to best practices.

The patient-centered activity, Patient Advocate interactions, recordation of these ROCs in the PATS database, and trending for quality management, are all in alignment with the System-of-Record recognition of PATS in the Federal Register, visible directly at: <https://www.gpo.gov/fdsys/pkg/FR-2009-06-03/pdf/E9-12954.pdf>, or by publications search from that page: [http://www.gpo.gov/fdsys 'patient advocate tracking system'](http://www.gpo.gov/fdsys/patient%20advocate%20tracking%20system).

DUSHOM's Office of Patient Advocacy Veterans Experience Program Leadership, use metrics and trending information from PATS Reports of Contact data, in their mission of oversight, national guidance, technical support, and education efforts for Patient Advocate staff within the broader context of the enhancement of the Veteran experience and patient centered care.

PATS is accessed, via https secure socket connections, through a browser, by Patient Advocates, to document, track, and report patient-related issues. Interoperating technologies include this Java Enterprise Edition (J2EE) application, running within the Weblogic application suite, which is running on servers at the hosting facility, with backup/disaster recovery servers located at another standby hosting facility. This Java application interoperates, via jdbc, with the Oracle database running on the database server, for dynamic transaction-based database updates. PATS also interoperates with each of the 100+ VistA legacy systems (VAMCs) for user authentication and authorization and employee/patient lookup, via connections known as VistALink Services, which use VistALink transport layer protocol for networked communication. For reporting and trending purposes, new transactions are migrated nightly, to the PATS-Reports database on the PATS-Reports server. This feature of PATS is directly available to Patient Advocates, during normal login sessions in the PATS user interface. In development are new PIV-managed processes with Two-Factor Authentication-single signon functionality, such that the role-use of PATS features is managed by the Role Based Access Control authorization process:

- The user opens PATS login page in their browser (also known as Application landing).
- They select that station into-which they intend to start a PATS session.
- The PATS application, running in WebLogic at the host in Hines, receives their click.
- PATS retrieves the Security Assertion Markup Language (SAML) xml token for this user, from the identity provider (IDP) identity repository. This token is validated at the target VistA environment, allowing the user roles to be retrieved by subsequent calls to the corresponding VistA RPCs.
- The PATS application validates this SAML token, authorizing the user for access to PATS.
- The user's PATS session object is constructed, enabling use of the role-based PATS features.
- The user interface is presented to the user.

Reports are available within PATS, showing detailed transaction data of the ROCs for detail reports, and counting reports used for trending. Patient Advocates generate site-specific reports, revealing ROC

counts, types and occurrences of issue codes (some issue codes are identified and distinguishable also as 'customer service standards') assigned in ROCs, and other patterns, for a fiscal year or date range, for review by Facility Administrators, Quality managers and Service managers. Veterans Integrated Service Network (VISN) Patient Advocate Coordinators generate similar VISN-scoped reports for review by VISN Directors. Central Office and National Program Office PATS managers generate national-scope reports, revealing usage patterns, to help the PATS National Director oversee the mission and usefulness of the PATS application, and to discover national VA-wide patterns of activity to aid in the mission of the VHA Office of Patient Advocacy to enhance the Veteran's experience. These reports provide feedback to aid in pattern assessment for quality management to facilitate best practice and care for the Veterans. Some transaction data is also transmitted weekly to the VHA Support Service Center (VSSC) which provides additional report views.

PATS is supported by the VA's multi-tiered support network, including the national Health Product Support PATS team, and regional, VISN and local IT support teams. When the Health Product Support PATS team requires Developer or infrastructure consultation, they consult with Developers from the Tier 3 Sustainment Administrative team, and other infrastructure and common-services teams such as Database Administrators from the Administrative Data Repository in Austin, DBAs from the VA IT Engineering Enterprise Health Solutions at Hines, and Server Administrators at the Capital Regional Data Center in Martinsburg WV.

PATS enables users to perform the following tasks:

- Add a Report of Contact (ROC) which details a Veteran's issue (compliment or complaint)
- Edit, close, reopen, and delete an ROC
- Send Informational Notifications to communicate an issue to an employee involved in a Report of Contact and/or the employee's supervisor
- Send Action Request Notifications, which require a response from the individual regarding action to be taken or next steps
- Generate site-specific and National reports
- Create ad hoc reports
- Display reports online and save them in a variety of formats (Word, Excel, PDF files)

Enhanced in April 2013 to introduce the Inquiry Routing and Information System (IRIS) functionality. A new feature allows the IRIS Agent to transmit an IRIS inquiry to PATS, as a new ROC. PATS automatically rolls up data to the VISN Support Service Center to provide additional National reports. The PATS application is deployed at the Capital Region Readiness Center in Martinsburg WV, and is managed by the Health Systems Implementation, Training, and Enterprise Support team.

Note: This product has been identified for replacement and subsequent decommissioning and will not appear in future versions of the Monograph.

#### **2.102.10. Personnel and Accounting Integrated Data (PAID)**

Version: 4.0

Namespace: PRS

Brief Description: PAID is comprised of the Enhanced Time and Attendance system and the Education Tracking system.

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Manage Human Resources

VHA Portfolio: Business Informatics

Business Owner: Office of Financial Management

VASI ID: 1830

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123300/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=51>

Full Description and Features: Education Tracking documents employee and student participation at mandatory and ward in-services, continuing education programs, and all other employee training. Training information is protected with varying levels of access.

- Creates a class database with pertinent class information including class name, presenter, location, contact hours, accrediting organizations, etc.
- Contains a class registration component that limits class registrants by number or service
- Credits class participation to individual attendee records
- Provides site-configurable mandatory training groups, accrediting organizations, presentation media, and class purpose
- Contains a variety of reports including registration roster and employee training reports

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

2.102.11. Personnel and Accounting Integrated Data (PAID): Enhanced Time and Attendance (ETA)

Version: 4.0

Namespace: PRS

Brief Description: PAID is comprised of the Enhanced Time and Attendance system and the Education Tracking system.

Business Function Framework Line(s) of Business: Manage Business Enabling Services



Business Function Framework Function(s): Manage Human Resources

VHA Portfolio: Business Informatics

Business Owner: Office of Financial Management, Payroll and HR Systems Service

VASI ID: 1887

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123509/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=51>

Full Description and Features: The Enhanced Time and Attendance System (ETA) automates time and attendance for employees, timekeepers, payroll, and supervisors. It provides employees the ability to request leave and display both the status of pending requests and leave balances and allows payroll to manage time and leave (T&L) units and tours of duty. It provides timekeeping, supervisory certification, and overtime management.

- Timekeepers can enter and edit employee data and view time card status
- Payroll can view processing status of T&Ls, locate uncertified/incomplete timecards
- Payroll can manage T&L units by multiple elements including supervisors, timekeepers and employees
- Payroll supervisor transmits all payroll data to Central PAID in Austin and monitors transmission status
- PAID builds and updates employee records with Central PAID
- Employees may submit electronic leave requests, and also view request status, leave balances, and service records
- Supervisors can approve electronic requests and timecards and view employee leave reports.

Note: This product has been identified for replacement (by the Veterans Affairs Time and Attendance System (VATAS) scheduled for completion by July 2018) and subsequent decommissioning and will not appear in future versions of the Monograph.

## 2.102.12. Primary Care Management Module

Version: 1.0

Namespace: PCMM

Brief Description: Legacy Primary Care Management Module (PCMM GUI) is no longer in use and has been replaced by Patient Centered Management Module (PCMM Web). PCMM allows users to create, manage, and define teams and assign staff to these teams. This function helps in maintaining accurate listings for primary care teams and panels.

Business Function Framework Line(s) of Business: Provide Health Care Administration

Business Function Framework Function(s): Perform Hospital Administration

VHA Portfolio:

Business Owner: VHA

VASI ID: 1530

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123113/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=95>

**Full Description and Features:** In the outpatient setting, patients are assigned a primary care team and provider who are responsible for delivering essential health care, coordinating all health care services, and serving as the point of access for specialty care. Associate Primary Care Providers (APs) provide primary care to patients under the supervision of the Primary Care Provider (PCP). PCMM supports both primary and non-primary care teams such as OIF/OEF and Mental Health Treatment teams. The software allows users to create, manage, and define teams; create, manage and assign positions to the teams; assign staff to the positions; and assign patients to positions.

In PCMM, primary care providers have an assigned "number of patients allowed" which is compared with the "number of patients actual" to determine if more patients may be assigned to the provider. PCMM functionality assists in maintaining accurate, active patient listings for primary care teams and panels. By unassigning patients who have not seen their primary care providers in a specified amount of time, new patients may be assigned. Unassigned patients may be readily reassigned to their previous primary care team and provider if they return for care. When the maximum number of patients is reached, sites may override the maximum number allowed or add the patient to the Electronic Wait List. PCMM Wait List reports assist in the management of patients awaiting a primary care team or provider assignment.

PCMM allows entry of the providers FTEE to track the amount of time the APs and PCPs spend providing direct primary care and measures the capacity of each institution (and VHA as a whole) to provide outpatient primary care. PCMM also screens staff assignments to PCP and AP positions to assure the data on providers is correct.

The primary care patient, provider, and team information captured in PCMM is sent to the Austin Information Technology Center (AITC) and the National Patient Care Database. Some PCMM information is available on the VHA Support Service Center (VSSC) website. Additionally, the Office of Performance and Quality Measures utilizes PCMM data for national reporting and performance measures.

- Uses a graphical user interface (GUI) for creating teams and provider positions as well as assigning staff to the provider positions

- Ability to assign/unassign patients to primary care and non-primary care teams and providers both in GUI and VistA roll-and-scroll
- Automates patient unassignment from primary care teams and providers if the patient has not seen their primary care provider for a specified time or when a patient's date of death is entered
- Screens assignments to PCP and AP positions based on provider type and person class.
- Produces patient-oriented, practitioner-oriented, and team-oriented reports
- Transmits data for primary care teams, providers, and patients to Austin in Health Level Seven (HL7) message format and provides the ability to receive/process transmission errors
- Ability to control transmission of MailMan messages to team positions

Note: This product has been replaced by Patient Centered Management Module Web (PCMM Web) and will not appear in future versions of the Monograph.

### 2.102.13. SlotMaster (Kernel ZSLOT)

Version: 8.0

Namespace: ZSL

**Brief Description:** SlotMaster is a quick login utility for VMS systems. SlotMaster saves user time by letting the user connect directly to an active M partition. This saves users from sitting through VMS process creation and loading an M partition, allowing them to log in to VistA directly.

**Business Function Framework Line(s) of Business:**

**Business Function Framework Function(s):**

**VHA Portfolio:**

**Business Owner:**

**VASI ID:** 1596

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123227/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=24>

**Full Description and Features:** SlotMaster is a quick login utility for VMS systems. SlotMaster saves user time by letting the user connect directly to an active M partition. This saves users from sitting through VMS process creation and loading an M partition, allowing them to log in to DHCP directly.

SlotMaster also conserves system resources by re-using the same VMS process for new users, rather than creating a new process for each new user.

Note: Product has been decommissioned and will not appear in future monographs!

- Programming Language: MUMPS
- Deployment Infrastructure: Varies by location
- Depends on: Kernel

#### 2.102.14. Social Work

Version: 3.0

Namespace: SOW

**Brief Description:** The Social Work package is designed to facilitate the Social Work Service functions within a medical facility and is composed of Case Management, Clinical Assessment, and Community Resource.

**Business Function Framework Line(s) of Business:** Deliver Health Care

**Business Function Framework Function(s):** Provide Care Management, Provide Ancillary Services

**VHA Portfolio:** Health Provider Systems

**Business Owner:** VHA

**VASI ID:** 1841

**VASI ID Link:** <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123411/c/56/nt/-1?id=1578>

**VDL Link:** <https://www.va.gov/vdl/application.asp?appid=101>

**Full Description and Features:** Within the Social Work module, the Case Management software is used for managing social work cases (e.g., opening and closing cases, recording problems and outcomes, storing referrals) and for generation of reports that are transmitted quarterly to VA Central Office. The Clinical Assessment software provides a method of identifying, upon admission, patients most likely to require social work assistance before or after discharge. The hospital stay may be minimized with the anticipation of patients' domestic or social needs prior to discharge. The Community Resource software allows the social worker to build a network of local community agencies that can serve the veteran. The network enables the worker to expediently match the needs of the client to the existing community resources, thereby increasing productivity and viable referrals.

- Automatic screening that uses predetermined and site-specific criteria (e.g., Veteran with no permanent address) to determine if a patient needs the services of Social Work Service prior to discharge
- Creates networks of local community agencies (e.g., alcohol treatment, housing, health) that can serve Veterans

- Compiles a list of community resources by user-selected category (e.g., name, town, type, zip code)
- Identifies local residential care homes and maintains detailed information on the homes (e.g., rates, vacancies, residents, date home assessed by a VA social worker)
- Allows workers to track patients and homes in the residential care home program by home and patient registry printouts
- Facilitates mailings to residential care home sponsors by printing address labels.
- Tracks caseloads by recording the openings and closings of cases
- Compiles and produces monthly and quarterly reports and transmits data electronically module
- Provides patient teaching and monitoring necessary for VHA-wide system of coordination/care management services
- Provides for standardized Psychosocial Database/Assessment for inclusion in patient health records. Also, provides mechanism for entering progress notes
- Provides for automated quality management monitors and reviews

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

#### 2.102.15. Spinal Cord Injury and Disorders Outcomes (SCIDO)

Version: 3.0

Namespace: SPN

Brief Description: The Spinal Cord Injury and Disorders Outcomes (SCIDO) 3.0 application converts the Spinal Cord Dysfunction (SCD) Registry from a legacy command line system to a client server platform with a graphical user interface (GUI) and enhanced capabilities.

Business Function Framework Line(s) of Business: Manage Public Health, Deliver Health Care

Business Function Framework Function(s): Provide Medical Registry Service, Provide Care Management

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1605

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123231/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=196>

Full Description and Features: The Spinal Cord Injury and Disorders Outcomes (SCIDO) application is a system for compiling spinal cord injury and disorders information. The SCIDO application accesses

several other Veterans Health Information Systems and Technology Architecture (VistA) programs that contain information regarding diagnoses, prescriptions, surgical procedures, laboratory tests, radiological exams, patient demographics, hospital admissions, and clinical visits. This access allows clinical staff to take advantage of the data supported by VistA. Information can be summarized at three levels: local medical center, SCI region, or national research access.

Note: This product has been decommissioned and will not appear in future versions of the Monograph.

#### **2.102.16. VistAWeb**

Version: 1.0 (SEE NOTE)

Namespace: WEBV

Brief Description: VistAWeb is a read-only intranet web application. It delivers to the client a uniform, well-defined suite of objects from the medical domain, including objects such as patient, provider, progress note, lab results, prescriptions, allergies, and imaging.

NOTE: VistAWeb is Version 16.0 and 16.1.5 for the server version in Austin; in FORUM it is Version 1.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Manage Health Records, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA

VASI ID: 1853

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123423/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=147>

Full Description and Features: VistAWeb enables VA clinicians to view VistA data generated from their own as well as remote Veterans Affairs Medical Centers (VAMCs) as well as information from the Department of Defense (DoD). With significant ease of use, flexibility, and reliability, VistAWeb is a preferred method for remotely accessing such information, and it is used, in addition, for reviewing remote patient information found in VistA, the Bidirectional Health Information Exchange (BHIE) system, the Health Data Repository II (HDR II) databases, and the eHealth Exchange. This capability with the eHealth Exchange renders VistAWeb a key component of Virtual Lifetime Electronic Record

(VLER) electronic health information exchange. VistAWeb reflects the reports behavior of the Computerized Patient Record System (CPRS) and Remote Data View (RDV), and affords robust and timely retrieval of remote-site patient data, supplementing CPRS/RDV.

Note: This product has been identified for decommissioning and will not appear in future versions of the Monograph.

## **2.103. DSS Inc. Commercial-off-the-Shelf (COTS) VistA Integrations**

### **2.103.1. Above PAR (APAR)**

Version:

Namespace: DSIY

Brief Description: APAT helps facilities to manage their prosthetics procurement process with an easy-to-use module. APAT is an Electronic Document Management Software (EDMS) system to electronically store and manage all documentation throughout the prosthetics department.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 1893

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123370/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: APAT helps facilities to manage their prosthetics procurement process with an easy-to-use module. APAT is an Electronic Document Management Software (EDMS) system to electronically store and manage all documentation throughout the prosthetics department.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/above-par/>

- All-electronic bid process and purchase order management
- Full-color graphical user interface (GUI)
- Comprehensive workflow tracking

- Standard and ad-hoc reporting capabilities
- Secure electronic document management
- Fully scalable, customizable and flexible

## 2.103.2.Advanced Prosthetics Acquisition Tool (APAT)

Version:

Namespace: DSIVA

Brief Description:

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID:

VASI ID Link:

VDL Link:

Full Description and Features: APAT helps facilities to manage their prosthetics procurement process with an easy-to-use module. APAT is an Electronic Document Management Software (EDMS) system to electronically store and manage all documentation throughout the prosthetics department.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/advanced-prosthetics-acquisition-tool-apat/>

- All-electronic bid process and purchase order management
- Graphical user interface (GUI)
- Comprehensive workflow tracking
- Standard and ad-hoc reporting capabilities
- Secure electronic document management
- Fully scalable, customizable and flexible

## 2.103.3.Caribou Community Living Care (CLC) Suite (Caribou)



Version:

Namespace: DSIB

Brief Description: The Caribou CLC Suite to automate resident care workflow processes for Community Living Centers through integration with The Veterans Health Information Systems and Technology Architecture (VistA).

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 2290

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/2505103/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: The Caribou CLC Suite a COTS integration with VistA to provide an automated tool that provides a comprehensive and standardized assessment of each resident's functional capabilities. It helps VHA CLC staff identify health problems with real-time access to resident medical information, develop individualized care plans, and evaluate the quality of care.

Additionally, the software allows the capture of admission, discharge and transfer (ADT) movement via the use of tracking forms. Information will be recorded and updated by clinicians and shared securely with decision makers in a timely and effective manner. The software will also provide reporting functionality for local, Veterans Integrated Service Network (VISN), and national users. The use of this solution helps VHA remain in compliance with Centers of Medicare and Medicaid Services (CMS) requirements, provide accurate Resource Utilization Groups (RUG), assist with the calculations of Veterans Equitable Resource Allocation (VERA), document Quality Measures (QM) for long-term care surveys, and improve the ability to assess CLC residents' quality of life.

This software solution was developed replace the CLC Accu-care tool and provides the functionality found in the legacy VA RAI/MDS software, ensure accuracy with respective VA RAI/MDS technical documentation requirements while maintaining regulatory compliance with current CMS standards and regulations which can be found at the following URL: <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/MDS30RAIManual.html>

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/integrated-clinical-products/caribou-community-living-care-suite/>

- Decrease the risk of errors
- Reduce double entry of data
- Shorten workflow processes for providers
- Improve overall delivery of residential care

#### 2.103.4.Dental Record Manager (DRM) Plus

Version: 6.9

Namespace: DENT

Brief Description: The original Dental Record Manager (DRM) software, installed in all VA dental clinics by the end of FY 2001, provided a customized user-friendly Windows interface for entering clinical encounter information and assisted with the assessment of ongoing care using current patient data for completed procedures.

Business Function Framework Line(s) of Business: Deliver Health Care, Manage Business Enabling Services

Business Function Framework Function(s): Provide Care Management, Provide Dentistry, Provide Medical Services, Manage Health Records, Provide Financial Management, Utilize Information Technology Services

VHA Portfolio: Health Provider Systems

Business Owner: VHA Dental

VASI ID:

VASI ID Link:

VDL Link: <https://www.va.gov/vdl/application.asp?appid=66>

Full Description and Features: DRM Plus brings significant graphical interface (GUI) entry and display enhancements to the original DRM version. DRM Plus records diagnostic findings, including head and neck lesions, restorative and periodontal charting, and sequenced treatment planning. DRM Plus helps assure quality care, patient safety, and staff communication in an environment that is fully integrated with the VA electronic health record.

The DRM Project also replaces the Dental Activity System (DAS) national and local reporting structure with the new Dental Encounter System (DES).

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/integrated-clinical-products/dental-record-manager-plus/>

- **Chart/Treatment:** This tab replaces the DRM Encounter Note tab and features the Treatment & Exam and the Periodontal Chart views. Features include head and neck findings, advanced graphics, and sequencing.
- **Treatment & Exam:** This screen is used to record and display oral and maxillofacial diagnostic examination findings, including restorative findings. Certain diagnoses, such as implants, impacted teeth, retained roots and teeth flagged for observation, appear graphically on all screens.
- **Periodontal Chart:** This screen records and measures various types of periodontal conditions. Periodontal charting icons are condition-specific, allowing a graphic charting display as well as the identification of critical elements in periodontal report tables. -Critical elements charted include pocket depth, bleeding, delayed bleeding, FGM, MGJ, suppuration, mobility, and furcation involvement.
- **Treatment Plan:** This screen allows the provider to enter and sequence a plan of care. Color is used to differentiate the status of various conditions. Some items appear graphically on all screens.
- **Completed Care:** This screen is used to enter procedures completed during the current visit. Certain completed care procedures, entered from the Completed Care Screen, appear graphically on all screens.

#### Clinical Benefits

- Improves communication among treating dental providers for patient oral and maxillofacial findings and for plan of care, including sequencing.
- Easily captures oral and maxillofacial diagnostic findings in a graphical and transaction-oriented format.
- Offers the provider the flexibility to enter only completed procedures or to enter the full range of findings, planned care, and completed procedures for each patient.
- Provides tracking of head and neck lesions entered by multiple dental providers.
- Captures periodontal findings in a graphical charting display that includes reports.
- Provides a dynamic interface for multiple dental providers to sequence the patient plan of care.
- Offers a visual display of most transactions, including implants and prostheses.
- Offers additional administrative and management tools for tracking workload and individual patient treatment plans.
- Provides for integration of medical CPT codes into the software.
- Interfaces with the new Dental Encounter System (DES) local and national database.
- Provides a dental history file that includes all completed procedures for each patient. Integrates dental information within the VA electronic health record environment with a user-friendly graphical user interface (GUI)

#### 2.103.5.DocManager

Version:

Namespace: DSIV

**Brief Description:** DocManager is a COTS integration with VistA to provide enterprise-wide software solution that automates the document management process – from scanning, indexing, storing and sending mission-critical information to generating reports needed to perform system audits and workload analytics. The solution enables facilities burdened with paperwork bottlenecks to enter more documents in less time using fewer staff.

**Business Function Framework Line(s) of Business:**

**Business Function Framework Function(s):**

**VHA Portfolio:**

**Business Owner:**

**VASI ID:**

**VASI ID Link:**

**VDL Link:**

**Full Description and Features:** DocManager is a COTS integration with VistA to provide enterprise-wide software solution that automates the document management process – from scanning, indexing, storing and sending mission-critical information to generating reports needed to perform system audits and workload analytics. The solution enables facilities burdened with paperwork bottlenecks to enter more documents in less time using fewer staff.

**Note:** This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/document-manager/>

- Scan, index, view and notate clinical, administrative and financial documents
- Manage multiple workflows within a single, secure environment
- Index images to the Computerized Patient Record System (CPRS)/Text Integration Utility (TIU) quickly and accurately
- Complete consults and send CPRS notifications to providers
- Generate workload and audit reports
- Integrated with VistA and Computerized Patient Record System (CPRS)

2.103.6.Encoder Product Suite (EPS)

**Version:**

Namespace: DSIP

Brief Description: EPS is a COTS integration with VistA to provide an end-to-end revenue cycle management solution that helps streamline inpatient reporting, auditing compliance and coding compliance workflows.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 2087

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/835859/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: The Encoder Product Suite (ENCODER) includes Microsoft (MS) Windows graphical user interface (GUI) modules that include coding, compliance, billing, and auditing functionality. This technology includes coding modules that aligns hospital and physician coding, reimbursement, and compliance tools to ensure data and coding consistency between physician and facility encounters. This technology provides the following functionality:

- Auditing and monitoring capabilities with VA-specific Veterans Equitable Resource Allocation (VERA) tools
- Coding knowledge with real-time error indicators
- Identifies high-risk coding practices
- Reduces claim denial with Centers for Medicare and Medicaid Services (CMS) 1500 and Uniform Billing (UB)-04 claim scrubbing
- Screening capability for claims and encounters
- Reporting capabilities with an ad hoc report builder.

EPS includes four modules:

- VIP Director: A flexible inpatient reporting management tool
- VIP Workplace: A single platform that captures inpatient coding activity and performs real-time coding compliance checks for all inpatient encounters
- Audit Compliance: A robust auditing tool with functionality for generating coding, billing, accounts receivable, compliance and VERA reports

- Coding Compliance: A suite of coding tools, including nCoder, E&M Calculator and Billing and more, contained within a single interface for making edits in real time

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/encoder-product-suite-eps/>

- Streamlines billing, coding and auditing workflows
- Provides a single point of access to all coding resources
- Reduces coding errors and potential revenue losses
- Enables coders to self-review work in real time

#### 2.103.7.Fee Basis Claims System (FBCS)

Version: 4.0

Namespace: DSIF

Brief Description: The Fee Basis Claims System (FBCS) is a claims management system. FBCS is designed to be used in the Fee Basis Departments of the Veteran Affairs Medical Centers (VAMCs).

Business Function Framework Line(s) of Business: Manage Business Enabling Services

Business Function Framework Function(s): Provide Financial Management

VHA Portfolio: VHA Chief Business Office (CBO) - Purchased Care

Business Owner: Document Storage Systems (DSS)

VASI ID: 2085

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/835602/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: The Fee Basis Claims System (FBCS) is a claims management system. FBCS is designed to be used in the Fee Basis Departments of the Veteran Affairs Medical Centers (VAMCs). The VA Fee Basis medical program provides payment authorization for eligible Veterans to obtain routine medical treatment services through non-VA health care providers. FBCS is an auditing system which provides instructional prompts designed to interface with the VistA package to track report and analyze fee claim data. FBCS is comprised of several modules: The Authorization module, Administrative modules and Claims Management Modules. Together these modules ensure collection of data for tracking purposes, increase quality assurance, and promote consistency and efficiency to maintain standards.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/fee-basis-claims-systems/>

- Updates the functionality at time of scanning to identify individual CMS-1500 (HFCA) claim forms that need to be consolidated to create one Claim ID record
- Allows all lines between forms to be reviewed, edited, priced and processed together
- Creates rejection of payment line items by Central Fee will be transmitted to VistA Fee Basis via new transactions that update VistA automatically
- Creates new transaction will replace all use of 994 sheets in IFCAP
- Automates the methods of sending, receiving, tracking, and managing claims scored by the VAs Program Integrity Tool (PIT) to communicate with Austin Information Technology Center (AITC) with a GUI, SQL, and workstation update
- Creates new interfaces between FBCS and VistA Imaging, allowing improved capture of non-VA claims processing information via the scanning and indexing of Fee medical records
- Identifies potential payments not in compliance with VHA policies and procedures by alerting claims processing clerks of potential payments to be made on behalf of ineligible beneficiaries and of claims requiring a secondary review or action before a payments may be made
- Creates an added automatic encryption of all passwords and access/verify codes by allowing the user to hold the Ctrl key and clicking the OK button on the main screen
- Updates the service to ensure when the PIT scoring functionality is off the service may continue to run to pick up or deliver pre-patch feed files and claims to score feed files for new entries will display 0 claims
- Creates an added SQL password decryption
- Updates functionality to accommodate the revised 02/12 version of the NUCC CMS 1500 form for current ICD-9 and future ICD-10 code based data
- Creates new code to set the SQL transaction isolation level to Snapshot Isolation for reporting
- Redesigns the FBCS Home Screen to display new Consult information for authorizations
- Removes the need to utilize CPRS to view or print consuls for Fee authorizations
- New components hosted in a web application. Contains web-GUI, middle-tier (API), and SQL updates
- Updates to the current FBCS system to accept and transmit necessary EDI claim information between HAC, FBCS and VistA Fee to support compliance with current EDI mandates, provide increased data tracking and reporting to support care in the community/CHOICE efforts and legislation and increase data integrity, add additional business rules to reduce improper payments and improve automated processes
- FBCS DSIF\*4.0\*0 introduces a web-based version of FBCS as a centralized data and operations claims processing system, focusing on front-end claims activities and establishing integration points with HAC, Alpha II and existing instances. This release contains new components hosted in a web application. Contains web-GUI, middle-tier (API), and SQL updates. These updates will be installed by a centralized host provider and not at individual sites

#### 2.103.8. Insurance Capture Buffer

Version: 2.2

Namespace: DSIV

Brief Description: The Insurance Capture Buffer (ICB) module is an insurance card scanning and VistA Buffer File update management system designed to enhance the insurance data collection and verification processes for Veterans Affairs Medical Centers.

Business Function Framework Line(s) of Business: N/A

Business Function Framework Function(s): N/A

VHA Portfolio: Business Informatics

Business Owner: VHA CBO

VASI ID: 1882

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123363/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: ICB is integrated with several VistA components such as, Appointment Scheduling and the Patient's Insurance File. ICB provides an electronic list of veterans with scheduled appointments whose insurance needs to be verified. The "Patient Update" List is used by check-in and registration clerks to scan insurance cards for those identified. Scanned images are stored and are immediately accessible to verification clerks via the "Insurance Buffer Entries" list. Data from the image can be compared with existing insurance data within VistA. By using advanced Optical Character Recognition (OCR) technology, insurance-related text can be entered directly from the digital image and saved to the VistA Insurance Buffer. A reporting utility is available to Business Office Managers to ensure compliance of check-in and verification clerks.

By expediting the data collection process at check-in, ICB helps a VA facility improve the patient check-in experience and customer satisfaction. It also increases insurance data accuracy and allows for standardization of the verification process.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/insurance-capture-buffer/>

- Paperless Work Flow
- Reduce Insurance Buffer File Errors
- Audit functionality by categories including Patients, Clerks and Date



- Identify the patient by appointment and location
- Alerts entry clerks to update insurance information
- Scan the insurance card with a small desktop scanner
- Saves the image for the insurance verification clerk
- Comprehensive and Accurate Process for Verification Clerks
- View work list of patients with recently scanned cards
- Compare existing VistA data against scanned insurance card image
- OCR to capture data directly from insurance card image
- Save updated data to VistA Insurance Buffer File
- Save updated data image to VistA Imaging
- View buffer from non IB sources
- VetLink Kiosk support

#### 2.103.9.Mental Health Suite (MHS)

Version:

Namespace: DSIU

Brief Description: DSS Inc. COTS integration for managing and documenting the care and treatment of mental health patients.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner: Office of the Assistant Deputy Under Secretary for Health for Patient Care Services (Dr. Lysell)

VASI ID: 1528

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123263/c/56/nt/27619?id=1578>

VDL Link:

Full Description and Features: MH Suite is a COTS software tool used to support the development and documentation of multidisciplinary treatment plans. MH Suite facilitates development of care plans that meet accreditation requirements in behavioral health settings, including multidisciplinary input from all care team members contributing to the plan, supporting one umbrella plan for all behavioral healthcare, and providing a mechanism for updating plans as problems are resolved.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/integrated-clinical-products/mental-health-suite-mhs/>

- Graphical user interface with standardized and customizable patient data and provider notes entry capabilities
- Advanced editing tools
- Patient-centric focus of documentation includes all required elements of mental health treatment plan, supporting compliance with Joint Commission and CARF accreditation standards
- Consistent with DSM-5 format
- Integrated reporting module
- Plan renewal capabilities
- Comprehensive risk identification and prevention tools

#### 2.103.10. Release of Information (ROI)

Version:

Namespace: DSIR

Brief Description: COTS integration with VistA Release of Information (ROI) is designed to expedite ROI requests and reduce costs, Release of Information integrates seamlessly with vxVistA and the Computerized Patient Record System (CPRS) and supports the tracking, fulfilling and releasing of ROI requests electronically.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 1564

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123140/c/56/nt/-1?id=1578>

VDL Link: <https://www.va.gov/vdl/application.asp?appid=132>

Full Description and Features: The ROI Manager is a COTS application integration with VistA that uses RPC Broker technology that permits the facility users to retrieve clinical data within the VistA System. The user can work offline of VistA and only administrator functions will be active. The ROI Manager Encounter System database is linked to the VistA System database that stores registered patient

documentation. These databases are in sync with each other and reduce data entry time because certain data fields are automatically populated (or filled-in) ensuring data accuracy.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/dss-vista-integrated-administrative-products/release-of-information/>

- Prevent ROI request backlogs
- Track ROI requests by patient and/or requestor
- Automatically print notice and reply letters
- Set reporting status as open, closed, pending or denied
- Generate reports
- Set and apply automated billing rules
- Track paper and imaged documents not found in CPRS database
- Comply with HIPAA requirements

#### 2.103.11. Telecare Record Manager (TRM)

Version:

Namespace: DSIT

Brief Description: DSS TeleCare Record Manager is a COTS integration with VistA that provides a complete telephone liaison care management system.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 1805

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123211/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: DSS TeleCare Record Manager is a COTS integration with VistA that provides a complete telephone liaison care management system that provides an easy and efficient way for you to access telephone treatment protocols and update and organize information from different categories of patient calls.

DSS TeleCare Record Manager (TRM) Plus is a HIPAA-compliant, URAC-certified telephone liaison care management solution that provides easy and efficient access to telephone treatment protocols. The solution also enables users to update and organize information based on patient call category.

TRM Plus integrates seamlessly with VistA and DSHI Veterans Health Gateway (VHG), which enhances telephone triage decision-making by helping nurses accurately assess patient symptoms and quickly determine the proper course of action for treatment.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/integrated-clinical-products/telecare-record-manager/>

- Integrates with VistA and DSHI Veterans Health Gateway (VHG) triage solution
- Enables the automatic creation of Text Integration Utility (TIU) notes in CPRS
- Supports call history, management and workload reporting
- Provides direct access to patient information in VistA

#### 2.103.12. VistA Chemotherapy Manager (VCM)

Version:

Namespace: DSIQ

Brief Description: VistA Chemotherapy Manager (VCM) automates the entire chemotherapy treatment process, from therapy assignment to dose calculation to documentation of care.

Business Function Framework Line(s) of Business:

Business Function Framework Function(s):

VHA Portfolio:

Business Owner:

VASI ID: 1883

VASI ID Link: <https://vaausdarapp41.aac.dva.va.gov/ee/request/folder/e/123364/c/56/nt/-1?id=1578>

VDL Link:

Full Description and Features: VistA Chemotherapy Manager (VCM) is a COTS integration with VistA for computerizing the administration of chemotherapy for cancer care. It automates the clinical practice of Oncology from the assignment of therapy to the calculation of chemotherapy doses, all the way through

to the documentation of care. It combines a complete range of automation, safety features and flexibility that Oncology practices demand.

Provides the full range of automated chemotherapy administration and advanced safety features required by oncology providers, nurses and pharmacists.

Note: This application is a DSS COTS integration with VistA, more information can be found at <https://www.dssinc.com/products/integrated-clinical-products/vista-chemotherapy-manager/>

- Integrates with VistA/CPRS
- Automates dose calculations and modifications
- Enables treatment plans to be assigned and reviewed electronically
- Transmits chemotherapy orders without disrupting pharmacy workflows
- Includes a comprehensive database of standardized chemotherapy regimens
- Supports treatment plan cancellations
- Sends drug interaction alerts

Other requirements from WorldVisitA website

**2.104: Standard Progress Note Templates** – The fully functional Veteran’s Administration (VA) VistA software is rich with pre-defined progress note templates. These templates have been imported directly from the VA National Library without modification.

**2.105: Create, Edit, and Customize Templates** – To speed document creation, personalized templates can be created to fit the specific needs of individual practices. Personalized templates may be created from scratch or edited from existing templates. Templates are used to create progress notes, complete consults, and write discharge summaries.

**2.106: Clinical Reminders** – The Clinical Reminders package is a valuable aid in patient treatment. Reminders assist clinical decision-making and educate providers about appropriate care. The primary goal of clinical reminders is to provide relevant information to providers, at the point of care, for improving patient care.

**2.107 Graphing** – The VistA software has a graphing feature, which allows users to view lab test results and vital signs in a graph. Each occurrence of a test or vital sign is a point on the graph. The Computerized Patient Record System (CPRS) component draws lines between the points to form a visual representation that can help you see trends. Dotted red lines show the high and low reference values for lab tests.

**2.108: Reporting** – The VistA software has a report construction feature which allows each site to individually run reports related to patient data. Clinical reports available from VistA include: Health Summary, Vitals Cumulative, Nutritional Assessment, Daily Order Summary and Oder Summary for a Date Range.

**2.109: HIPAA Compliant** – The VistA software supports HIPAA standards, including role-based access for security controls, electronic signature required for approval of orders, and audit capability.

**2.110: Codified Data** – The VistA software supports the requirements for codified data, including diagnosis data using ICD-9 codes.

**2.111: Risk, Social and Medical Factors** – For each new patient, the VistA software has the capability to capture and store risk, social and medical factors; including, but not limited to the following: Tobacco use and history including number of years and packs per day (PPD), Alcohol use history, Drug use history, Occupational environment, Marital status, Occupation, Religious preference, Ethnicity, Healthcare surrogate with alert, Guardian/legal representative with alert.

**2.112: Hospitalization** – The VistA software is able to document discharge summary hospitalization data, as well as procedure and diagnosis-related information.

**2.113: Immunization History** – The VistA software captures history of received immunizations.

**2.114: Pediatrics** – WorldVistA EHR provides the following pediatric functionality including: Pediatric progress note templates based on the Indian Health Services (IHS) progress note templates and American Academy of Pediatric Bright Futures templates.

**2.115: OB/GYN Templates** – WorldVistA EHR provides OB/GYN progress note templates based on the Indian Health Services (IHS) progress note templates.

**2.116: DOQ-IT (Doctor's Office Quality-Information Technology) Reminders** – WorldVistA EHR DOQ-IT Reminders include: 1. DOQ-IT Registration Reminders – Registration reminders are triggered once a patient meets eligibility requirements for the DOQ-IT program; 2. Clinical Reminders related to the Registered DOQ-IT measure; 3. Codified Data – System supports the requirements for codified data specified by the DOQ-IT quality improvement measures.

### Low-level security requirements dependencies in WorldVisitA

| ID | Dependent | Depend on | Reveeals Vulnerability |
|----|-----------|-----------|------------------------|
| 1  | 2.1       | 2.2       |                        |
| 2  | 2.1       | 2.9       |                        |
| 3  | 2.1       | 2.18      |                        |
| 4  | 2.1       | 2.36      |                        |
| 5  | 2.1       | 2.76      |                        |
| 6  | 2.2       | 2.3       |                        |
| 7  | 2.2       | 2.9       |                        |
| 8  | 2.2       | 2.13      |                        |
| 9  | 2.2       | 2.92      |                        |
| 10 | 2.3       | 2.4       |                        |
| 11 | 2.3       | 2.101     |                        |
| 12 | 2.3       | 2.6       |                        |
| 13 | 2.4       | 2.100     |                        |
| 14 | 2.5       | 2.3       |                        |
| 15 | 2.5       | 2.9       |                        |
| 16 | 2.5       | 2.29      |                        |
| 17 | 2.5       | 2.96      |                        |
| 18 | 2.6       | 2.3       |                        |
| 19 | 2.6       | 2.35      |                        |
| 20 | 2.7       | 2.5       |                        |
| 21 | 2.7       | 2.54      |                        |
| 22 | 2.7       | 2.3       |                        |
| 23 | 2.7       | 2.9       |                        |
| 24 | 2.8       | 2.10      |                        |
| 25 | 2.8       | 2.80      |                        |
| 26 | 2.9       | 2.11      |                        |
| 27 | 2.9       | 2.29      |                        |
| 28 | 2.9       | 2.79      |                        |
| 29 | 2.9       | 2.3       |                        |
| 30 | 2.9       | 2.96      |                        |
| 31 | 2.10      | 2.12      |                        |
| 32 | 2.10      | 2.93      |                        |
| 33 | 2.11      | 2.3       |                        |
| 34 | 2.11      | 2.8       |                        |
| 35 | 2.11      | 2.92      |                        |
| 36 | 2.11      | 2.100     |                        |
| 37 | 2.14      | 2.3       |                        |

|    |      |       |  |
|----|------|-------|--|
| 38 | 2.14 | 2.94  |  |
| 39 | 2.14 | 2.95  |  |
| 40 | 2.15 | 2.4   |  |
| 41 | 2.15 | 2.32  |  |
| 42 | 2.15 | 2.80  |  |
| 43 | 2.15 | 2.96  |  |
| 44 | 2.16 | 2.7   |  |
| 45 | 2.16 | 2.39  |  |
| 46 | 2.16 | 2.54  |  |
| 47 | 2.17 | 2.97  |  |
| 48 | 2.18 | 2.80  |  |
| 49 | 2.19 | 2.3   |  |
| 50 | 2.19 | 2.39  |  |
| 51 | 2.19 | 2.80  |  |
| 52 | 2.20 | 2.3   |  |
| 53 | 2.20 | 2.4   |  |
| 54 | 2.20 | 2.10  |  |
| 55 | 2.20 | 2.102 |  |
| 56 | 2.22 | 2.3   |  |
| 57 | 2.22 | 2.29  |  |
| 58 | 2.22 | 2.32  |  |
| 59 | 2.22 | 2.105 |  |
| 60 | 2.24 | 2.3   |  |
| 61 | 2.24 | 2.7   |  |
| 62 | 2.24 | 2.38  |  |
| 63 | 2.25 | 2.106 |  |
| 64 | 2.27 | 2.3   |  |
| 65 | 2.27 | 2.8   |  |
| 66 | 2.27 | 2.105 |  |
| 67 | 2.27 | 2.12  |  |
| 68 | 2.29 | 2.41  |  |
| 69 | 2.34 | 2.3   |  |
| 70 | 2.34 | 2.42  |  |
| 71 | 2.35 | 2.3   |  |
| 72 | 2.35 | 2.5   |  |
| 73 | 2.35 | 2.29  |  |
| 74 | 2.35 | 2.54  |  |
| 75 | 2.36 | 2.35  |  |
| 76 | 2.36 | 2.102 |  |



|     |      |       |   |
|-----|------|-------|---|
| 77  | 2.36 | 2.8   |   |
| 78  | 2.37 | 2.101 |   |
| 79  | 2.38 | 2.103 |   |
| 80  | 2.38 | 2.4   |   |
| 81  | 2.38 | 2.8   |   |
| 82  | 2.38 | 2.6   |   |
| 83  | 2.39 | 2.10  |   |
| 84  | 2.39 | 2.7   |   |
| 85  | 2.40 | 2.99  |   |
| 86  | 2.40 | 2.6   |   |
| 87  | 2.41 | 2.3   |   |
| 88  | 2.41 | 2.39  |   |
| 89  | 2.41 | 2.92  |   |
| 90  | 2.41 | 2.98  |   |
| 91  | 2.42 | 2.12  |   |
| 92  | 2.46 | 2.54  | ✓ |
| 93  | 2.47 | 2.93  |   |
| 94  | 2.47 | 2.6   |   |
| 95  | 2.47 | 2.5   |   |
| 96  | 2.52 | 2.35  |   |
| 97  | 2.52 | 2.47  |   |
| 98  | 2.52 | 2.96  |   |
| 99  | 2.53 | 2.5   |   |
| 100 | 2.53 | 2.32  |   |
| 101 | 2.54 | 2.39  |   |
| 102 | 2.56 | 2.96  |   |
| 103 | 2.56 | 2.29  |   |
| 104 | 2.57 | 2.93  |   |
| 105 | 2.57 | 2.5   |   |
| 106 | 2.57 | 2.93  |   |
| 107 | 2.57 | 2.8   |   |
| 108 | 2.59 | 2.35  |   |
| 109 | 2.59 | 2.80  |   |
| 110 | 2.60 | 2.10  |   |
| 111 | 2.62 | 2.79  |   |
| 112 | 2.63 | 2.11  |   |
| 113 | 2.63 | 2.94  |   |
| 114 | 2.63 | 2.6   |   |
| 115 | 2.63 | 2.32  |   |

|     |      |       |  |
|-----|------|-------|--|
| 116 | 2.64 | 2.29  |  |
| 117 | 2.64 | 2.47  |  |
| 118 | 2.64 | 2.93  |  |
| 119 | 2.65 | 2.12  |  |
| 120 | 2.66 | 2.92  |  |
| 121 | 2.66 | 2.4   |  |
| 122 | 2.67 | 2.10  |  |
| 123 | 2.68 | 2.39  |  |
| 124 | 2.68 | 2.81  |  |
| 125 | 2.68 | 2.6   |  |
| 126 | 2.68 | 2.54  |  |
| 127 | 2.69 | 2.53  |  |
| 128 | 2.70 | 2.100 |  |
| 129 | 2.71 | 2.6   |  |
| 130 | 2.72 | 2.53  |  |
| 131 | 2.73 | 2.8   |  |
| 132 | 2.73 | 2.61  |  |
| 133 | 2.73 | 2.81  |  |
| 134 | 2.74 | 2.7   |  |
| 135 | 2.75 | 2.12  |  |
| 136 | 2.75 | 2.101 |  |
| 137 | 2.76 | 2.35  |  |
| 138 | 2.76 | 2.62  |  |
| 139 | 2.76 | 2.74  |  |
| 140 | 2.79 | 2.11  |  |
| 141 | 2.79 | 2.6   |  |
| 142 | 2.79 | 2.39  |  |
| 143 | 2.79 | 2.64  |  |
| 144 | 2.81 | 2.5   |  |
| 145 | 2.82 | 2.92  |  |
| 146 | 2.82 | 2.10  |  |
| 147 | 2.82 | 2.99  |  |
| 148 | 2.83 | 2.67  |  |
| 149 | 2.84 | 2.8   |  |
| 150 | 2.84 | 2.68  |  |
| 151 | 2.84 | 2.73  |  |
| 152 | 2.84 | 2.12  |  |
| 153 | 2.84 | 2.98  |  |
| 154 | 2.85 | 2.68  |  |

|     |       |      |   |
|-----|-------|------|---|
| 155 | 2.86  | 2.8  |   |
| 156 | 2.86  | 2.71 |   |
| 157 | 2.86  | 2.4  |   |
| 158 | 2.87  | 2.5  |   |
| 159 | 2.87  | 2.7  |   |
| 160 | 2.87  | 2.72 |   |
| 161 | 2.87  | 2.39 |   |
| 162 | 2.88  | 2.79 |   |
| 163 | 2.88  | 2.12 |   |
| 164 | 2.88  | 2.54 |   |
| 165 | 2.89  | 2.57 |   |
| 166 | 2.89  | 2.61 |   |
| 167 | 2.90  | 2.9  |   |
| 168 | 2.91  | 2.9  |   |
| 169 | 2.91  | 2.79 |   |
| 170 | 2.92  | 2.35 |   |
| 171 | 2.93  | 2.3  |   |
| 172 | 2.93  | 2.61 |   |
| 173 | 2.93  | 2.13 |   |
| 174 | 2.94  | 2.71 |   |
| 175 | 2.95  | 2.53 |   |
| 176 | 2.95  | 2.11 |   |
| 177 | 2.95  | 2.78 | ✓ |
| 178 | 2.96  | 2.11 |   |
| 179 | 2.98  | 2.4  |   |
| 180 | 2.100 | 2.8  |   |
| 181 | 2.100 | 2.12 |   |
| 182 | 2.101 | 2.39 |   |
| 183 | 2.102 | 2.82 |   |
| 184 | 2.103 | 2.7  |   |
| 185 | 2.103 | 2.84 |   |
| 186 | 2.104 | 2.32 |   |
| 187 | 2.104 | 2.5  |   |
| 188 | 2.104 | 2.8  |   |
| 189 | 2.104 | 2.85 |   |
| 190 | 2.105 | 2.35 |   |
| 191 | 2.105 | 2.85 |   |
| 192 | 2.106 | 2.32 |   |
| 193 | 2.106 | 2.92 |   |

### How to read this table?

If we have following row:

| <b>ID</b> | <b>Dependent</b> | <b>Depend on</b> | <b>Reveals Vulnerability</b> |
|-----------|------------------|------------------|------------------------------|
| 1         | 2.46             | 2.54             | ✓                            |

it indicates that 2.46 depends on 2.54 ( $2.46 \rightarrow 2.54$ ). At the same time, since we have ✓ in the last column that indicates at least one vulnerability is detected in this dependency.